

A POLITICAL ECOLOGY OF CONSERVATION:  
PERI-URBAN AGRICULTURE AND URBAN WATER NEEDS IN  
MEXICO CITY

by

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## ABSTRACT

This dissertation examines the cultural politics of conservation efforts in Mexico City, where in 2000, the city legislated a soil and water conservation plan in its rural areas. During 12-months of field work in the village of San Luis Tlaxialtemalco I focused on how the conservation plan was to be established in the wetlands with chinampa agriculture, directly above one of the city's fresh water reservoirs.

Political ecology research of conservation suggests that ecosystemic processes are intricately linked to economic and social processes on many scales. Post-structuralist analysis has complicated homogeneous and generalizing descriptions of social categories, politics of power, and the causality between socio-economic, political, cultural, and ecological factors. Research in political ecology emphasizes the diversity of actors and their subject positions and seeks to locate and understand the dynamics of power and agency within and outside formal institutions. I examined the negotiations of the conservation plan on three social scales and I looked at the intersecting axes of power and the knowledge of various actors, and how they inform conservation.

On the scale of the state, a discursive analysis of the 'coloniality of power' of the conservation plan uncovers the city government's underlying assumptions about how the farmers' land use practices and social organization contribute to the conservation effort. I ask how do those assumptions define and condition chinampa farmers as 'Indian'? I conclude that in the conservation plan, colonially-based discourses constitute rural communities and agriculturalists in ways that subject them to the city's needs and interests, and exclude them from equal livelihood opportunities.

In San Luis Tlaxialtemalco I examined ideas of 'community' by documenting how the conservation plan affected local power relations. Analyzing the dynamics among chinampero farmers in their meetings, I examined the alliances in and the 'voice' of the village. I conclude that 'community' is a fluid and contested entity shaped by class, knowledge, and cultural values in unpredictable constellations.

The third scale of analysis concerns women's knowledge and voice, and examines ideas of silence as agency. In semi-structured interviews and participant observation in farmer women's everyday lives in San Luis I explored how they make decisions that affect the environment. The research shows that multiple constraints and opportunities, such as economic responsibilities, class, prestige, and patriarchy shape women's daily lives and direct their decisions to advance goals consistent with their values even when their decisions may undermine the long-term health of the environment they depend on.

By looking at the micropolitics of conservation, my research provides cultural understanding of how at different scales decisions that affect ecology are made and how they are articulated through cultural idioms in the charged context of the conservation plan. The dissertation de-mystifies predominant representations of chinampas and chinamperos. It also complicates ideas of 'community' and suggests that the analysis has to go beyond class and include values and knowledge. Further, I show that relevant ecological knowledge does not automatically lead to 'appropriate' action, and that silence can be a powerful tool that resists impositions and furthers individual and community interests. Finally, the thesis suggests that political ecologists need to move away from equating power with action and activism within "progressive movements", and that conservation efforts need to have multiple goals and follow diverse strategies.

## TABLE OF CONTENTS

Abstract	ii
List of Figures	v
Glossary	vii
Acronyms	viii
Dedications	ix
Acknowledgements	x
 CHAPTER 1. INTRODUCTION: CONSERVATION, CONFLICT, AND RESEARCH	 1
Research questions and objectives	3
Theoretical framework	3
The road to this research	7
In the field	8
Methods	8
Post-colonial reflections – situating myself	18
Discussion of methods	26
Chapter outlines and arguments	32
 CHAPTER 2. “SEÑORITA MALJA, DISCULPEME PERO NO TENEMOS AGUA. NI LUZ HAY”: WATER, CHINAMPAS, AND RURAL LIVELIHOODS IN XOCHIMILCO	 37
The chinampa	42
Environmental conditions	54
How did it come to this?	54
The situation in the last fifty years	59
The social environment	73
The economic environment	76
Previous rescue efforts	85
The Conservation laws of 2000	93
The political back drop	96
San Luis Tlaxialtemalco	101
 CHAPTER 3. “¿COMO ES POSIBLE QUE...?”: CONSERVATION AS COLONIALITY	 112
State-peasant relations	115

Framework and method	117
Government's discourses	126
The texts	126
Analysis	132
Folkloric pasts and subordinated presents	132
Romantic appropriations and restricted livelihood options	140
'Indian Problems' and imposed dependency	147
Conclusions	149
 CHAPTER 4. " <i>¿QUE NOS ORGANIZEMOS UN FRENTE COMUN PARA REVOCAR ESTA LEGISLACION!</i> ": CONSERVATION AND LOCAL POWER.	 152
Introduction	152
The 'united' resistance: Entering into the existing field of relations	156
Elite interest groups	160
Class	166
Voluntary departures	177
Competition, skills, and powers	177
Other forms of marginalization – ideological silencing	181
Conclusions	189
 CHAPTER 5. CHAPTER 5. " <i>SI NO USAMOS LA TIERRA DE HOJA, NO TENEMOS QUE COMER</i> ". CHINAMPERA WOMEN'S ENVIRONMENTAL KNOWLEDGE, CHOICES, AND AGENCY	 194
The economy of floriculture, women's roles and agency, and the environment	200
Chinampa economy, women, and village relations	206
Women's voice and feminine identities	211
Values and class	221
Institutional culture of policies for women and citizen participation	228
Conclusions	237
 CHAPTER 6. SUMMARY AND CONCLUSIONS	 241
Contributions	244
Future research directions	248
 BIBLIOGRAPHY	 253



## LIST OF FIGURES

Figure number	Page
1. Precolonial lakes in the Valley of Mexico and location of Xochimilco and the villages discussed in the dissertation.	39
2. Diego Rivera's mural Huastec Civilization, 1950, depicts people working the land with chinampas in the back ground.	44
3. Manuel Rivera Cambas' lithography of a <i>Paseo</i> on Canal de Viga. 1882.	44
4. Schematic representation of chinampas. Their construction and function are discussed in the text. Photo of a miniature at the Museo del Templo Mayor, Mexico City.	47
5. Location of Xochimilco and its villages discussed in the text.	48
6. Tourists on a modern-day <i>paseo</i> in the canals of Xochimilco.	49
7. View north across the wetlands.	51
8. Modern greenhouse next to 'traditional' chinampería in San Luis.	52
9. Corn on a chinampa in San Luis.	53
10. Housing on a chinampa in San Luis.	53
11. Mr. José Genovevo Pérez Espinosa by the remains of the Acuezcomac spring in San Luis in June 2000.	58
12. Damaged roots of the <i>ajuehotes</i>	62
13. Water running down from the green house roofs has damaged the canal edge, now supported with poles and branches.	62
14. A chinampa before it was raised.	64
15. A chinampa after it was raised.	64
16. Construction of the greenhouse floor with plastic and gravel.	68
17. A fine mesh allows ventilation but keeps insects out of the greenhouse.	68
18. A list of chemicals used in greenhouse cultivation.	69
19. Garbage in the chinampas.	70
20. Garbage in the chinampas.	70
21. Deforestation on the hills near San Luis.	72
22. Erosion on the hills.	72
23. The wall of the kinder garden in San Luis has appeals to detain urban encroachment.	74
24. The sign on a house on the chinampa declares the construction closed.	74
25. Señor Cabello displays poinsettias.	78
26. Invitation to the Christmas sales of poinsettia in San Luis.	82
27. The plant market in San Luis.	82
28. Mostly women are in charge of selling the plants in the market in San Luis.	84
29. Buyers come with trucks from neighboring provinces and the city.	84
30. The distribution of the electoral power in the institutions of Mexico City.	98
31. A map of those parts of San Luis where I lived.	102
32. A truck has brought forest litter to the embarcadero to be loaded on canoes	104

33. The church in San Luis Tlaxialtemalco.	104
34. Elvira Balancario Sanchez and her husband Miguel Jiménez Robles plant seedlings in their greenhouse.	109
35. Graffiti on the loading deck at the plant market's embarcadero.	169
36. The image on INMUJER's web page.	235

## GLOSSARY

Consejo	The body representing APPO in the negotiations with the CORENA
Coordinación	The office of the elected political leader of a village to represent it in affairs with the municipality (i.e. the precinct, in this case Xochimilco)
Coordinador	The elected political leader of a village to represent it in affairs with the municipality (i.e. the precinct, in this case Xochimilco)
Delegación	The city's political administrative unit, the precinct; this dissertation focuses on Xochimilco
Legal text	The official legal text of the Ordenamiento Ecológico (Gazeta Oficial 2000).
Mercado	The local plant market in San Luis
Ordenamiento	Ordenamiento Ecológico (Ecological Ordinance), México City's law of environmental management; the focus of chapter 3. This term refers specifically to the version intended to the general public (GDF 2000).
Quiosco	A raised and covered band stand in the zócalo. Used also for meetings and socializing.
Zócalo	A park and square in the center of a village, in front of the church. In San Luis used mainly for religious fiestas, village wide gatherings, and socializing.

## ACRONYMS

ANP	Areas Naturales Protegidas (Protected Natural Areas), México City's conservation plan; parallel to the Ordenamiento Ecológico (Ordenamiento)
APPO	Asociación de Productores de Plantas de Ornato, Priducer Association in San Luis Tlaxialtemalco
CORENA, CORENADER	Comisión de Recursos Naturales y Desarrollo Rural (México City's Commission of Natural Resources and Rural Development, responsible for executing the conservation plan and accountable to the city's secretary of environment)
DGCOH	Dirección General de Construcción y Operación Hidráulica (An office in the City's Secretary of Public Works and Water; in charge of the hydraulics in Xochimilco)
GDF	Gobierno del Distrito Federal (The Government of Mexico City)

## DEDICATIONS

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## CHAPTER 1 INTRODUCTION: CONSERVATION, CONFLICT, AND RESEARCH

*No sería exagerado afirmar que la ciudad de México no tiene la octava parte del agua indispensable para sus habitantes... No quedará más recurso que introducir el agua de los grandes manantiales de... Xochimilco, cuyo caudal es suficiente y que tiene la pureza necesaria para alimentar una ciudad populosa como debería ser nuestra capital.*

*El ojo de agua de San Luis está situado en la falda boreal del cerro del Teutli, cerca del pueblo de aquel nombre... [Lo he] observado a las tres de la tarde del mismo del mismo día 6 de abril [1883]; tiene ancho como 20 metros y de profundidad 11m75, teniendo una temperatura profunda de 21 [grados centígrados] y 4,5 hidrométricos de Boutron. Esta manantial es el más corpulento de todos los que hemos observado en el Valle de México...*

It is no exaggeration to say that Mexico City does not have more than one eighth of the water that is essential to its inhabitants... The only solution is to introduce the water from the big springs in... Xochimilco, which have the necessary chemical purity and sufficient flow to supply the populous city, which is what our capital should be.

The [spring] in San Luis is on the forested side of the Teutli volcano, close to the village with the same name... [I] observed [the spring] at 3 o'clock in the afternoon on the 6<sup>th</sup> of April [1883]; it is twenty meters wide and 11.75 meters deep; its temperature at depth is 21 degrees [Celsius] and [it is] 4.5 on Boutron's scale. This spring is the largest of the ones we have studied in the Valley of Mexico...  
Peñafiel (1884: 56, 67, 75).

Mexico City's leading hydrologist Antonio Peñafiel calculated in 1864 that the city had 250 litres of water available per day for each of its two hundred thousand inhabitants. But according to him, the resources were diminishing, and in April of 1883 with 350,000 inhabitants, the city only had 64.4 litres per person a day (Peñafiel 1884). Hence he had his eyes on the springs in Xochimilco. Thirty years after he had surveyed them, the largest of the springs, the Acuezcomac in San Luis, had been tapped and its water diverted forty kilometres to the city; in the 1940's the pond surrounding the spring had dried up and filled in<sup>1</sup>, signalling the end of the annual St. John's day festivities honouring the spring (Bravo Vázquez 1997).

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<sup>1</sup> Residents of San Luis, personal communication.

For more than a thousand years the springs had fed the chinampas, which are agricultural fields built on the former lake margin. This agriculture has been significant throughout its history: it was a major food source for the Aztecs (Parsons 1976), provided livelihood for rural inhabitants during the colonial era, and continue to bring economic sustenance and mark peasant identity to its practitioners and communities that live off this type of agriculture (Coe 1964, Canabal-Cristiani 1997, Jiménez-Osornio et al. 1986, Rojas Rabiela 1993a, Torres-Lima et al. 1994). The diversion of water from the springs to the city diminished the water supply to the chinampas so that in the 1950's, after all the dozen or so springs in Xochimilco had been tapped, the canals had dried up and cultivation on chinampas had become impossible (Canabal-Cristiani 1997, Torres-Lima et al. 1994). Growers were unemployed or worked in city jobs, and many families lived in extreme poverty.<sup>2</sup>

After the city started to supply the canals with treated sewage cultivation re-intensified and made use of 'modern' technologies and new market demands. Over the years, many chinamperos built greenhouses and shifted production from vegetables and flowers to ornamental plants<sup>3</sup>. At the same time, the city's withdrawal of water from the aquifer had exceeded the rate of replenishment and urbanization together with agrochemicals threatened the water quality. Consequently the city passed a series of conservation plans in its rural areas; the latest one passed in August 2000 (GDF 2000) met fierce opposition in Xochimilco's communities that practice agriculture in the wetlands above the city's water reservoir. My research taps into this water conflict that

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<sup>2</sup> Residents of San Luis, personal communication.

<sup>3</sup> This development has spatial variations that are explained in more detail in chapter 2.

continues at the outset of the 21<sup>st</sup> Century with material, cultural, political, and ecological dimensions that are already apparent in this historical trajectory.

Research questions and objectives:

This dissertation takes a political ecology approach to examine the cultural politics of conservation in the chinampas. Specifically, I examine the cultural politics of decision making that affects ecology as articulated in the charged context of the conservation plan. How does power operate in the production and circulation of knowledge? How do the discourses and micro politics of conservation affect decisions about ecology at different scales and how are they articulated through cultural idioms? In what ways is the state's conservation plan informed by assumptions about chinampa agriculture, rural communities, and their role in conservation that are rooted in the colonial era? How do these assumptions inform local responses to the conservation plan, how do local power relations influence what knowledge enters into conservation efforts, and how local might power affect the environment? How do women engage their environmental knowledge in the context of the conservation plan? Finally, what are the implications of these questions to ideas about power for political ecology, conservation, environment, and the literature on chinampas?

Theoretical framework

Post-structuralist approaches in contemporary political ecology conceptualize politics broadly as “power relations that pervade all human interactions, characterized by challenge and negotiation, and infused with symbolic and discursive meaning” (Paulson et. al. 2003: 209). Hence, this sub-discipline is sensitive to environmental politics as a process of cultural mobilization, and scholars focus analytically on the ways in which cultural practices are contested, fought over, and negotiated. Studies have focused on specific contexts in which power and politics operate; for instance, Donald Moore analysed the micropolitics of environmental conservation in the context of state and rural actors in Zimbabwe: the struggle of conservation revolves around their competing understandings of the landscape, expressed both symbolically and materially, and affecting the distribution of resource rights (Moore 1998). Lisa Gezon examined ecological politics in conflicts over access to land in a protected area in Madagascar. She exposes the complex ways in which villagers establish resource rights based on ethnic politics, family rights, moral authority, and state regulation (Gezon 1997). Susan Paulson shows how power in produce and labor markets at different scales affects soil erosion and gender relations in the Andes (Paulson 2003).

At the centre of these conflicts is the contestation of knowledge (Escobar 1996, Peet and Watts 1996a; Foucault 1980): Contestation of knowledge at regional, local, and global scales by a panoply of actors like local men and women, international institutions, national governments, non-governmental organizations, researchers, politicians and others in complex discourses influences how and why particular forms of knowledge predominate and circulate, what ecological and social outcomes they produce, and who has access and rights to resources (Paulson et. al. 2003). Furthermore, within actors,

diverse knowledge and discourses prevail (Moore 1996), further complicating political-ecological outcomes.

Research on the implementation of conservation plans shows how power enters into conservation efforts as historical and contemporary social conflicts. For instance, local inhabitants' livelihood strategies and their internal social organization (Moore 1998, Sundberg 1999, Utting 1994, Zimmerer 1996), national processes of development (Simonian 1995, Escobar 1996), global ideologies and practices of conservation (Guha 1998a, Igoe 2004, Sundberg 2003a) processes of development and trade (Bryant and Bailey 1997) affect how people make environmental decisions and implement policies locally.<sup>4</sup>

One strategy to improve the success of conservation efforts is to redistribute power and incorporate local inhabitants in all stages of conservation (Campbell 2000). However, 'local inhabitants' are not a homogeneous group with coherent and mutually agreeing development or conservation goals (Bebbington 1996, Reed 2000, Watts 2000) or understandings of the ecosystemic functions in the area to be protected (Zimmerer 1996, Rocheleau et. al. 1996a). Such diversity makes it difficult to ensure 'everybody's' involvement. Institutions, too, have internally differing goals and methodological preferences that may confuse local residents about what they are supposed to do, thereby undermining their confidence with authorities (Moore 1998).

Given such complicated relationships among societies, ecological processes, and environmental changes the causality among socio-economic, political, cultural, and

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<sup>4</sup> See also for instance Sundberg (2003a) on biosphere conservation and citizenship, Young (2003) on marine resources and ecotourism, Basset and Zuéli (2003) on savannah ecology and knowledge, Utting (1994) on forest conservation and local livelihoods, and McCusker and Weiner (2003) on land cover change and colonial changes in local power.

ecological factors is not just unpredictable but often difficult to discern even after the fact (Nightingale 2003). One reason for this complexity is the fact that the various actors who are involved in conservation, pro or con, are embedded in specific and intersecting ecological and social processes on many scales, and their individual and collective positionality and knowledge affects how they perceive and undertake economic activities and conservation (Awanyo 2001; Gibson-Graham 1996, Reed 2000). Furthermore, their positionality is fluid, their use of knowledge is strategic, and they attribute both material and symbolic values to resources (Moore 1998, Nightingale 2003).

For instance, gendered ecological knowledge provides agency differently for men and women (Carney 1996, Schroeder and Suryanata 1996) but at the same time, women's knowledge and agency vary across class (Agarwal 1992, Rocheleau et. al. 1996a) as does their subject position (Reed 2000). Also race<sup>5</sup> affects where and how conservation projects are planned (Utting 1994, Sundberg 1999) and what knowledge becomes incorporated into them (Braun 1997, 2002). People's values and cultural choices also direct how they make decisions about land use (Zimmerer 1996) and ecological changes precipitate social change and alter land management practices (Nightingale 2003).

My research contributes to these works by examining on different scales how power and knowledge intersect with social categories and affect decisions made about the environment. Within these broader frameworks of political ecology, I employ more

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<sup>5</sup> When I refer to race, I do not refer to biologically differentiated 'races' but rather to the persistence of social categories and material practices that racialize particular groups as superior or inferior. In order to recognize the existence of racial categories without reifying those categories as natural, I follow scholars who use race when referring to "a contingent historical phenomena that has varied over time and space" and racialization to refer to the "the process of marking human differences according to hierarchical discourses" (Appelbaum et. al. 2003:2).

specific conceptual approaches in each empirical chapter and explain them at the outset of each chapter.

#### The road to this research

My master's thesis explored Precolonial agriculture in the wetlands of Laguna Mandinga in Central Veracruz on the Gulf Coast of Mexico (Heimo 1998, Heimo et al. 2004). Analyzing soil sediments and making inferences from them about agricultural practice and change gave me the opportunity to use my knowledge in soil science while crossing the bridge between applied and social sciences. However, the lack of human interaction between the researcher and her subjects that inevitably comes with archaeological research<sup>6</sup> made me want to find a doctoral topic that would allow me to talk with people as a way of 'collecting data'. The relative ease with which I had interacted with Mexican farmers during many field seasons in the wetlands and canyons of Veracruz and Campeche<sup>7</sup> made me think that I would be able to conduct comfortably ethnographic research in Mexico. I also thought that my many years of participating in peasant agriculture in my childhood, together with my subsequent farming, research, and extension experience in 'modern' agriculture would enable me to understand the issues that were important on Mexican small farms.

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<sup>6</sup> Having said that, I enjoyed tremendously working and interacting with the local men and women who assisted me in every aspect of my master's field work.

<sup>7</sup> I participated as a research assistant in Doctor Alfred H. Siemens's work about Precolonial wetland agriculture and the vertical integration of resources across ecological zones in Mexico for many years (Siemens et. al. in press, Siemens et. al. 2002, Siemens et. al. 1995).



As a PhD student, my exposure to post-colonial theory<sup>8</sup> led me to question the romantic notions about the 'amazing chinampas' (e.g. Canabal-Cristiani 1997, Coe 1964, Parsons 1976) and 'traditional' agriculture. My interest in feminist political ecology led me to investigate further the prevailing representations of chinamperos as male, and eventually, my fieldwork in San Luis gave me the opportunity to bring together my diverse background in agriculture with my new understandings in cultural geography.

## In the field

### Methods

I visited San Luis Tlaxiatalmalco for the first time in February 1999 with Alf Siemens. We were then planning to undertake research about the local effects of globalization, and he had visited San Luis previously and had some idea of how chinampería agriculture had changed towards greenhouse cultivation. We went to San Luis without having initiated contact with anyone there. During our first day of the two-day visit, we talked to a couple of farmers in order to find out who would be the individuals to talk to about our plan. We then sought out and arranged a meeting with the board of the local flower growers' association.

We were, however, unsuccessful in getting funding for the project and instead, I decided to go to San Luis alone to do field work for my dissertation focusing on women

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<sup>8</sup> With post-colonial theory I refer to scholarship that examines the effects of "colonialism and its contestation on the cultures of both colonizing and colonized peoples in the past and the reproduction and transformation of colonial relations, representations, and practices in the present" (Johnston et al. 2000: 612).

and chinampa soils. Several months prior to my departure I contacted Jorge, one of the board members we had met the previous year. I explained that the plan had changed and I was interested in coming alone to work on a different topic. He welcomed my ideas and told me to contact him upon my arrival, which I did. As he is one of the leaders in the community, he introduced me to others: in the first instance Luís, the president of the co-operative plant market. Once he heard about my plan to work around women, he immediately introduced me to half a dozen women in the market, asking them to collaborate with me. This was my initial 'entry' into the community of growers with greenhouses and ornamental plants: those who have adopted more modern technologies and generate bigger turnover than 'traditional' chinampería does.

Another avenue opened up when a woman approached me on the plant market. She was curious about me, and when I told her that I came from Canada, she mentioned another Canadian researcher who had lived in her house a few years earlier. She invited me to her house and while talking with her husband, they offered to introduce me to Miguel, a relative of theirs, acquainted with foreign researchers for years, and an avid spokesman for 'traditional' chinampería and the importance of local culture. We immediately went to his house, where he welcomed me and invited me to do a reconnaissance of the chinampas. We did that on two separate days, during which time he took me to an entirely different set of farmers from those I had met in the market. His friends were 'more traditional', developed greenhouse production more cautiously, and relied more on local inputs than those I had met in the market. In this way, I was introduced to the broad economic and cultural division in San Luis: families who have the resources and contacts to develop capital intensive and input-dependent greenhouse

cultivation and those who either by choice or due to lack of resources continue to rely on 'traditional' techniques and products. This division is not clear as members have relatives and friends on both sides, collaborate in organizing community events, and participate in the management and operation of the market. Furthermore, many chinamperos combine or practice in parallel 'traditional' and greenhouse production. The two modes of production are not mutually exclusive but often the emphasis is on one or the other. The significance of this 'division' lies in the fact that I had the opportunity to understand differences in economic, cultural, and political priorities and practices in the community. It also made it clear to me that I had to try to select 'informants' across these social differences in order to expose diversity, one of the key elements in post-structural and feminist political ecology, as opposed to homogenizing generalizations.

I started the interviews in the form of a survey among twenty three male chinamperos in order to first gain an idea of the cultivation practices and the environmental concerns. I then moved on to interview women about their knowledge of the environment and their perceptions of how their decisions affect it. I started off with the women in the market to whom I had been introduced and expanded from there to interview others to include different subject positions in terms of production methods and class. Altogether I interviewed fifteen women in the market.

Once I had an idea of men's and women's roles relations, I interviewed four groups of men and women; these groups were put together by one farmer from each group, whom I had asked to select other individuals of his or her choice. This way we avoided composing groups where individuals might have animosities towards, or

competition between, each other, which would lead to highly politicized discussions.<sup>9</sup>

These meetings occurred in the chinampas in order to facilitate a familiar setting to the participants. In these groups I showed them pictures I had taken in the chinampas and quotes I had recorded from previous discussions and asked them to talk to me about them. The pictures showed phases of 'traditional' chinampería (e.g. pouring canal muck on a chinampa and cutting the *chapines*<sup>10</sup>) and gender roles in production (a man extracting muck from the canal bottom). The quotes address gender roles ("Generally it's the men who make decisions here") and economic and social goals ("The *fiesta* is the reason why I cultivate").<sup>11</sup> The goal of this method was to enable the participants to express in their own words what they saw or read in the images and what they thought about the issues raised.

All these interviews and discussions took place during the first few months of my visit in San Luis. I learned that while some 'still' practiced 'traditional' chinampería, several other chinampas were covered from one edge to the other with greenhouses.

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<sup>9</sup> Having said this, the resulting conversations most certainly were also political but for a different reason: my presence and the expectations that the interviewees might have had about what I wanted to hear, likely directed how they spoke to me. While this might be unavoidable, one way of 'going around' it is to ask same questions or try to confirm and validate the answers with other individuals.

<sup>10</sup> *Chapines* are soil cubes cut out of semidried canal muck. Seeds are planted into these blocks, which then can be transplanted to thin out the stand when the plants grow. Many farmers have moved from making *chapines* to using plastic bags or containers filled with potting soil made of a composition of local and purchased elements.

<sup>11</sup> *Fiestas* are parties organized by individual families or collectively on a number of occasions. These included family celebrations such as birthdays, weddings, and 15<sup>th</sup> birthdays. I was often invited to them as a guest of my hosts, sometimes as a friend of the organizing family, and more often as the 'Canadian researcher'. Many farmers also organize a religious service and *fiesta* to honor the Saint of their particular chinampa or some sacred feature on their chinampa. These occasions take place annually and people know to expect them; they had an 'open' invitation to all 'neighbors' and, as I moved around in the chinampas fairly freely and got to know many farmers, I was invited to several of these parties. In fact, my hosts convinced me that attending the *fiestas* was the best way to get to know people and to gain acceptance in the community.

The *fiestas* were particularly interesting because after the formal program, which always included a meal and drinks after the mass and other religious services, people gathered in groups to continue socializing. That included often a fair amount of beer, which loosened the tongue and people became more open and spontaneous than when I talked with them in a more formal setting.

Despite my limited knowledge in greenhouse production, when talking with farmers, I found it easy to talk 'business': i.e. the cultivation methods that are based on the biology and chemistry I had learned when studying agriculture. However, considering the widely assumed sustainability of chinampa agriculture, I was puzzled by the fact that many chinamperos I had talked with to that date seemed eager to build more greenhouses and use '*tecnología de punto*' or top-notch technology. If I had had the information they needed, the farmers would have interviewed me about the most recent greenhouse developments in Canada, particularly how to combat certain pests and diseases which attack the poinsettia.

However, while the farmers welcomed me and took time to talk with me and answer my questions, soil was not their primary concern, even less so for women than for men. When I started to interview women about their production methods and scope, domestic and economic responsibilities and activities, and ecological knowledge, I understood that although many women were knowledgeable about the chinampa soils, their deterioration, and potential remedies, and, despite the fact that environmental deterioration affected their lives and work in many ways, their main concern was to "put food on the table" and to make sure their product was competitive.

Having understood key points and the extent of the environmental degradation by the time Mexico City passed its conservation legislation in August 2000, I was excited because I thought it would be an opportunity for the chinamperos to tap into programs that in the long term would improve their environment and enable them to re-establish 'real' chinampería agriculture. While continuing the interviews, I also started to follow the negotiations of the conservation plan, and after a while I stopped the formal

interviews regarding chinampa soils and instead started to attend the farmers' meetings when they met internally or with the government representatives about the conservation plan.

I soon afterwards discontinued the soils interviews because they were 'off topic' in terms of the main concerns in the village; after all, they had given me a good idea of the state of the agriculture in San Luis as well as general developments in the community. My next approach, suggested by a friend, was to stop asking questions and start to listen: to draw upon observation, participant observation, and open-ended discussions. Apart from being less intrusive than formal interviews, these methods of collecting 'data' enabled me to find out and focus on political ecologies that emerge from and in the social conditions or relations that are played out and constituted in and by everyday work and life of individuals; that is, analyzing what people do, under what ideological and material conditions, and examining how what they do is tied to a multitude of explicit or implicit social organizations (Smith 1999). While I chose to focus for the remainder of my time in San Luis on how the conservation plan 'fared' on the ground, thanks to the 'listening' method I made fewer choices about what topics were discussed and how they were discussed, thereby giving the 'decision' of the priority of issues to the farmers.

I attended six out of seven meetings that the farmers had as a 'community' with the authorities, five out of seven meetings the farmers had internally, two meetings of the farmers representative body (they called this the *consejo* or 'council' and it consisted of ten individuals elected in farmer's first meeting), and numerous *fiestas* where the conservation plan often came up as a topic of discussion.

Thus in the meetings I attended, I listened, taped, and took notes. Afterwards, when groups of farmers stayed behind talking about what had happened, I would join them, and occasionally I would 'probe' them in order to better understand why they thought the way they did or why their opinions differed. Later I would talk with a farmer I ran into on the street or at some event.

Once my own understanding of the thorny questions about the conservation plan had emerged, I started to take the initiative in talking with people again, focusing on what had been said in the meetings and other discussions among the farmers. My goal was to understand how people think and why they think in certain ways. Eventually I interviewed a select group of farmers to address specific questions. They included several of the leaders in the community, their followers, and people 'on the margins'. These leaders were individuals who were driving forces in the community either pro or con the conservation plan, individuals who were part of the 'mass' and participated in the negotiations, and individuals who rarely or never participated in them.

To get the perspective of the non-farming San Luiseños, I interviewed the chair of the coalition of the six local neighborhood committees as well as the board of the coalition, and I attended a community meeting in the local health care facility, where American researchers consulted San Luiseños about health concerns in the community. One central topic in the discussion was the contamination in the chinampas and the use of agrochemicals in greenhouses.

I also interviewed numerous government representatives with knowledge about or interactions in chinampa communities<sup>12</sup> and I specifically interviewed those six who were

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<sup>12</sup> These include Ing. Leticia Barrón Estrada, director of extension services at the Federal Institute of Rural Capacitation (INCA Rural, Instituto Nacional de Capacitación Rural, interviewed June 3<sup>th</sup>, 2000), Lic.

involved in the negotiations and implementation of the conservation plan. These six individuals occupied various positions in CORENA (Comision de Recursos Naturales, later to become Comision de Recursos Naturales y Desarrollo Rural, CORENADER), which is responsible for executing the conservation plan. CORENA is an office in the city's ministry of environment. The individuals I interviewed were the director general of CORENA, the director and two planners in the division of the Ordenamientos Ecológicos (the office to create the village-level conservation plans), the sub-director of the division of Areas Naturales Protegidas (ANP, Protected Natural Areas, a legislation that overrides the Ordenamientos), the director of the division of extension services and a planner in the same department. The first five were interviewed on April 24, 2001, the sub-director of the ANP was interviewed additionally on February 14, 2001, and the head of extension services and the planner there on February 22, 2001.

Because only men participated in the negotiations with the city's functionaries, I continued talking with women. From my initial surveys with fifteen women I selected ten for further interviews based on the diversity of their backgrounds and cultivation practices, which I learned about in the first round of interviews. I talked repeatedly with them, carrying on interrupted conversations about 'being a woman and a chinampera' in San Luis. I met most of them while they were working in the plant market but two of them also invited me to join them when they worked in the field or greenhouse, where they explained to me what they were doing and why their work was important. I also

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Dinorah Rios Palacios, vice governor of the precinct of Xochimilco and in charge of land use in the chinampas (interviewed June 6, 2000); Ing. Arturo Perez Panduro, researcher at the Colegio de Posgraduados (Agricultural graduate school in the State of Mexico. Ing. Panduro is involved in research about use of water and biological control in the chinampas; interviewed Aug. 2, 2000), Lic. MA. Magdalena Gamez Arriola, social worker at the support centre for family violence (UAVIF-Xochimilco, interviewed June 7, 2000), Lic. Carol Swam, director of Women's support centre (CIAM Xochimilco, Centro Integral de Apoyo a la Mujer; interviewed September 29, 2000).



visited three women in their homes, where we could talk with fewer interruptions and more privacy than in the market. More than asking specific questions, I invited them to talk about their background, marriages, children, work, and concerns and joys in order to understand what social norms, personal and family aspirations, and women's experiences shape their lives as individuals, members of a family, and members of community. I became friends with two women in particular and have stayed in contact with them since I have returned to Canada. To get an outsider view on chinampera women in San Luis, I interviewed representatives of two women's organizations: Lic. MA. Magdalena Gomez Arriola, social worker at the support centre for family violence (UAVIF-Xochimilco, interviewed June 7, 2000), Lic. Carol Swam, director of a Women's support centre (CIAM Xochimilco, Centro Integral de Apoyo a la Mujer; interviewed September 29, 2000).

Within the ethnographic 'everyday'-framework, which looks at people's daily activities and lives, I also applied participant observation when working with men and women in their fields, talking with women in the market and observing how they interacted with their clients and other vendors, or observing the men in their meetings and work. When addressing specific questions with sought-ought individuals, I conducted semi-structured or open-ended interviews. Thus much of the ethnographic material in this dissertation was gathered in casual conversations in social functions, discussions during work, semi-structured and open-ended interviews, by listening, and from the taped meetings.

To complement the ethnography, I also used textual analysis of discourses in the conservation plan about chinampas and rural communities. This approach allowed me to reveal the assumptions that are intended to organize chinampa agriculture and rural

communities in Mexico City in the context of the conservation plan and the city's immense need for clean water.

To get more perspective on the situation in San Luis in general and women chinamperas there, I sat in on two meetings of a farmers self-directed educational group in the centre of Xochimilco and I interviewed separately two women and one man who were driving forces in this group. Furthermore, I interviewed a chair of a group of farmers in the northern part of the chinampas, where 'traditional' chinampería is the main mode of production, often combined with cultural and ecotourism. Finally, to learn about new ideas in cultivation and how they came to the chinampas, I attended an annual two-day continuing education program for floriculturalists organized by the city's rural capacitation office (INCA Rural), and I visited the international floriculture trade show in Mexico City.

Finally, during the entire time in San Luis, I relied on my hosts. They are not chinamperos but their families have been for generations and they know 'everybody' and 'everything' in the community. Without ever identifying the individuals I had talked with, I frequently asked my hosts to explain village dynamics, world views, attitudes, politics, and ways of thinking that were difficult for me to understand. They also helped me to make the link between broader political events in Mexico and the daily lives of peasants. These discussions became partly an entertainment, as we watched the news together during the months leading to the presidential elections. We would interpret and analyze the commentaries and interviews in the news from many perspectives, including the U.S. interests in Mexico, the national interests, the interests of the ruling elites, and, most

importantly to the lives of my hosts and their community, the working class and the peasants.

#### Post-colonial reflections – situating myself

Feminist and postcolonial scholarship have demonstrated that the researcher's specific background affects the research in all its stages: the researcher's educational, cultural, ethnic, gender, and class experiences, for instance, shape research questions, methods, 'data', interpretations, and reporting. It is now commonly accepted that all knowledge is situated and partial (Haraway 1991), and objectivity is the "process of working out differences and commonality, of struggling epistemologically and politically to make connections, affiliations, and alliances" (Johnston et. al. 2000:743). Therefore, scholarship encourages an explicit discussion about the ways in which the researcher's situatedness affects the research (e.g. England 1994, Rose 1997).<sup>13</sup>

Significant aspects of my background that have affected this dissertation are related to how I have formed my ideas about peasants and agriculture and how my post-graduate education has shaped my understanding of other cultures. These biases entered into the everyday practices of my fieldwork and shaped its outcomes and, while they invited me to try to understand the processes of negotiating the differences between

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<sup>13</sup> Research in this area is by now extensive. Ground-breaking works include Gibson-Graham (1994), the articles in the *Professional Geographer* in 1994 that explored ideas of power and identity in field work (England [1994], Gilbert [1994], Katz [1994], Kobayashi [1994], Nast [1994], Staeheli and Lawson [1994]) and those published by the Women and Geography Study Group (1997) on a range of issues. Linda McDowell reviews these two collections and adds her own reflections (1999). Juanita Sundberg discusses politics of field work in Latin America (2003b), Sandra Harding (1998) explores feminism and knowledge from the perspective of multiculturalism, and Linda Smith examines the possibilities of decolonizing research about colonized peoples (1999).

myself and the people of San Luis, perhaps most importantly, they have forced me to acknowledge the colonial history of Finland and take action to change its legacy.

My host in San Luis would often say: "Maija, it must be difficult for you to be here because this is so different, food and everything else". She was right, and some differences were so great that I could not understand them fully. Instead, my analysis stems from my particular empathies towards 'peasants' in general. From when I was four years old until age eighteen, my family spent the summer months in a small and poor village where I participated in the work on a semi-subsistence farm. For example, I remember learning to drive a horse driven rake. I recall vividly the excitement, dangers, and smells that wafted in the field where hay making always started: a sandy hillside-field incapable<sup>14</sup> of producing the lush clover-dominated hay that the lowland fields gave. On this dry slope rocks somehow managed to sneak into the blades of the cutter and snakes scared the horse off its course and the harrow. Too short to operate the rake alone, I sat on Wiljami's knees, while he let me drive the horses. I also took in the smells: his sweat, the hay and sand, the horses, and the coffee, which his wife Ruth brought us in the afternoon. At the end of the day Wiljami let the horse off its reigns and after it had its hay, I was allowed to ride the horse to the beach for a swim for both of us.

Those sunny days were my introduction to why some soils need to be treated differently from others and why clover would not succeed on the hillside fields. Experiences like this instilled in me a love for and romanticism about peasant agriculture. In the village I also saw class differences negotiated.

On a couple of hectares together with their four sons, Wiljami and Ruth raised a few cows, chicken, and pigs, and had a big kitchen garden. They also hunted, fished, and

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<sup>14</sup> Now I would put inverted quotation marks around that word.

felled trees for food and money. Their life, livelihood, and culture were very different from my family's upper middle class background but the two families became good friends: I would join my father and Wiljami on fishing trips, and my mother joined Ruth to weave rag carpets. We bought eggs, milk, and potatoes from them and my father, who worked in a bread factory, brought them good quality but broken bread that they fed to their horses and, when times were really difficult, to their sons. Wiljami and Ruth visited us many times in our city home, and last year when Ruth passed away at the age of 93, my mother attended her funeral. My siblings and I are still in contact with her four sons.

Thanks to my family's ability to purchase a summer home in this village, I was able to 'enjoy' all aspects of peasant life without living it. However, the experience set me on to study agriculture and to finance my university years by working as a farm hand and by making a small profit from growing sugar beets. After university I worked for several years doing research and agricultural extension in agriculture before shifting careers to journalism with a specialty in agriculture and rural issues. Thus, I believe I have a broad and extensive understanding of agriculture's many facets.

This dissertation is rooted in these experiences. But at the same time and despite my political leanings and practical experiences that sometimes parallel those of many chinamperos', my privileged and Western worldviews ultimately affect my research. I hope that it also does justice to the people whose lives it describes.

My approach and understanding of different cultures has been shaped by my Western upbringing and university education where only in the past ten years I have started to understand how colonialism continues to underwrite perceptions of indigenous people. While Finns have been colonized and I live that legacy, I also live the legacy of

the colonizer in that the Finns occupied and took over the lands of the Sami people, indigenous to Scandinavia.<sup>15</sup> When my identity as colonizer/colonized is 'exported' to Mexico, I experience my relationship with Mexicans as dualistic and internally divisive. I identify with the indigenous peasants' colonial history and am aware of the lived "colonial present" (Gregory 2004). At the same time, many members of the Mexican elites identify me as 'one of them'. While I am able to converse with them intelligibly, I also reject what I perceive as their elitist and colonial ideas of the peasantry and the indigenous people, and their uncritical ideas about the 'West' as a progressive and democratic culture to be emulated by Mexico.<sup>16</sup>

My fluid and multiple positionality on the one hand, facilitated my relations with the villagers and, on the other hand, complicated my relations with the government negotiators. Although intellectually conscious of the necessity to approach them with an awareness of my prejudices, I often found myself in opposition challenging their views. I would, for instance, introduce the possibility that what they say about the chinamperos is a reflection of the power they have gained through the colonial process. Without denying my suggestions flatly, they would politely pass over the issue and move to technicalities

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<sup>15</sup> Finland was part of Sweden from the 1200's to 1809. Swedish governors were given the best land in Finland and they exploited Finnish labor force even after Finland had become a Grand Duchy of Russia in 1809. Sweden also drafted Finnish men to serve in the Crowns army in numerous wars during the last one hundred years of the Swedish reign (Jutikkala 1963).

The Sami are the Indigenous people of Sápmi or Samiland, which spans central Norway and Sweden, through northern Finland, and into the Kola Peninsula of Russia. A rough estimate of the total Sami population is between 75,000 and 100,000. The Sami are the only indigenous people in the European Union. Christianization was the central means of colonizing the Sami. Since the 11th century it gradually eroded the Samis' nature-based worldview; from the 1800's onwards the Nordic countries established harsh assimilatory policies towards the Sami in the name of education and social welfare (Heimo and Kuokkanen 2004). In Finland, the Second World War, which entailed the drafting of Sami men to Finnish army, the destruction and subsequent peace-time rebuilding of Samiland, and the temporary evacuation of the Sami to Finnish areas, marked a forceful and deep-reaching introduction of Western values to the Sami (Lehtola 2002. Paltto 1986, 1993).

<sup>16</sup> This is not the social attitude or knowledge of all elite Mexicans, of course, but this is the aspect to which I react strongly both intellectually and emotionally.

about agriculture or the chinampa communities. In the end, their rhetoric did not address my questions about the power relationships between the government and the peasants – it rather illustrated the discourses by which power is re-enacted and constituted in conversations with foreign investigators.<sup>17</sup>

Despite my history, extensive and broad academic education, and empathies and partial identification with the chinamperos, initially I did not have tools to understand *why* some greenhouse growers opposed the conservation plan so vehemently despite its obvious long term benefits for the chinampas, and *why* others did not even participate in the negotiations although their views about chinampa agriculture were very similar to what the conservation plan proposed. Therefore, while my background facilitated the ‘entry’ into the community and the lives of individuals as well as the understanding of the technical questions about agriculture and conservation, obviously it could not erase our cultural and political differences that made it difficult for me to understand the logic or arguments of many chinamperos.

Apart from my difficulties in understanding the chinamperos’ lives, I also ran into typical problems that arise when an outsider undertakes research in a foreign community and culture. The concerns involved are basically about unequal power relationships between the researcher and the community that often lead to a unidirectional flow of knowledge and information, inadequate compensation to the community and its members for their input to the research, and lack of merit and recognition of their contributions (Clifford and Marcus 1986, Smith 1999).

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<sup>17</sup> The government negotiators did, however, ask me to give them a copy of my dissertation.

When I came to San Luis, I talked about my research interests and intended methods with the three community leaders that I initially met, and we agreed about several conditions. One was that nobody is forced to give any information, and that I need their written consent. All information that I gathered was to be kept confidential and no individuals were to be identified. Finally, I promised that before I left, I would give them a written preliminary report of my work and send them the final dissertation translated into Spanish.<sup>18</sup>

These agreements were not made known to the community collectively; instead, I explained them one interview at a time. Not everybody was in agreement, and I got turned away a few times. Some chinamperos also challenged my presence in their meetings precisely because of a perceived unequal exchange of information. For example at one point, when farmers were discussing what they were going to demand from the government in exchange for altering their agricultural practices, one man, by the name of Miguel, pointed at me and said, "what we need is the kind of information this woman has" i.e. methods of cultivating ornamental plants in greenhouses in Canada. He then added, "She has never told us about that"<sup>19</sup>. Having been put on the spot I explained that I do not have that kind of information although I know about agriculture in the field. I also clarified my research interest in the processes of decision making in agriculture and resource use. I said that I had helped some farmers to find information on the web and that I would translate English-language material into Spanish if they wished. The discussion about my role ended there, but after the meeting I told Miguel that his point

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<sup>18</sup> Two weeks before my departure from San Luis, I organized a thank-you party for the chinampero families, where I distributed copies of my report to twelve individuals, left one copy in the public library in San Luis, one with the political office (*Cordinación*), and one in a stationary where many farmers buy supplies or use the computers.

<sup>19</sup> Farmers' meeting April 7, 2001.



was very important because it gave me the opportunity to explain my role in San Luis.<sup>20</sup> Afterwards some chinamperos asked me to translate documents, and in some cases I managed to do that but not in all. Some parents also asked me to teach English to their children, which we organized as a public event in the quarters of the church.

Another incident that illustrates the fear of investigators 'stealing' information happened when the farmers initially met to organize themselves for the upcoming negotiations with the government. Before they got into any details, Luís, who was standing opposite to me in the circle, said that he did not want outsiders to come to San Luis to do research or anything else; "They come, take a lot of information but leave nothing in return, and are never seen or heard of again",<sup>21</sup> he claimed. I had shivers going up my spine. No one replied to his comment and nobody seemed to pay attention to me, so I decided to stay.

Luís, whom I had not met personally at this point yet, was later voted to represent San Luis in the precinct's administration.<sup>22</sup> A few days after his election, I talked with another influential man, Gastón, who often contacted me because of some information he wanted to pass on to me. I said to him that I was worried that Luís would not be supportive of my presence in San Luis and that in this new position he could prevent me from being in the village or attending functions. Gastón replied that he had already talked about me to Luís and explained that it was important that foreign investigators spread the knowledge about the chinampas and the community in academia and the media. He had suggested that instead of being antagonistic toward my presence, Luís should try to find

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<sup>20</sup> In every meeting some people I had not met participated for the first time. This is why it was possible that they would have little idea of my work.

<sup>21</sup> Farmers' meeting October 2, 2000.

<sup>22</sup> Mexico City is divided politically and administratively into sixteen precincts. San Luis belongs to the precinct of Xochimilco.

ways of taking advantage of my perceived expertise. He also told me that thanks to their discussion, I did not need to worry. A few weeks later I got an invitation to Luís' office and he asked me to translate technical brochures about cultivation, which I promised to do; however, when I was supposed to pick up the material from him, he was not in and nobody had seen the material. I checked in a couple of times later, but the material was still not available. This happened in March. I did not run into Luís again, nor did I seek him out explicitly. He did not come to the thank-you party although I had left an invitation at his office.

Although my presence in the community was more or less accepted, these incidents illustrate the contentious character of cross-cultural research relations and how the researcher becomes part of local interests (Clifford and Marcus 1986, Sundberg 2003b). Without knowing details, I assume that some people's previous negative experiences with outside researchers have likely affected the content and extent of the information they made available to me. For some, my presence was more advantageous than for others and perhaps they gave me information that they would not give to just anybody. For others, my presence may have been a threat, and they may have decided to withdraw information out of sheer opposition or because they considered it somehow sensitive. For these reasons what I present is partial and may contradict some peoples' knowledge and understanding about the issues I discuss.

The dissertation has broadened and deepened my understanding of deep-seated elements in my own background, my shifting and sometimes even contradictory identity, and the political nature of my actions, be they as an academic or as a 'world citizen'. Most importantly my experiences doing field work in Mexico and writing the dissertation

have helped me to become more aware of the power relationships in my 'home' culture and history, and to engage with exploring them critically and in partnership with people whom my culture continues to keep at a disadvantage.<sup>23</sup> The task ahead is to translate these learning experiences to my future work in Canada, while continuing the collaboration with Sami scholars.

### Discussion of methods

As my goal was to uncover the details of the everyday 'machinations' of power as they are lived and experienced by individuals and groups, ethnography presented the method to understand the processes and meanings of power, both symbolically and materially (Herbert 2000). Like all ethnographic field work, this project is subject to the impossibility of 'truth'; while in keeping with contemporary theorizations of ethnographies, rather than seeking the truth, I work from the position of partial, situated, and subjective knowledge (Cook and Crang 1995, Haraway 1991). That is precisely the power of ethnography, which does not aim at generalizations but seeks to expose diversity and different subject positions, i.e. how people, in their own terms "render true" and make sense of the events they live (Cook and Crang 1995: 11); through ethnography one can "illustrate and explicate the connection between the life world of a social group and the world they construct" (Herbert 2000: 551). Furthermore, structures are enacted

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<sup>23</sup> In an opinion editorial in a major Finnish daily paper I explored how the controversy about attempts to harness a sacred spring for water exports in Samiland represents an opportunity for the Finns to critically examine their relationship with the Sami and start to take bolder measures in freeing the Finns from their legacies of colonization (Heimo 2003). With the Sami scholar Rauna Kuokkanen, I had a paper in the Annual Conference of the Association of the American Geographers, outlining how the attempts to harness the sacred spring contemporary colonization of the Sami intersected with the discrimination of women (Heimo and Kuokkanen 2004).

and sometimes challenged in daily life in ways that quantitative information cannot reveal; Herbert points out practices like a turn of a head or a blink of an eye (2000); “These are cultural systems of meaning” that cannot be discerned without thorough immersion in a “milieu” (Herbert 2000: 556).

However, even in ethnography, one still uses some criteria to select one’s sources and their information, as well as how to interpret what has been said. In this section I discuss how the methods and the selection of informants and information together with my positionality have affected the research.

Throughout the field work my goal was on the one hand, to understand the specific context and its associated events and social relations in San Luis and, on the other hand, to understand the diversity and conflicts of social positions and material practices in San Luis. Therefore I made reconnaissance visits to three other chinampa villages. I interviewed chinamperos in the Centre of Xochimilco (location in Figure 6 on page 48), who like San Luiseños have moved to greenhouse cultivation but also engage in tourism and often have salaried work. I also visited Cuemanco (location in Figure 6 on page 48) where chinamperos do not have greenhouses but practice ‘traditional’ agriculture and to a small extent tourism. In San Gregorio, I visited vegetable growers; a variety of lettuces and other greens are the most important products grown without greenhouses. With these comparisons I was able to establish an understanding of how the relative distance from the city, Xochimilco’s administrative centre, and tourist attractions, together with cultural values shape chinamperos’ livelihood choices and their aspirations for community. I did not visit chinamperos in Mixquic and Tláhuac (location in Figure 1 on page 39), communities where chinampas are either rapidly disappearing under urbanization

(Tláhuac) or they are under vegetable production without greenhouses (Mixquic). These communities lie further out from the city than San Luis, and due to longer distance to markets and educational opportunities or salaried work, most likely represent yet a different set of material and social circumstances in which chinamperos make ecological decisions.

My initial entry to San Luis was selective, specifically through a person that is open to consider new ideas and perceptions regardless of where they originate. Although I frequently consulted this person during my entire time in San Luis and even consider that he and his family became friends of mine, I systematically sought other informants with different positionalities and values. I therefore frequently relied also on the person who actively sought to promote 'traditional' methods and values to be applied in contemporary conditions. By juxtaposing the opinions and facts that these two men gave me and validating them with other individuals among their respective 'followers' and yet others who lie in between these two 'extremes', I acquired my understanding of how people think and why they think in certain and multiple ways about the chinampas, water, economy, cultivation, and community.

Thus I kept asking same questions and cross checking information with several individuals; often this led to confirmation, or as Cook and Crang say, to a point where "the accounts [that are told] begin to have the same ring about them" (1995: 11) but sometimes the cross checking brought up yet another point of view or argument, which I then took to another round of 'testing'. This 'testing' and validation required much time and the building of trust with several individuals, so that they could be 'bothered' frequently by what, after all, were my interests in the first place. And, as Cook and Crang

(1995) note, in ethnographic field work, the validity and breadth of information is always uncertain, partial, and subjective.

The opinions and perspectives that I was able to cover least were those of the paid workers on the chinampas and those chinamperos who have moved to San Luis recently from other provinces and are now cultivating independently. They too, make decisions that affect the environment and the community, and I got a glimpse of those dynamics in one of the meetings, but overall, while I could see that they are skilled farmers and workers, I did not explore in depth how they influence the politics of environment or conservation. Thus understanding their roles is one of the areas for future research.

I believe that over time my rapport with San Luiseños grew based on trust and respect, which I deduce from the fact that the longer I stayed in San Luis, the more often I was invited to family gatherings, fiestas, and community meetings by the chinamperos themselves. I understand that by so doing they sincerely opened their homes and offered their friendships and expertise but at the same time I am aware that there is a politics involved in how a community receives a foreign investigator, not just in how an investigator enters the community.<sup>24</sup> Besides gaining prestige from having a foreign acquaintance, my hosts solicited services and information from me. I tried to fulfill those requests as best as I could without letting myself be drawn into the politics of the village in ways that would complicate my access to any group I needed to consult. Therefore, I did not enter into interpersonal matters or 'helping' people with their dealings with authorities (which I was asked to do) but instead limited my actions to acquiring information about cultivation techniques, finding possible sources of funding,

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<sup>24</sup> Cook and Crang (1995), Sundberg (2003b).

and the acquisition of air photographs and maps that were used towards the collective effort in negotiations.

Despite these positive interactions, there were the antagonisms I described earlier. After being challenged in the meeting by Miguel with whom I had not talked earlier, I immediately clarified publicly my position and intentions, and afterwards talked face to face with Miguel. While this certainly did not satisfy his need for specific information, it did alleviate the antagonism because afterwards we were able to discuss facts and also joke informally, which I often tried to do when mingling among the chinamperos. I found that such dynamics helped to keep the lines of communication open and also reduced the perceptions of authority based on my origin and level of education.

Luís, the man who expressed his reluctance at allowing outsiders to meetings, remained distant to me. Despite some effort, we did not manage to organize our schedules so that our planned meetings would have happened. Instead we seemed to go in circles and communicate through a third person. I seldom ran into him on the streets or at public events where I could get an opportunity to talk with him informally. He was the chair in one of the farmer's internal meetings after the 'incident' I described, but, as the chair of this other meeting, he did not make any comments about my presence despite the fact that in that meeting some issues at hand were very contentious and some might have preferred those issues to be dealt with internally. Thinking of how the research might have been different if I had managed to talk to him, I point out his links to the central administration of Xochimilco. Being the representative of San Luis gave him a privileged position both in gaining information from and trying to press issues with the authorities. Thus his

specific position would have enabled me to trace another route and scale through which politics of the chinampas and water are wrestled.

Of all the relationships that I made during my time in San Luis, the most difficult for me were those with the authorities. Being cynical of their intentions and statements at the outset, it took me a long time to appreciate what I called their 'liturgies' as serious material for research. Therefore, instead of including and analyzing them systematically in the dissertation, I resorted to analyzing the written version of the conservation plan as one representation of the state. Having since, by the writing the dissertation, entered much more deeply into the intricacies of how the colonial powers operate in daily discourses and practices today, my discussions with the authorities present a rich material to be analyzed for an article that will explore the social construction of Mexican peasants in conversations between Mexican politicians or government functionaries and a white, European woman academic.

After several mothers and a few fathers requested that I teach English to their children, I agreed to do so on the condition that the classes were open to anybody's child. They organized the space, provided some of the materials, and gave me instruction in how they would like the classes proceed. A few mothers were always present in the classes. A total of eleven children attended initially but several dropped out along the way. Those who stayed the longest came from families that were not among my 'key' informants.

Although I initially thought that teaching English was one way of 'giving back' to the community on their terms, I regretted having agreed to it in the end. While I do not think it affected the research, I found out teaching my third language in my fifth language



too difficult. I am also aware of the possibility of unintended 'colonization' or influence on local cultures by foreigners teaching about their culture.

## Chapter outlines and arguments

Anticipating complex relationships among ecology, economy, social organization and culture, and specifically focusing on the calls for more nuanced and complex analysis of power and scale in political ecology (Paulson et. al. 2003), I examined the positionality and intersecting axes of power of various actors in the negotiations of the conservation plan in San Luis Tlaxialtemalco in Mexico City. By looking at the discourses and micro politics of conservation, this dissertation provides cultural understanding of how decisions that affect ecology are made at different scales and how they are articulated through cultural idioms in the charged context of the conservation plan.

Chapter two begins by outlining the background and context in which the conservation efforts take place in Mexico City and its rural areas. First, I address the chinampa system by highlighting its historical significance and contemporary importance as a source of livelihood and identity for the city and for the inhabitants of Xochimilco. Then, I discuss the environmental and economic changes in the city at large and in the chinampas in particular, to establish the background for the conservation effort and broadly situate the lives of the chinampero families. An overview of the political situation of the city explains the political climate in which the ruling party and the city government attempt to conserve the city's water resources. To contextualize the negotiations over the conservation plan in 2000-2001, the chapter also outlines previous conservation efforts in

the chinampas, specifically their contentious points and their effects in local communities. Finally, the chapter introduces San Luis Tlaxiātemalco as I saw and experienced it, emphasizing the dynamic changes in San Luis that are tied to national and global processes and people's daily lives and their sense of place; my goal is to illustrate the people's material and cultural conditions that shape how conservation efforts 'fare' at the local level.

Bearing in mind the complex relationships among ecology, economy, social organization, and culture, the three empirical chapters examine on three social scales the positionality and intersecting axes of power and knowledge of various actors in the negotiations of the conservation plan. Chapter three operates on the scale of the state because political ecology studies in the third world have shown that it is important to understand how the colonial intervention in third world countries informs contemporary patterns for human-environmental interactions and associated power relations (Bryant 1998, Escobar 1996, 1999, Peet and Watts 1996b, Moore 1996, 1998, Jaroš 1996, Guha 1997, Gupta 1998). Moreover, colonial ideas continue to influence conservation efforts (Braun 1997, 2002, Sundberg 1999). I analyze how such "coloniality of power" (Quijano 2000, Mignolo 1999) informs the conservation plan in that state ideologies influence local ecological changes as well as social relations (Nightingale 2003). I draw upon frameworks that read writings of Mexico's history as colonizing texts (Rabasa 2002), which, in order to facilitate nation building, rearticulate and reconfigure ideas about indigenous people and peasants at various historical junctures (Hilbert 1997, Saldaña-Portillo 2002, Quijano 2000). With this framework I analyze Mexico City's conservation plan (DGF 2000) asking what are its underlying assumptions about chinampa agriculture,

rural communities, their social organization, land use practices, and contributions to the conservation efforts? Such assumptions represent the knowledge the government has and wants to assert about rural communities to define them discursively; I argue that these assumptions perpetuate historically-based inequalities between social groups and therefore charge conservation efforts with political struggle.

Chapter four moves to the community of San Luis Tlaxialtemalco, where I first analyze this political struggle. I ask how do the state's assumptions about total communities inform local responses to the conservation plan, and how do local power relations influence what knowledge enters into conservation efforts, and how local might power affect the environment? I examine power locally in order to complicate ideas of 'community' (Moore 1998, Watts 2000) by uncovering its heterogeneity and internal power (Zimmerer and Basset 2003a).

I juxtapose the conservation plan's homogeneous assumptions of rural communities with the internal contestation of community relations that ensued when farmers organized to negotiate with the government. Documenting the politics and power dynamics among chinamperos in their internal meetings and when they met with the government, I clarify how class, culture, and values shaped alliances in the village. I show how subgroups and individuals adhered to, and separated from, the larger group of negotiators that the farmers initially formed and I illustrate how this repositioning of groups and individual farmers together with their specific representational strategies influenced what knowledge and resources would enter into the negotiations. I argue that homogenizing ideas and 'stories' about communities and their agricultural practices obscure the complex web of ecological, economic, social, and cultural relations and

politics in which environmental actors are embedded. Such stories therefore fail to account for the myriad and intricate realities in which conservation policies are implemented, which in turn 'select' whose knowledge determines conservation practices.

Chapter five engages with chinampera women in San Luis. Instead of focusing on gender relations, I examined women's roles and knowledge because my goal was to engage in research that emerged from daily events in the village. Because women are the economic managers and marketers in the family enterprises, it became important to understand their multiple roles, environmental knowledge, and agency. I ask, how do women engage their environmental knowledge in the context of the conservation plan?

In the context of women's every day lives and using the idea of silence as agency (Koivunen 1997, Mahoney 1996), I examine how women make decisions that affect the environment and how they engage their knowledge despite their apparent silence, i.e. their absence from the conservation negotiations. I seek to complicate the relationship between knowledge and agency by looking at the relationships and expectations in which women's lives are embedded and I consider both the material and cultural aspects that constitute women's economic activities, including institutional perceptions of women, domestic division of labor, class, values, and material aspirations. I also look at how women's knowledge operates in the web of economic, family, and community interests, and how women address and negotiate patriarchal relations that affect their ability to engage their knowledge in the formal political process of the city's conservation plan.

I show the complex ways in which knowledge, women's responsibilities, and agency intersect. On the one hand, women's daily lives and decisions seek to advance goals consistent with their values even when their decisions may contradict their

environmental knowledge and undermine the long-term health of the environment they depend on. On the other hand, despite their absence from the formal negotiations over the conservation plan, women exercise their agency over the environment in ways that intersect with their responsibilities, roles, and relations in the village. Thirdly, women's institutions' perception of 'women' do not encourage self-employed chinampera women to engage in institutional programs that might increase their equality, knowledge, and power. Therefore, I conclude that while women may have intricate knowledge of their environment, it does not automatically 'translate' to 'progressive' action or make women the "most reliable narrators for observing and assessing environmental change" (Seager 1996: 297) due to the many ways in which women's roles are defined and negotiated.

In the concluding chapter, I first summarize how power in economy, ecology, and society mutually constitute each other in the everyday processes of conservation, livelihood procurement, and social relations across scales (Castree and Braun 2001, Nightingale 2003, Zimmerer and Bassett 2003a). I conclude that underlying these contemporary relations is the colonial history, which is contested and perpetuated in the politics of conservation with ecological outcomes. These colonially-based social relations intersect with power in communities, men's and women's roles, and with their respective set of decisions about the environment. The final chapter also outlines the dissertations' contributions to theoretical and methodological considerations in political ecology, ideas of conservation, and research on the chinampas. Last, it lists further research needs.<sup>25</sup>

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<sup>25</sup> About citing quotes from interviews and meetings: unless otherwise indicated I use only pseudonym initials and names of individuals in order to protect their identity. I place the references of quotations and statements in footnotes and indicate the person, the event, and the date; for instance, Oscar Fernandez Gonzalez (or OFG), farmers' meeting, October 2, 2000. References to written sources appear within the text or in footnotes. The bibliography lists all written sources regardless of where on the page they appear.

CHAPTER 2. "*SEÑORITA MAIJA, DISCULPEME PERO NO TENEMOS AGUA. NI*

*LUZ HAY*":

WATER, CHINAMPAS, AND RURAL LIVELIHOODS IN XOCHIMILCO

Approximately once a week, my host said in the morning, "I am sorry Maija, but there is no water. We do not have electricity either". Then I knew that the shower that I usually took after the day in the field would be off for that particular day. The outage could last anywhere from half a day to three days, was never announced ahead of time, and created great problems for greenhouses. The public laundry facility filled up when women came out to do laundry because the tap at home was dry, and men lined up by the public tap in the enormous aqueduct that rushes the water from San Luis into the city. San Luis Tlaxialtemalco, one of the 14 pueblos of the precinct of Xochimilco, is the most important source of Mexico City's water thanks to its several springs, most significantly the legendary Acuezcómac<sup>1</sup>. Ironically, San Luiseños go many days of the week without water because there is not enough of it for everyone in the city.

Electricity, and its infrastructure, are inadequate as well. The demand in San Luis frequently surpasses the city's supply or the capacity of the transformers. A block away from my hosts' house is a dance hall, where many big loudspeakers keep music going during *fiestas* – they use so much electricity that if, at the same time greenhouses and homes in the area have a peak consumption, a loud bang down the road will indicate that a transformer has blown up. It could take up to three days to get it and the scorched lines replaced.

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<sup>1</sup> The word is Nahuatl and means the place of the spring.

Although San Luiseños are used to these outages and have created ways to get around them, their daily lives are interrupted. Farmers have to rush to the greenhouse and engage the gasoline-powered generators. In the plant market, women cover plants to prevent them from drying. In homes, refrigerators warm up and food goes bad, people have to spend money on bottled water, and children go out dirty.

Water has given identity and sustenance to San Luis and other villages on the margin of the former Lake Xochimilco for hundreds of years (Figure 1). In the 11<sup>th</sup> Century, the Aztecs built numerous platforms onto the margin and created a grid of canals and fields; eventually this agricultural system, called the chinampas, became the backbone as the empire's food supply. Chinampa<sup>2</sup> derives from the Nahuatl word *chinamitl* and means "*seto o cerca de cañas*" or 'a wall of reeds' (Santamaría 1992). The name refers to one way in which these cultivation and habitational platforms were built: according to some accounts, a fence was built on lake shores to delineate the area which was filled by piling up reeds, twigs, mud, and soil to elevate a platform above the water (Coe 1964). The chronology, techniques, materials, form, and hydrological context of construction has likely varied but the objective of elevating a platform out of the water to facilitate cultivation and habitation has been common throughout the known history of the chinampas.<sup>3</sup>

For generations chinampa-agriculture continued to feed and clothe Xochimilcans and in evolving form and function it continues to do so. Not without problems, however: the intermittent lack of water and electricity signal that the relationship with the huge

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<sup>2</sup> I do not italicize this word or its derivatives, as they are in common use in the English language literature about Mexican agriculture and about agroecology.

<sup>3</sup> Crossley [1990] provides the most recent review of the literature regarding construction.

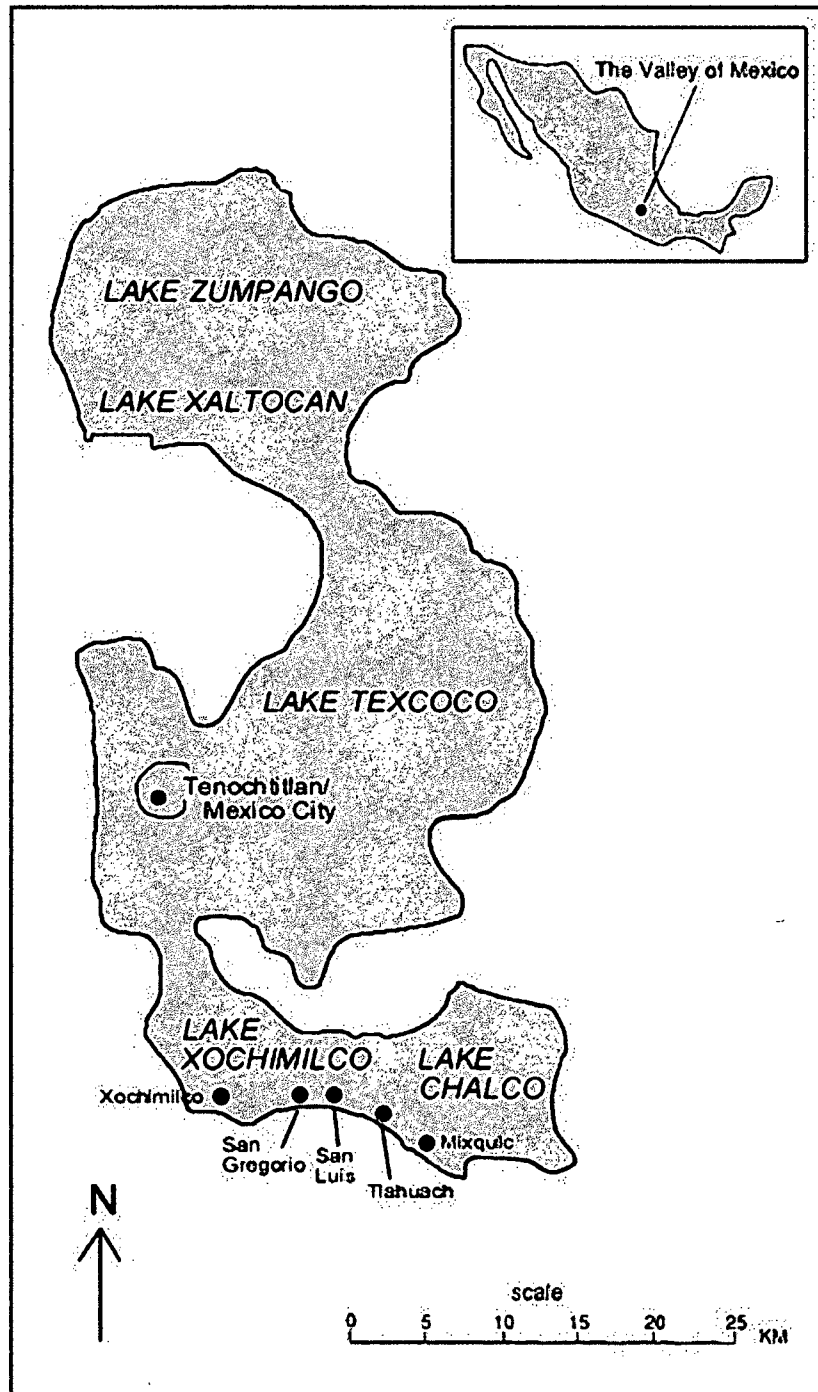


Figure 1. Precolonial lakes in the Valley of Mexico and location of Xochimilco and the villages discussed in the dissertation.



and growing city has become problematic in terms of resources. The chinampas and chinamperos compete with the city over water, and urbanization physically spreads out onto the chinampas.

While the history of the relations between Xochimilcans and the city have been ridden with conflicts since 'day one' of Hernan Cortez's arrival to this part of the Aztec empire (Pérez Zevallos 2003a), the diversion of the spring and the desiccation of the chinampas mark a modern day conflict that lives on in the minds of the residents in San Luis Tlaxialtemalco. Without asking people about the spring, they volunteer their stories of its size, the purity of its water, the abundance of food plants around it, and the festivities on its shores. The tears in their eyes indicate that they are still processing the trauma of losing this natural feature that has given character to the place and identity to its people. "*Se nos robaron el agua*" [They stole our water], is the way in which San Luiseños often describe the tapping of the spring.<sup>4</sup> The phrase also reveals the antagonism that the loss of the spring brings to the relationships between the city and its rural populations.

These antagonisms are being replayed in the beginning of the 21<sup>st</sup> Century. The central issue continues to be water: the chinampa fields lie above the city's fresh water resources. Chinampa farmers increasingly use chemical inputs and technological innovations such as greenhouses in part because of the water shortage. The city government is concerned that these practices will contaminate its water resource but the chinamperos, who have had to adjust their livelihood strategies many times to suit the

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<sup>4</sup> Some residents say, however, that they never owned the water in the first place but it belongs to nature.

city's needs, are displeased with the requirement that they do so yet again. To prevent any possible contamination, in August 2000 the city passed a conservation law that strictly regulates agricultural practices on the chinampas by insisting on chemical-free and 'organic' agriculture. The farmers, i.e. the chinamperos are concerned about their source of livelihood (Canabal-Cristiani 1997, Torres-Lima et al. 1994) and irritated by the fact that the city asks them to make significant changes at a time when they think that they have just "learned to fly"<sup>5</sup>, or developed technologically and economically a greenhouse production that enables them to meet their needs.

This chapter sets the context for this relationship through the looking glass of competing water needs and efforts to conserve the chinampas. I start off with the chinampas because that is where my life and the life of the people whom the dissertation describes coincided for twelve months. The first part of the chapter thus explains chinampa agriculture, its preconditions, extent, and recent changes. I then outline how the environmental conditions for this type of agriculture have changed and how they are linked with the city's growth. The metropolis' social environment also affects the chinampas and so do economic changes in the city. I describe how the chinamperos have adjusted their livelihood strategies and production technologies in order to combat both the perils of urban growth and to take advantage of the opportunities it offers.

In order to set the background for the conservation plan that the dissertation examines, the chapter then describes earlier efforts to rescue and restore the chinampa ecology. I also outline the conservation legislation and negotiations that started in the summer of 2000. After discussing the content and rationale of the legislation, I outline the

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<sup>5</sup> FJO in the meeting of the board of the *consejo*, Feb. 17, 2001.

political environment in which they unfolded. The chapter ends with a description of the village of San Luis Tlaxiátemalco and the daily lives of the chinamperos.

### The chinampa

Although chinampa and chinampa-like cultivation platforms have been common in prehistoric, historical, and contemporary times throughout Meso- and South America and in the Andes<sup>6</sup>, the term chinampa is invariably attached to the lakeshore fields in the Valley of Mexico. While the chronology of the construction is uncertain, the oldest fields uncovered to date were built probably 770-880 A.D. (Nichols and Frederic 1993). Later the Aztecs manipulated the hydrology of the Valley significantly (Palerm 1973), thereby initiating the intensive control and alteration of the lakes by building causeways that separated the saline waters of the lakes in the north from the freshwater lakes of Xochimilco and Chalco in the south (Figure 1). They also intensified the construction of new chinampas, which eventually reached a maximum of approximately 10,000 hectares between 1400 and 1600 A.D. (Armillas 1971, Parsons 1976, Sanders 1971).

Much folklore and admiration of the chinampas' productivity and sustainability fills the pages of cultural ecology, development, and agroecology literature. Indeed, this agricultural technology together with the social and economic organization of the Aztecs was the backbone of their food supply (Parsons 1976), and was admired by the Spanish

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<sup>6</sup> A Review of the Precolonial distribution and technologies of wetland agriculture in the Americas is in Denevan (2001) and Whitmore and Turner (2001). Contemporary reactivations or recreations of chinampa-like fields are described in Chapin (1988), Erickson (1998), Gómez-Pompa (1990), and Kolata et al. (1996).

*conquistadores* (Díaz del Castillo 1956),<sup>7</sup> colonial administrators, missionaries, and travelers (e.g. de Acosta 1940, Von Humboldt 1966), and foreign diplomats (e.g. Calderón de la Barca 1843). The bounty and variety of produce in the chinampas has inspired artists who describe Precolonial Mexico (Figure 2) and so has the *paseo*, or the elitist colonial practice of outings in the canals (Figure 3).

What is this productivity based on? Ideally a chinampa maintains fertility by recycling energy and materials as a closed system (Coe 1961, Jiménez-Osornio and del Amo 1986; Figure 4). The high fertility of the canal muck that is scooped onto the fields provides ample nutrients and, together with the incorporation of vegetation into the soil improves its physical characteristics. The willow trees, or *ajuehotes*, that surround the chinampas also provide organic material, which improves the soil's quality and turns into fertilizer when it decays. Remains of aquatic vegetation and animals also supply nutrients. Plant intercropping and crop rotation create an internal mechanism that controls pest and disease outbreaks without the use of synthetic chemicals. Wild terrestrial and aquatic plants and animals, which used to be numerous, are another source of food and medicine. In this system, up to three or four harvests a year were historically possible.

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<sup>7</sup> Crossley (1999: 144 fn 1) asserts that Bernal Díaz' description of the sumptuous markets in Tenochtitlán may not be based on actually seeing the chinampas; considering that Díaz wrote his account many years after the conquest, he may just have written down what other people had described to him. Like many other colonial accounts, Díaz also attaches a 'wonder' and 'bounty' to the chinampas, qualities that may tell more of the viewers' reactions to the unknown than the actual reality (Greenblatt 1991). One such example is the folklore about 'floating gardens', which circulates particularly in tourism. In fact, the chinampas may never have floated and some of the early travelers who made such claims may have mistaken a large boat or 'canoe', filled with produce for a chinampa (Crossley n.d.). Those observers never perhaps put their foot on a chinampa. However, the contention that the chinampa system is productive enough to have become the 'backbone' of the Aztec food supply (Parsons 1976) is a reasonable one and has been documented in the contemporary chinampas. (E.g. Armillas 1971, Coe 1961, Jiménez-Osornio and del Amo 1986).

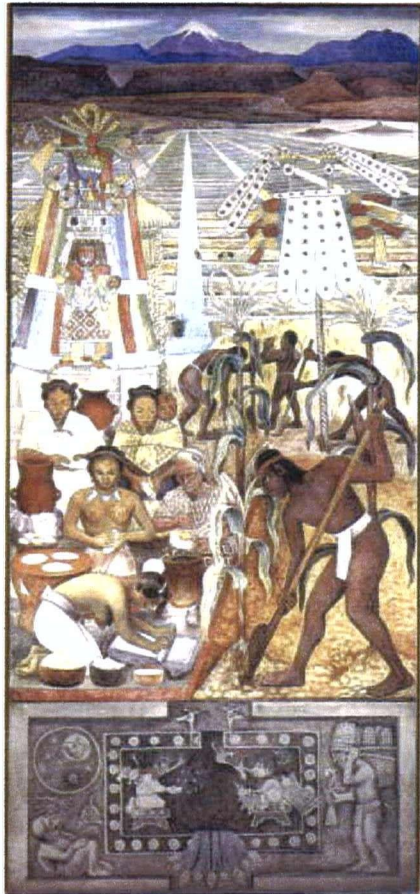


Figure 2. Diego Rivera's mural Huastec Civilization, 1950, depicts people working the land with chinampas in the back ground. National Palace in Mexico City. Copied from <http://www.fbuch.com/murals.htm>

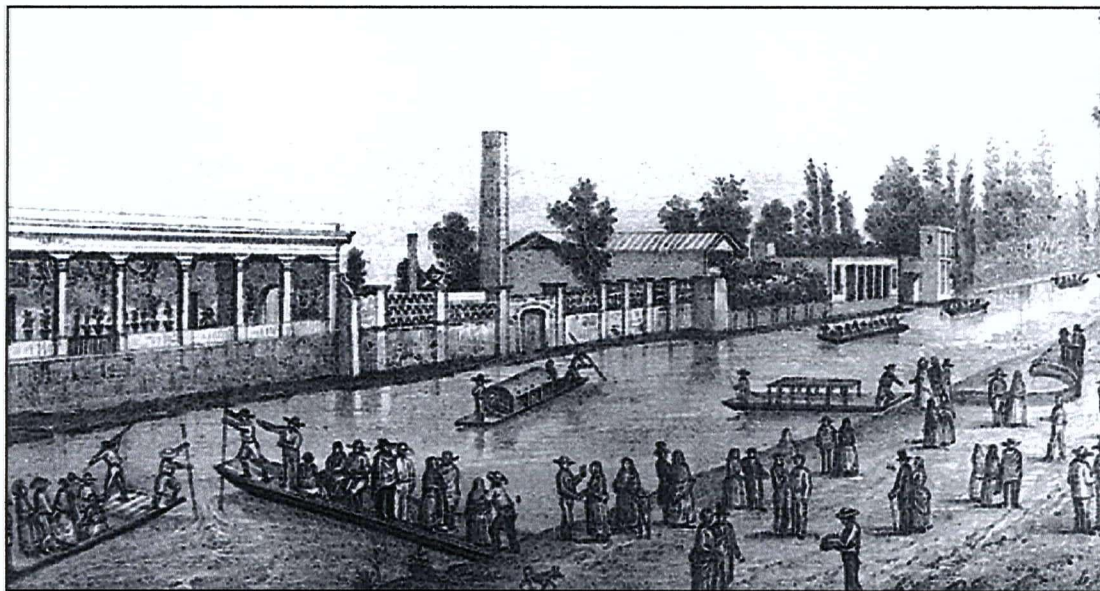


Figure 3. Manuel Rivera Cambas' lithography of a Paseo on Canal de Viga. 1882. Source Hernández Silva 2003: 17.

Chinampa cultivation is therefore considered one of the most productive agricultural systems in the world (Gómez-Pompa 1978) and, together with similar fields in the Andes, it has prompted hope and inspiration for development specialists and agroecologists. Imitations and modifications have been built outside of the Valley of Mexico and in other countries. Some experiments failed, at least partially, not because of the 'inherent' characteristics of the system but due to the lack of attention to, and resources for, the economic and social organization of the communities and markets (Chapin 1988, Gómez Pompa 1990). Others proved to be a success when the overall situation was considered carefully (e.g. Erickson 1998).

However, the 'original' chinampas in the Valley of Mexico have undergone a tremendous reduction and transformation. The Spanish Conquest and the ensuing colonial administration drastically changed the economic and political framework in which the chinampa production had occurred;<sup>8</sup> the ecological changes were crucial, as well.

When the Spanish administration embarked on a massive drainage of the Valley (Palerm 1973, Ezcurra et al. 1999) aiming at drying the lakes, water levels in the chinampa system dropped and subsequently some fields were abandoned. Since the late 19<sup>th</sup> Century the extraction of water from the valley's aquifers underneath the lakebed by the growing city further lowered water levels in the scanty remains of the lakes and in the

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<sup>8</sup> During the Aztec era Xochimilco belonged to the Aztec Empire and Tenochtitlán extracted tribute from its vassals. It had nominated landlords to individual chinampas in order to produce food for the empire as well as the landlord's consumption (Brumfiel 1991). The political changes in the indigenous administration during the colonial period are outlined in more detail in chapter three but overall, the indigenous communities and leaders gradually lost control over their lands as well as their subjects when the colonial administration nominated its own leaders and appropriated land for Spaniards. After Mexico's independence in 1821, land speculation by outsiders continued in the wetlands. For instance, hacienda owners claimed areas that emerged from the water and had been used communally by the chinamperos

chinampas. Urbanization has had other consequences as well; with many chinampas paved over for streets and built over with recreational, housing or commercial structures, submerged due to the subsidence of the ground, or abandoned due to farmers' decreasing interest in this type of agriculture or life, only about 1,200 hectares of chinampas are under cultivation today, including chinampas that were built as late as in the 1950's. Another thousand or so hectares are lying idle<sup>9</sup>.

The direction of change within the entire chinampa zone has been variable. The city has appropriated large areas close to the urban center, paved them over, filled in canals, and built shopping malls, streets, an ecological park, and recreational areas on top of them. In 1967, the city expropriated an area in the Northern part of the chinampas, where it built the *pista olímpica*, the rowing stadium for the 1968 Olympic Games. In 1990, the city expropriated just over one thousand hectares in a comprehensive rescue effort to protect the underlying aquifer and to restore the wetland ecology.

Next to the *pista olímpica* in the northern zone, in the area called Cuemanco (Figure 5), collective working patterns in the community have been a significant factor in reintroducing the cultivation of vegetables, corn, squash, and 'traditional' ornamental plants with 'traditional' techniques enhanced with some machinery. Many chinamperos in

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(Hernández Silva 2003). Post-revolutionary land reform gave the possession of these areas to the ejidos of Xochimilco and San Gregorio in 1920 and 1922 (Anon. n.d. b). Chinampas, however, continued to be private property and new ones were built on land claimed from the receding water up till the mid 1950's (Chinamperos in San Luis, personal communication 2000, 2001). In the 20<sup>th</sup> Century the rapid growth of the city caused numerous effects in the chinampas.

<sup>9</sup> These figures are from 1990 (Departamento del Distrito Federal [1990]) after which some chinampas may have come under cultivation and others abandoned or left under settlements. Another source says that the entire wetland zone comprises 8,349 hectares: 2,000 hectares are chinampas and the rest are unbuilt wetland fields without the extensive canal system. A total of 6,300 hectares are cultivated, and 14,000 families own land: 5,763 are chinamperos, 890 small holders but not chinamperos, and 7,387 ejidatarios (i.e. they own communal land) (Cisneros Quiroga 1991: 27).



the area are self-employed or salaried in tourism and recreational activities, and others have jobs outside of the chinampas as well. For example, I spoke with a veterinarian and a teacher.<sup>10</sup>

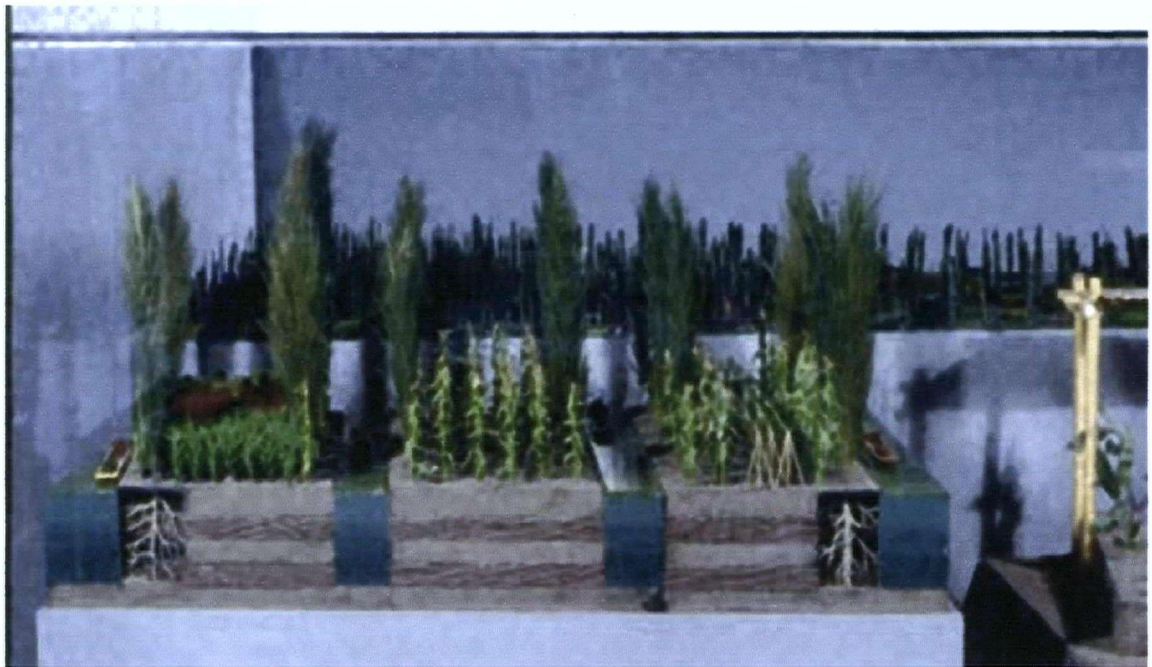


Figure 4. Schematic representation of chinampas. Their construction and function are discussed in the text. Photo of a miniature at the Museo del Templo Mayor, Mexico City.

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<sup>10</sup> Local informants during my visit in the area in 2000.



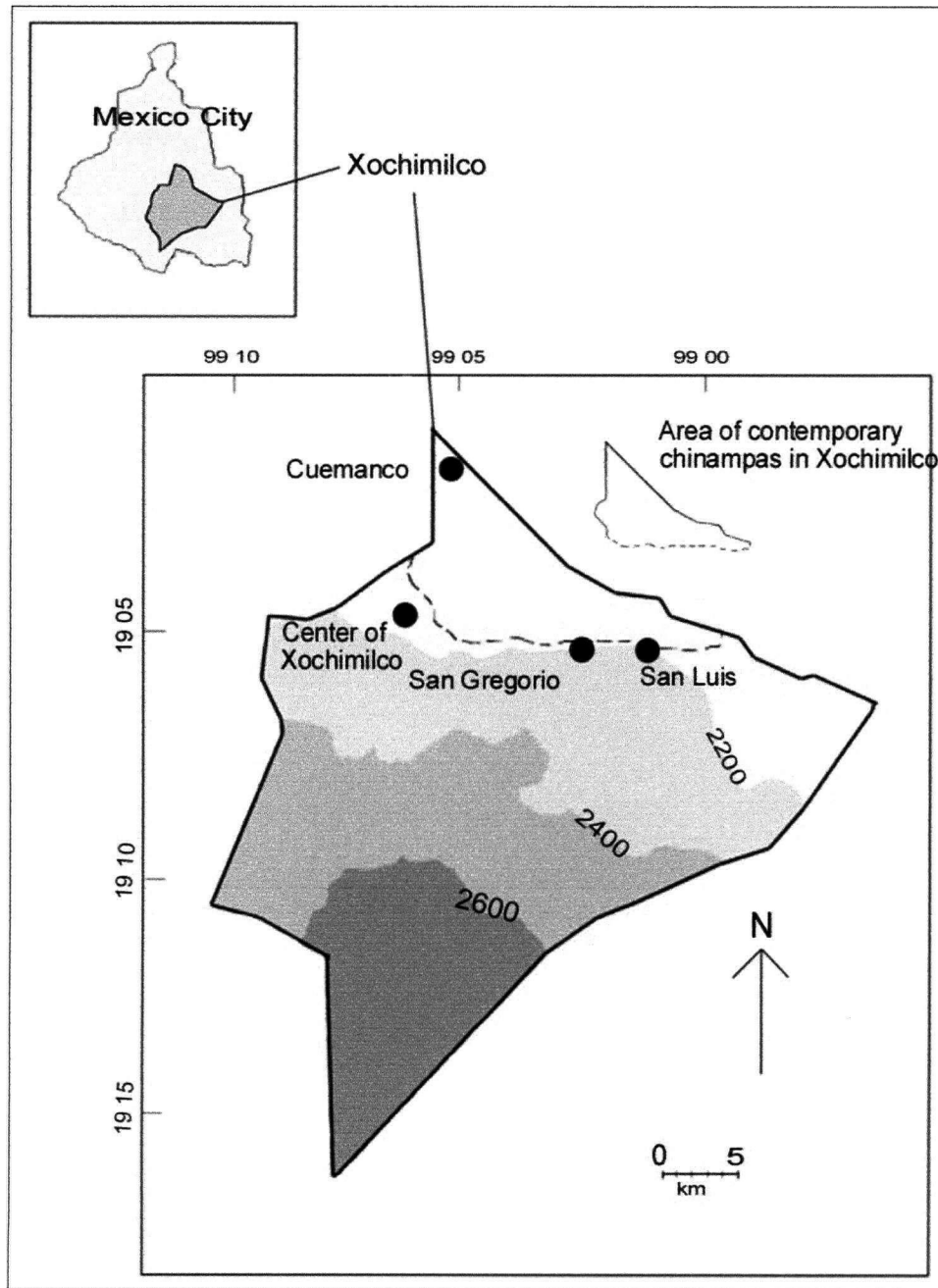


Figure 5. Location of Xochimilco and its villages discussed in the text. Basemap from Farias Galindo 1978.



Figure 6. Tourists on a modern-day paseo in the canals of Xochimilco.

Tourism is more intensive in the chinampas in the center of Xochimilco, where there are several *embarcaderos* (landings) with decorated *trajines* or canal boats (Figure 6) complete with musicians, restaurants, parking lots, and souvenir shops. Many of the *trajineros* (boat men) are part time chinamperos as well. A total of ten thousand people are involved in tourism within the chinampas, and double or even triple occupations are common among the chinamperos (Cisneros Quiroga 1991: 27). Greenhouse cultivation of ornamental plants is also very intense in this area, as is the production of perennial garden plants in the open. Some greenhouses are located right by the *embarcaderos* and lure visitors to buy plants. This practice reduces farmers' transportation costs to the market.

Tourism has not come without problems. Garbage, drinking, excessive noise, violence, and more recently drugs have impacted the environment and the business – the

elitist colonial *paseo* has been transformed into a rowdy middle-class weekend bash. Regulations and vigilance, including a “riparian police” force is now active and highly visible in this part of the chinampas (Zamora 2002).

Another factor that has affected the chinampas in the center of Xochimilco is the housing construction by chinamperos but especially by people who move into the city and cannot afford regular housing prices. Instead, they build illegally on the chinampas. Entire neighborhoods have sprung up; some of them are later incorporated as urban areas and others are left alone or demolished by the riot police (Servin 2002).

Further east along the old lake margin, greenhouses are nestled among residences, streets, and patches of forest. The density of all these diminishes but does not disappear towards San Gregorio de Atlapulco (Figures 5 and 7), where vegetable cultivation in the open is important – urban markets consume a variety of greens including various lettuces, spinach, and the local delicacy, *verdolaga*. Greenhouses also have sprung up in San Gregorio both in the chinampas and on the dry land.

In San Luis Tlaxiátemalco (Figure 5), which is the focus of this dissertation, greenhouse production in the chinampas creates the biggest turnover. Every year the technology associated with the construction and operation of the greenhouses becomes more sophisticated aiming at economies of scale, an even product quality, easier and faster manual work, and bigger profits. At the same time, many grow herbs and hardy ornamental plants in the open with traditional techniques (Figure 8). Many greenhouse growers also integrate traditional techniques with greenhouse cultivation for certain

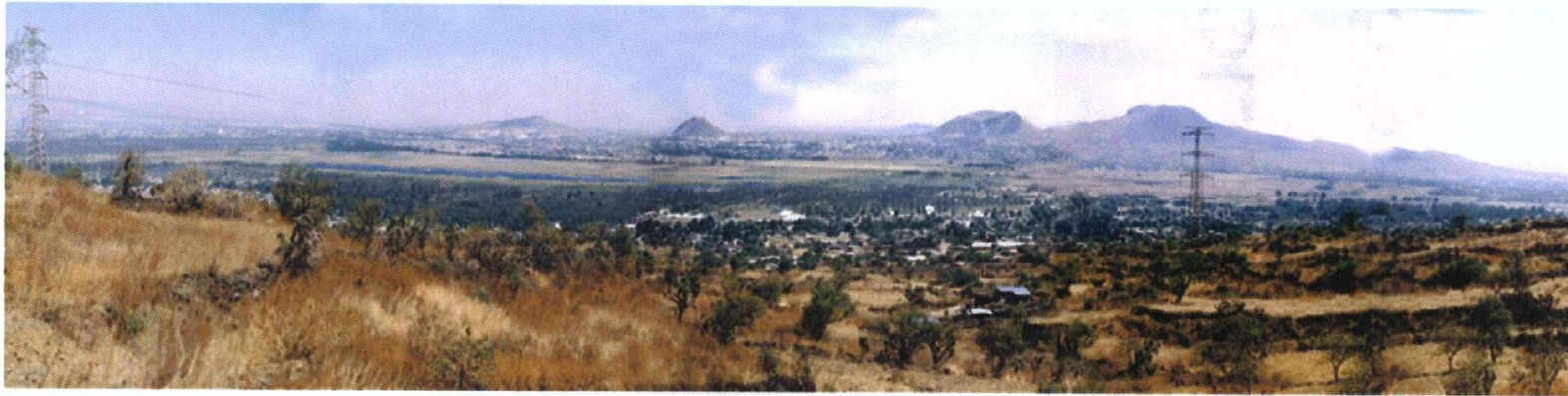


Figure 7. View north across the wetlands. The village on the left is San Gregorio Atlapulco and the one on the right is San Luis Tlaxialtemalco. The green area in the center is part of the wetlands with chinampas where there are trees. The highway runs east west along the southern edge of the wetland, and is lined with houses. Housing creeps up along the hillsides by the night.





Figure 8. 'Modern' greenhouse next to 'traditional' chinampería in San Luis.





Figure 9. Corn on a chinampa in San Luis.



Figure 10. Housing on a chinampa in San Luis.

plants and purposes. A few chinamperos continue growing corn (Figure 9) for household consumption and to sell the leaves to artisans and the stalks for fodder. Some do not use money in these transactions but barter corn stalks for manure, which is a good fertilizer. Housing construction on the chinampas in San Luis is increasing (Figure 10) but in 2001 remained limited thanks to the high degree of occupation by cultivation. The chinampas in Tláhuac (Figure 5) have undergone a different transition: many canals have been filled to create larger fields that permit the use of tractors and other machines in open field production of grains and beans. In effect, this cultivation is no different from dry-land cultivation (Crossley 1999). Other areas are about to succumb to the expansion of the urbanizing core of Tláhuac. In Mixquic (Figure 5), chinamperos have not yet converted to greenhouses and cultivation in the open using traditional techniques continues although the cultivars have changed predominantly to Brassicas, celery, and chard (Crossley 1999: 142).

Urbanization is thus affecting the chinampas everywhere although the degree varies. A whole host of effects has followed urbanization, and the chinamperos most often mention the environmental consequences first.

#### Environmental conditions

How did it come to this?

In discussions about the environmental conditions in the chinampas, water usually takes center stage. While water is crucial for cultivation and a source of identity to the entire community in San Luis, its deterioration together with other environmental conditions gnaws at the complex ecosystemic functions in the chinampa zone. The severity and emphasis of the water-related problems vary in different parts of the chinampa zone but long-term human-induced hydrological changes in the Valley underlie current conditions.

The Aztecs built dams and aqueducts that contained the 'natural' flow of waters in the Valley and guaranteed that the chinampa zone would be fed with fresh water while separated from the saline waters of the adjacent lakes (Doolittle 1990; Palerm 1973). Initially erosion of the hillsides, 'naturally' or due to deforestation, would have created higher spots on the lakeshore, where chinampas could be built by piling up sediments, rock, soil, and reeds (Armillas 1971).

The hydraulic works of the Aztecs affected the distribution of water more than the water level in the lakes but when recurrent flooding in the valley destroyed crops and wreaked havoc during the early colonial period (Hernández Silva 2003), the colonial administration embarked on draining the lakes (Ezcurra et al. 1999). This initial drop in the water level left some chinampas too dry for chinampería.

Information about detailed changes in the ecology and the social and economic circumstances in the chinampas during the colonial period is scant (Jimenez-Osornio et al. 1990). Therefore, it is difficult to discern changes in the cultivation practices until the late colonial period, when Spanish and European food items influenced the selection of



cultivars (Crossley 1999) and particularly European vegetables found their way into the chinampas (Rojas Rabiela 1993b).

People built new chinampas until the middle of the 20<sup>th</sup> century, when water levels in the remnants of the lake continued to drop and expose new land;<sup>11</sup> however, older chinampas on higher ground were left with too little water<sup>12</sup>. This 'ultimate' drop in the water level occurred after the city started to withdraw fresh water from the springs that lined the old lakeshore in the south. The city's hydrologists and engineers, who actually built the pumping stations and an aqueduct from Xochimilco to the City since 1904, did not mention that the springs were a vital source of irrigation and drinking water for the villagers. Nor did they consider their role in the chinampa ecology (Crossley 1999).

The biggest of the springs, the Acuezcómac was in San Luis. People cite numerous facts, legends, and memories about the spring and activities around it. Common characterizations used by local residents to describe the spring include its enormous size (its diameter was twenty meters), the force of the emerging water, "*brotandose un metro y medio*" [gushing a meter and a half high], and the purity of the water, "*limpio, limpio*" [clean, clean]. On the day of St. John in midsummer, the villagers from San Luis and the neighboring Tulyehualco used to gather for an all-night outing around the spring to eat, dance, court, play, and recite stories and legends about the spring (Bravo Vázquez 1997).

Mr. José Genovevo Pérez Espinosa from San Luis told me this legend:

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<sup>11</sup> UE explained to me how the government had encouraged people to claim wetlands from the receding water after the Mexican Revolution in the 1920's. His father had occupied new lands and build chinampas on them at that time and he himself built his last chinampas in the 1950's. Personal communication 2000.

<sup>12</sup> Too little water in terms of the presumed 'subirrigation', or the capillary rise of water into the root zone of plants, to function properly, and too little in terms of easy irrigation by manually lifting water from the canals onto the platforms.

Two siblings were playing and, because at that time the village had water - which it does not have today - they went to the spring with two buckets. The water was moving and the boy noticed a *carpa* [a fish]. They wanted to catch it, and she told him to grab it by the gills, and he stuck his hand into the mouth of the fish but it escaped... It was white and beautiful like gold.

Then the boy got a high fever.

He looked for the fish again and soon he got a white one in the bucket again. But the bucket tipped over and the fish returned to the water. Eventually he got a white fish, beautiful like gold, and he stuck it between the rocks. But again it escaped.

Later when they returned home he got high fever and was hallucinating in his bed. He said to his mother, "Help me mom, I have scales. Please take them away; I am a fish". People say that when a person has a fever higher than 39 degrees, the skin starts to chip away as if it was made of scales. Again he asked his mom to help, "I am a fish". That is how the night continued.

In the morning a beautiful cloud appeared, a cloud like milk, and it stopped above the boy's house. It rained a little chipi, chipi [shows with his fingers] and the water glimmered like crystal when the rays of the sun reflected from it. At that moment, the boy died.

This cloud and this rain mean that the spring's siren asked for the boy's life.

Supposedly the siren is a Greek figure, but this legend is Prehispanic. That's how cultures mix and legends change, and everybody has his or her own version. My grandmother told me this legend and its name is The Boy Who Converted to a *Carpa*. It is from the village, its roots, and it is important.

There is another legend of the siren leaving the spring. When the city tapped the spring, the spirit of the siren rose to the clouds with the crystalline rain, and it rose from the spring of Acuezcomac. The cloud wandered in circles from one side to the other [of the volcano Teuhtli] and stopped in Milpa Alta at a place called Tulmiac. Because the mountain is crying, a spring appeared at that place. This spring never dries up but it is not like the one that was in San Luis.

José Genovevo Pérez Espinosa May 19, 2003  
personal communication

The legends and the water give identity and unity to the community by keeping alive the memory of the spring that characterized the village and was central to the well

being of its people and the traditions of the community. “They are our roots; they are from the *pueblo* and they are important”, Mr. Pérez assured me (Figure 11).



Figure 11. Mr. José Genovevo Pérez Espinosa by the remains of the Acuezcomac spring in San Luis in June 2000. Location in Figure 31.

As the city's water extraction from the springs increased, some canals dried up completely by the 1960's and others had so little water that cultivation was hampered

(Torres-Lima et al. 1994, local residents, personal communication 2000, 2001). Because of this initial desiccation, the subsequent 'rescue' efforts and their secondary consequences, and the rapidly changing economic and social circumstances, the alteration of the chinampa ecology has accelerated and intensified.

#### The situation in the last fifty years

No doubt the material and cultural importance of the abundant water and its superb quality have been vital to the chinamperos for a long time. Many consider water-related issues the single most important agent of environmental change in the chinampas. So viewed, water-related problems have spurred a whole host of cultural, economic, and environmental changes that gnaw at the feasibility of 'traditional' chinampa cultivation (e.g. Torres-Lima et al. 1994). Others stress that the chinamperos' choices have also contributed to the changes since the 1950's (Crossley 1999) and that modernization and urbanization, broadly speaking, do not favor 'traditional' values, practices, and social organization (e.g. Canabal-Cristiani 1997, Neira Orjuela 1999, Jiménez-Osornio et al. 1990). As the discussion below will show, the change agents are not, however, independent causalities but closely linked, and their secondary effects can be difficult to predict and often too complex to combat without chinampa-wide or even broader measures.

When the canals dried up, cultivation became impossible for many, but others persisted by relying on smaller springs within the system after they obtained pumps from

the city to help move water.<sup>13</sup> Others quit altogether and many chinampas became idle or were converted to dry land corn cultivation or grasslands for cattle (Crossley 1999). In any case, poverty increased in San Luis; “We were so hungry that you would not have an idea of such hunger”, is how one woman described her childhood in the sixties to me.<sup>14</sup> Collectively the poverty caused a decrease in the number and sophistication of *posadas*, or community-wide celebrations that precede Christmas. For many, the ultimate expression of difficulties was the early 1960’s when San Luis did not have a single *posada*.

At this time, some chinamperos took employment in the city, which meant that customary family patterns changed and dependence on salaried work increased. In the late 1970’s, the city started to supply the chinampas with treated sewage, with the goal of resuming cultivation. However, the treatment of this water was inadequate for cultivation purposes and consequently several bacteria, heavy metals, and salts contaminated the chinampa soil and altered the canal ecology. As a result, soil fertility diminished, pathogen-induced plant diseases increased, canals became eutrophic, and some aquatic vegetation and life died while others exploded. The use of canal muck as a fertilizer, rooting media, and soil conditioner was subsequently compromised, and many edible wild plants and animals either died or became contaminated<sup>15</sup>.

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<sup>13</sup> UE, personal communication 2001.

<sup>14</sup> YO, personal communication 2000.

<sup>15</sup> Several studies have confirmed water contamination but few have been published (Crossley 1999). However, farmers point out visible signs of contamination and habitat change everywhere: people who come into contact with the water complain about skin rashes and gastrointestinal problems; dead fish float in the canal; frogs have almost disappeared; a white crust forms on the dry soil surface and the soil cracks; seedlings in seedbeds die of fungi, and parasites attack roots and stems.

By the 1990s, the preconditions for the chinampas' enclosed system of recycling materials and energy had largely broken down due to the problems with water quality and quantity. Other factors aggravated the break-down: air pollution from the city has affected the health of the *ajuehotes*, which suffer from wide-spread defoliation as a result of an insect infestation (Sanders 2002); cutting *ajuehotes* for fire wood and construction has further diminished the organic material inputs to the canals; the death of the root system of the *ajuehotes* leaves the canal edges without support thereby causing their erosion, which is aggravated by drainage of rain water from the greenhouse roofs (Figures 12 and 13).

Another water related problem is flooding. When water extraction from the aquifer below the city increased beyond replacement rates, the city started to sink – the subsidence is greatest in the city center but southeastern parts of the city have started to sink increasingly as well (Ezcurra et al. 1999). Many chinamperos believe that subsidence is the reason why low-lying chinampas frequently flood<sup>16</sup> causing loss of

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<sup>16</sup> Crossley (1999) maintains that in the chinampa zone, subsidence may actually be minimal and that the frequent flooding is due to the fact that low-lying chinampas are at the lowest elevations where water has started to accumulate after the supply of treated water has increased. However, subsidence on the margin of the chinampa zone in San Luis is evident in sunken houses and enormous holes in the ground that appear suddenly. Whether this subsidence is due to water extraction or is a secondary effect of the 1985 earthquake that shook the chinampas and caused water to 'disappear' is unclear (Crossley 1999, local residents, personal communication 2000, 2001). Nevertheless subsidence is taking place, and locals also say that it occurs unevenly in the chinampas and tilts canals off their gradients, thereby leaving some areas too dry and others with too much water. Sluice gates in the canals and the pumping of water between canal sections would be necessary to correct this problem. Some of these measures are in place but due to the uneven subsidence they do not function properly, and some sluice gates have been broken in order to facilitate easier canoe traffic (Canabal Cristiani 1997, Crossley 1999). A community group has initiated the establishment of such water control measures but they lack funds and equipment to realize the necessary chinampa-wide topographic survey, and the government has not offered significant help in this respect (Anon. 2003 personal communication). Regardless of the actual causes of the flooding, water-related problems cause major losses and damage to cultivation annually.





Figure 12. Damaged roots of the *ajuehotes* lose hold of the canal edge, leaving it susceptible for erosion and collapse.



Figure 13. Water running down from the greenhouse roofs has damaged the canal edge, now supported with poles and branches.

crops and property, abandonment of chinampas, and much anger (e.g. Gonzalez 2002). To correct the situation, the city provided in-fills to raise platforms; the material for this came from road and housing construction as well as sediments from dam sites. In addition to raising the surfaces by approximately one meter, the in-fill brought the entire gamut of human waste into the chinampas (Palacios Zarco 1999). Several canals were also filled in, further changing the hydrology of the chinampas. While compaction of the refill and continuing subsidence of the zone seem to have countered this remedy to some extent, these raised chinampas are usable again (Figures 14 and 15).

Flooding also occurs when excessive water is released into the canals - the release of water into the canal system has been 'out of synch' with the needs of farmers and the supply from precipitation (farmers in the meeting with the authorities March 20, 2001). This erratic and changing water level is not conducive to the needs of plants or aquatic vegetation, and it causes additional work and trouble for the farmers.

More problems come with the water quality affected by urbanization and the inadequate drainage system. Because the chinampas are within an ecological reserve, building infrastructure is not allowed, and therefore many households dump their waste directly into the canals. Despite conservation legislation, illegal construction of houses is common in many parts of the chinampas and has taken over entire sections of chinampas in the center of Xochimilco and San Luis.

Many illegal houses on the hillsides are within the ecological reserve as well. They also lack sewers, and their waste together with waste from the streets flushes into the chinampas during the rainy season when intensive down pours surpass the capacity of





Figures 14 and 15. A chinampa before (above) and after (below) it was raised. The structure in the middle of the picture at the bottom shows the difference in elevation.

the surface drainage. Further, some houses have connected their sewer into that portion of the drainage system that is supposed to provide the canals with rainwater (Canabal Cristiani 1997). As a result of these deficiencies, human and street waste such as feces, detergents, tires, oil, and dog carcasses float in the canals after a downpour. Farmers in San Gregorio use the canal water to irrigate vegetable crops and they say that they do not need to add any fertilizer because the water contains more than enough of it.

For sensitive plants, like many ornamentals, the contaminated water is not useful: its pathogens make the plants sick and its array of other contaminants interferes with the proper dissolution of fertilizers and pesticides into the irrigation water. For these reasons, many farmers have drawn a hose from their houses or the public line to the chinampa – this is illegal but they claim it is essential and that they will continue doing so until the government arranges better water quality in the chinampas.<sup>17</sup>

While the water-related problems seem overwhelming, their severity is not equal in all parts of the chinampas and cannot be the sole reason for the change in cultivation technologies. After all, some farmers continue to use the water and practice ‘traditional’ methods successfully or at least feasibly despite the human health risks that it carries (community meeting at the Health Centre June 20, 2000).

The sensitive ornamental plants were a choice spurred by economics and the difficulties with ‘traditional’ techniques. When the treated sewage was introduced in the 1970’s, returns for vegetables declined. In San Luis, by chance a farmer encountered the rose, which had higher market value, and soon other ornamental plants joined the

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<sup>17</sup> Farmers in a meeting with the government March 20, 2001.

selection.<sup>18</sup> The urban market was interested in ornamental plants, and the most demanding of those cultivated in the chinampas to date, the poinsettia, came to Xochimilco in the 1980's<sup>19</sup>. A Japanese consultant from a greenhouse in Morelos came to give advice:

He came sometimes to show how to use the fertilizers and later in September he came to point out that "you have to start to use the black plastic because the [red] color forms during the dark months of December and January. So you have to [cover the plants] with a black plastic so that the plants think that it is the dark period"; [you would cover them] around five or six in the afternoon and take the plastic away around ten or eleven in the morning.

LFH in San Luis, May 16, 2003

Soon it became apparent that specializing in ornamental plants was often economically more successful than a salaried work in the city, and chinamperos started to return to their plots. But, these new plants could not be grown in the open air. They need a more controlled environment to maintain optimal temperatures, light, and humidity. The government supported this development and organized credits and materials, hoping that active cultivation would prevent illegal housing in the chinampas (Diario Oficial 1992a).

Many call the first greenhouses that were built only fifteen years ago tunnels. They are simple structures with a plastic drawn over a wood frame, often so low that a tall person cannot stand upright underneath. A few of the old structures are still in use and

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<sup>18</sup> The word Xochimilco is Nahuatl means The Place of Flowers. Ornamental plants have been grown for a long time on the chinampas as one item among many and often on the edges to solidify them. Some popular ceremonial plants like the *cempasuchil* (marigold) date back to prior the conquest. However, specialization in ornamentals with 'modern' technologies only started in the chinampas in the late 1980's.

<sup>19</sup> The poinsettia (*Euphorbia Pulcherrima*) is native to the dry and hot highlands of Central Mexico where it grows as a bush or tree up to several meters high. Apparently, the Franciscan missionaries started to use it as decoration around the altars at Christmas, when its uppermost leaves turn red. The English language name poinsettia comes from the first American ambassador to Mexico, Joel Poinsett, who brought stems to North Carolina, where commercial cultivation and breeding of the poinsettia subsequently started.

have been modified to higher ones, but the latest models have become much more sophisticated and resemble what North-Americans call a greenhouse.<sup>20</sup> Laying the foundation for a greenhouse entails covering the soil with plastic and a layer of volcanic rock (Figure 16); drainage is sometimes built to dispose of excessive irrigation water; the houses are high enough for a tall person to stand upright; the cover is heavy plastic and so placed that the sides and ends can be rolled up to facilitate ventilation. Sometimes additional fine mesh is placed on the sides to let air in but keep insects out (Figure 17). Gasoline-powered pumps and electric lights are essential. Although bringing electricity to the chinampas is illegal, many have drawn a line from the power lines in the village: lights are necessary in regulating the growth of some plants and also for people to see when working in the dark hours of the evening. Others use electricity also to power a radio.

Greenhouse cultivation is not without environmental concerns, however, particularly if care is not exercised in applying chemicals (Figure 18). Excess amounts of chemicals can end up in the canals and the soil, eventually risking the quality of the aquifer. Other concerns include the permanent alteration of the chinampa surface: the volcanic gravel covers the soil, and people wonder if it will ever again be possible to work the soil

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<sup>20</sup> In my opinion the name of the structures is less important than how they function technologically and how they contribute to the developments of cultivation. However, the greenhouses in chinampas differ in some respects significantly from those in North America: they do not have a concrete floor or raised tables for plants, they are not (yet) computerized or have electric ventilators, and they do not practice recycling of water and waste. Glasshouses were rare in the chinampas in 2001.





Figure 16. Construction of the greenhouse floor with plastic and gravel.



Figure 17. A fine mesh allows ventilation but keeps insects out of the greenhouse.

Botritis (hongos foliares)	- Daconil	2787 W-75
	- Cuboxinix	
	- Bekate	
	- Ridomil Bravo	
Deformac. de las hojas	- Tetracarbendazole Agrico	
	- Alternaria	
	- <del>A</del> Manzate	
	- Cenicilla negra y blanca Saprol	
Araña roja y trips	- Agrimoc	
	- Mavrid	
Mosa Negra	- Vidate	
	- Furadan	
	- 350 L	
Pal. blanca	- Pastar	
	- Confidor	
Cenicilla	- Estrabid	
Fusarium + Rhizomania	- Envelate S	
	- Ridomil Bravo	
	- Ridomil Gold	
	- Interbusan 300	
Larva en raíz:	- Confidor	
	- Vidate	
	- Furadan 350 L	
Sustrato	- Bromura	
Calderas con vapor		
con 5		

Figure 18. A list of chemicals used in greenhouse cultivation. I composed the list after the dictation of one grower. The column on the left lists the targets and the substances are listed on the right - they total 19 different ones.





Figures 19 (above) and 20 (below). Garbage in the chinampas. The burning creates fumes that irritate the eyes and respiratory system. A family lives a few feet behind the photographer in Figure 20.



'traditionally'. The structural posts of greenhouses require a concrete foundation causing more changes that might be difficult to remedy; drainage outlets break up the canal edge and can cause its erosion and even collapse. Precipitation runs down along the roof of the greenhouse, creating amounts and velocities that cause the erosion of the chinampa edges. Package materials, plastic, and containers from greenhouses often end up just somewhere, creating an environmental hazard for the water, soil, air, and people (Figures 19 and 20).

The farmers are aware of these problems. To combat them they seek biological control against insects and diseases and encourage more careful use of chemicals and a proper discharge of wastes. One farmer went as far as to predict that, "If we do not clean up our acts, we will be kicked out from our own community":<sup>21</sup> he referred to the fact that greenhouses have sprung up also in the village proper amidst homes, where many residents complain of headaches and irritations when chemicals are spread in neighboring greenhouses.

The contemporary cultivation practices also affect the environment beyond the chinampa zone. Forest litter makes a near ideal and, until recently, affordable potting medium for most ornamental plants. However, its extraction from the forests in the surrounding hills is said to cause deforestation and erosion (Figures 21 and 22), thereby diminishing the rate at which precipitation filters into the soil to eventually replenish the aquifer.

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<sup>21</sup> GR in a community meeting October 2, 2000.





Figure 21 Deforestation on the hills near San Luis.



Figure 22. Erosion on the hills. Photo taken at the site in Figure 22.

Although the greenhouse cultivation is partly responsible for the environmental problems, it is not the only culprit. As previously noted, contamination from inadequate sewer and drainage is significant and takes place in a social environment that officially combats illegal housing construction but lacks teeth to contain it or provide adequate services.

#### The social environment

Housing construction in the city has not kept pace with its growth rate, and the city's commitment to low-income housing has been increasing but remains inadequate, as has been the supply of land for housing (Ward 1998: 189-206). Poor migrants have resorted to self-construction in squatter settlements and have done so increasingly in the chinampa zone. The La Jornada reported recently that

Xochimilco has two tastes, the urban and the rural. However, one tends to extinguish the other without many possibilities to balance the urban expansion that requires paving, drainage, and other processes of urbanization; meanwhile the chinampa zone and agricultural production die due to the reduction of space and contamination of water and soil.

Servin Vega 2003

Although some chinamperos have built houses on chinampas in San Luis, they generally worry more about the expansion of illegal construction. The reasons for this preoccupation are variable; some are troubled by the different 'cultural elements' that immigration brings to the village, and they claim that violence, drugs, and thefts have increased with the influx of immigrants. Others are concerned with the limited space in





Figure 23. The graffiti on the wall of the kinder garden in San Luis appeals to detain urban encroachment.



Figure 24 . The sign on a house on the chinampa declares the construction closed.

schools and childcare facilities in San Luis. Most worry about the contamination in both the chinampas and the hills (Figure 23).

For the government, illegal housing anywhere is worrisome because the resulting contamination threatens the safety of the aquifer. Accordingly, the law prohibits housing construction in the ecological reserves, and illegal initiatives have been shut down (La Reforma 2002a; Figure 24). Moreover, an entire settlement of 800 people was recently violently destroyed (Servin et al. 2002). To eradicate corruption in housing construction the city's ruling party PRD (Partido de Revolución Democrática) sought to cancel the party membership of three individuals because they had been involved in illegal construction in the chinampas (La Reforma 2002b). Others have been sentenced to a jail term (La Reforma 2002b) – these are political gestures to warn others.

Corruption of officials and politicians makes regulation difficult. Recently, a former director of the city's urban development sector claimed that

[e]very illegal settlement in the city has a political history of corporatism and manipulation by political groups; it is not only the necessity and action of an individual person that generates invasions.

Behind the invasions is always a big negotiation. Behind every illegal settlement there is always somebody who will get money and also somebody who seeks to obtain political benefits for whatever candidacy.

La Reforma 2002c

For example, in San Luis, when I asked one chinampero how he obtained permission to build on a chinampa, he replied that the housing inspector had told him to build during the inspector's holidays. Money was not mentioned in this incident. In another incident where a parcel was sold for construction within the ecological reserve in the hills, I asked the seller, "Isn't it illegal to build here?" He replied, "It's not my

business what they do with the land". This example shows how people who no longer cultivate their land may sell it to get cash (Ward 1998: 189-206).

While illegal settlements are a local phenomenon on the outskirts of the city, they stem from broader national and global economic contexts. Globalization also ties chinampa agriculture to forces that take some control away from the chinamperos but also enables them to advance their production.

#### The economic environment

Since the 1960's Mexico's industrial development has centered in Mexico City and agricultural and rural policies have not favored smallholder agriculture. Since the 1980's neoliberal economic policies aimed at global markets and free trade have aggravated the lot of small farmers in the provinces. As a result, many peasants have not been able to survive on the land in remote areas but have left to seek employment in the city (or in the US and Canada). Although the influx into Mexico City has by now diminished due to industrialization in other regions, the capital continues to grow and most recently the Southern portions of the city have grown more in average than the city (Ward 1998, Neira Orjuela 1999). San Luis has its share: it now has 13 neighborhoods mostly occupied by immigrants who work in the city.<sup>22</sup> The primary school is saturated,<sup>23</sup> and another day care facility was recently opened after years of contestation.

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<sup>22</sup> These neighborhoods are called *barrios* and they have sprung up outside of the core area of San Luis.

<sup>23</sup> A new primary school has been for several years on San Luisenos' list of demands to the city. A new school was built and opened in 2003 (UV, personal communication, May 2003).

Immigrants have also settled in the chinampas where no infrastructure is available or permitted. Many of these people work in the greenhouses. Sometimes both the husband and wife are employed but most often only the husband has salaried work and some workers are bachelors. Sometimes employers offer them a house but others live in rudimentary structures built of cardboard and plastic. Their lot is difficult as will be described in more detail in chapter four, but it is better than the lack of opportunities at home, and perhaps preferable to industrial work for someone who is used to work in the fields. The chinamperos claim that the salaries are good, at least relatively speaking: while I was in San Luis, people claimed that they paid their workers roughly double the minimum salary plus food and often accommodation. Some of these workers have succeeded in becoming independent growers renting land and producing in the open air.

The fact that greenhouse growers can pay such high salaries is indicative of their economic success. In fact, from its beginning in the 1970's, the production of ornamentals has been so profitable that many chinamperos who left the chinampa for work in the city have returned to cultivate (Torres-Lima et al. 1994). Some cultivate part time, keeping a salaried job as well; others are full time producers with other family members also working in one or another aspect of the production.

Who buys all these plants? Economic improvements in the chinampas parallel those in the city, where an urban middle class now has disposable income.<sup>24</sup> That is how a market for ornamental plants has expanded. Urban buyers are interested in new plants

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<sup>24</sup> Some plants could be considered basic, as they are a vital part of ceremonies and festivities. One such plant is the *cempasúchil* (*Tagetes* spp.), grown in the chinampas for centuries particularly for the festivities during the Day of the Dead. In a 'traditional' chinampa the gannet was grown on the edges to solidify them



Figure 25. Señor Cabello displays poinsettias.

and varieties; for instance the poinsettia now comes in several colors and combinations although the red is still predominant (Figure 25). During my stay in San Luis, some producers had started to cultivate the tulip, and others were starting up with the African violet.

While consumer demand drives changes in the chinampa economy, the supply side also affects the production. The economy of ornamental plants is a global one, with various degrees of domination by certain companies or countries. For instance, the poinsettia ‘mother plants’ come to Mexico largely from one company in California, the

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and it was sold as a cut flower (local farmer, personal communication 2001). The more recently introduced plants include garden and indoor ornamentals.



Ecke Farms, and a Canadian breeder. The tulip bulbs come from Holland, and seeds come from Japan, Israel, and France. Similarly many of the chemicals, construction materials, and plastics are imported.

Another global arm of production is information. Farmers constantly research, experiment with, and apply new ideas from Canada, the US, Holland, and Japan. Partly they find this information on their own on the Internet, for example. They also acquire it in the annual 2-day conference on floriculture that the city's Department of Agriculture arranges in Xochimilco. The speakers are academics, industry representatives, and farmers. Yet another source is the semi-annual Agriflor Américas tradeshow, where the world's leading plant technology companies promote their products. Flori- and horticulture's 'hot spots' like Mexico, Ecuador, and Columbia have been Agriflor's hosts alongside New York, Miami, and Amsterdam. In 2000 they gathered in Mexico City and one chinampero organized a bus from San Luis to the World Trade Center so that San Luiseños could absorb the latest.<sup>25</sup>

Some aspects of this trade make the farmers dependent on importation: for instance, the Mexican supplier of the California-based poinsettia seedlings must pay royalties to the Californian producer.<sup>26</sup> The dependency is also expressed in the availability of inputs; for example the nematodes used to combat the larvae of the white fly have to be applied at critical moments in the larvae's development. However, it has

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<sup>25</sup> Agriflor Américas in part of Agriflor Internacional, which organizes half a dozen tradeshow worldwide every year (<http://www.agriflor.com/news/general.html> and <http://www.agriflor.com/floriculture/floriculture.html>).

<sup>26</sup> LFH May 12, 2004, personal communication.



happened that the American supplier has not been able to send them at the right time or a portion of the delivered nematodes have been dead.<sup>27</sup>

Although a greenhouse is an expensive venture and the risks are high in the cultivation of sensitive plants like the poinsettia, a successful harvest brings considerable returns. One farmer calculated that with poinsettia he can pay off the capital costs of a greenhouse in two or three years.<sup>28 29</sup> Some farmers have received help from rural assistance programs and others have taken bank loans<sup>30</sup> or they earn a salary to support the family. Everywhere in San Luis there are signs of improved family economy enabled by the greenhouse cultivation: new brick houses, elaborate *fiestas*, vacation trips, interior kitchens, washing machines, televisions, even vehicles.<sup>31</sup>

There is no doubt that the prospect of good money drives some farmers to produce more, take higher risks, and learn and invest continually. With this development however,

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<sup>27</sup> Arturo Pérez Panduro, personal communication November 16, 2000.

<sup>28</sup> The poinsettia represents one of the most demanding plants cultivated in the greenhouses. Its production has many stages that require close attention and careful and timely actions and it is sensitive to changing environmental conditions. Other ornamentals grown 'in bulk' in greenhouses include the pelargonium, fuchsia, violets, etc.

The production line of poinsettia is as follows: the breeder creates and patents new varieties, produces large plants of them to be sold to wholesalers around the world; the Mexican wholesaler produces seedlings from these 'mother plants' and sells the seedlings to individual growers. The seedlings are actually cut-off stems, locally called *escejes*, which the grower roots in an environmentally strictly controlled and isolated space in the greenhouse. Once rooted, the seedlings are transplanted to pots to be grown to various sizes. Control of insects and diseases is necessary throughout the six to eight month growing period. Farmers are increasingly trying out biological controls to reduce the use of chemicals. However, unlike the sales of the seeds of the herbicide resistant corn, cotton, or canola (the so-called Round Up Resistant seeds), the sales of poinsettia *escejes* are not (yet) tied to certain other cultivation practices and chemicals also patented by the seed company.

<sup>29</sup> However, since I left in 2001, the competition has increased and poinsettia markets have become saturated. Plants from very large and fully equipped and controlled greenhouses outside of the Valley of Mexico flood the market, and retail price has not increased in the last three years. The price of inputs, however, has increased, narrowing the profit margin (local residents, personal communication December 22, 2003).

<sup>30</sup> Although all chinampas are private property, not everybody has the documentation complete. This makes it difficult for them to obtain bank loans because they cannot use the land as a guarantee (Cisneros Quiroga 1991: 29).

<sup>31</sup> Although many have given up a salaried job in the city and become full time farmers, it is common that chinamperos have a part-time job elsewhere.

comes competition amidst the need for collaboration. When someone discovers new 'tricks' in cultivation, he or she guards them closely; one farmer even admitted that he does not mind if a neighbor's operation 'screws up' [*"va al zingado"*]. In this competitive environment, collaboration can be sacrificed for profits, when only a close circle of people can participate in privately arranged workshops or when sources of new knowledge are kept secret. This polarization of the knowledge base increases when private consultants replace public extension workers.<sup>32</sup>

Collaboration is more common in the facilitation of the 'industry' at large than in the production itself. Chinampa neighbors gather to repair trails, clean canals, or install power lines. They also collectively approach authorities in charge of water or electricity. Before Christmas, poinsettia growers organize advertising campaigns and marketing events in the city (Figure 26). In 1995, they realized a major collective project when the co-operative plant market, the *mercado*, opened in San Luis (Figure 27).

Every grower who is a native of San Luis is guaranteed a stall in the market. Mostly women are in charge of the commercialization of the products (Figure 28), while men are in charge of the administration and maintenance of the market. Most sales go to intermediaries and are wholesale (Figure 29): distributors and retailers drive out to San Luis very early in the morning and by 9 o'clock they have spread out all over the city and even continue to other states. Bargaining in the market is severe and quality is in high demand.

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<sup>32</sup> In May 2001 the government shut down one of its extension services, the CINDERS that many chinamperos had relied on. At the same time more private consultants appeared in the greenhouses, and some farmers actively advocated for them over academics or public extension workers.



Figure 26. Invitation to the Christmas sales of poinsettia in San Luis.  
Source: Delegación de Xochimilco 2001



Figure 27. The plant market in San Luis. It has 300 stalls and attracts buyers from all corners of the city.

With the increasing quantity and specialization of production some farmers have started to sell directly from the greenhouse. Buyers come with a truck to the *embarcadero* or greenhouse when possible, select the hundreds of plants they want to buy, load the trucks, and drive away. The renters, those former workers who have become independent growers, also sell directly from the chinampa although their quantities are much smaller and could be transported to the *mercado* in a canoe or along the trails. However, because they are not native to San Luis, they do not have a stall in the *mercado*, leaving them the option to sell directly from the field or to try to find a spot on one or another of the city's additional *mercados*; that would, however, drive up their transportation costs and many do not have a vehicle.

Greenhouse cultivation is at one end of the range of production technologies in San Luis and its gross value is much higher than that of open-air cultivation. However, those who have not had the opportunity or will to invest in a greenhouse continue with medicinal herbs and condiments and have added less demanding ornamental plants such as the *clavel*, forget-me-not, *agazaña*, or roses to their selection. Their economic risks are not as high as for the greenhouse growers but their economic buffer capacity may not be as high either, and a crop failure may drive the family economy into severe difficulties. For example, one man whose chinampa floods frequently simply stopped cultivating and left for a short-term contract to harvest tobacco in Canada. Many also hold jobs in the city.

However, a greenhouse with the economic risks and dependencies, and the associated potential loss of the knowledge and practice of 'traditional' chinampería is not





Figure 28. Mostly women are in charge of selling the plants in the market in San Luis.



Figure 29. Buyers come with trucks from neighboring provinces and the city.

everyone's dream. One chinampero, who had worked in the city, left the job because he felt that city-life was too stressful for him. He is now devoted to land rather than money. One day I asked him how he considers his economic prospects with 'traditional' and open-air cultivation. He said, "I pray God that I never will have to build a greenhouse. I can get by without one because my production costs are lower. I also remain independent so that when my wife asks me to pick up our daughter from the school, for instance, I can do it."<sup>33</sup>

As evident from above, this farming community is economically diverse and even polarized. At one end are the 'capitalists' epitomized by the cultivation of poinsettia, which approaches the production of a cash crop: large investments, high cost of inputs, big risks, salaried labor, and potentially good returns. At the other end are poor renters who cannot afford investments or inputs and live from hand to mouth.<sup>34</sup> The economy intersects with the environment, which in turn is affected by government policies. The government's interest in protecting the chinampas stems from its enormous need for drinking water.

#### Previous rescue efforts

In the 1980's, the city government became increasingly worried about the price, quality, and quantity of its drinking water. Urban growth had spread out into the

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<sup>33</sup> LHEO personal communication October 25, 2001.

<sup>34</sup> The polarization will be described in more detail in chapter four.

chinampas that lie above the city's aquifer, thereby threatening to contaminate the water source. Sixty years of water extraction from the aquifer had also caused hydrological changes in the chinampa zone, which created the subsidence problem and contributed towards the development of chemical agriculture. The resulting flooding has meant that many chinampas and communally used pastures in the center of the former lakebed lie idle. When the urban expansion spread onto the chinampas, the city assumed that an environmentally sound and profitable agriculture, together with major hydrological works, was a way to contain the illegal settlements and the subsequent contamination in the chinampas (Departamento del Distrito Federal 1990, Cisneros Quiroa 1991). With a series of laws, the city aimed at rescuing, restoring, and protecting the chinampa ecology, economy, and culture.

In 1986, the city passed the law of Historic Monuments of which the chinampas and their 'traditional' agriculture is one component (Diario Oficial 1986). This law protects 'traditional' agricultural production but has not provided resources to the chinampas while buildings and monuments in the centre of Xochimilco have been renovated and protected instead.

In 1987, the United Nations declared the historic centre of Mexico City, the colonial centre of Xochimilco and the chinampas, a World Heritage site. Xochimilco qualified for this honor on the basis of

its network of canals and artificial islands [which] testify to the efforts of the Aztec people to build a habitat in the midst of an unfavourable environment. Its characteristic urban and rural structures, built since the 16th century and during the colonial period, have been preserved in an exceptional manner

(UNESCO n.d.)

It is notable that until recently this honorable designation has not provided resources to restore or improve the conditions in the chinampas. That responsibility lies primarily with the host country rather than the international community.<sup>35</sup> But even without much material assistance for restoration for the chinampas, the World Heritage title has fortified the Xochimilcans' and chinamperos' identity and pride in their heritage, and particularly tourism in Mexico has promoted itself on this honor. However, fame does not automatically translate into resources, and deterioration in the chinampas has continued.

In the wake of the declaration of the World Heritage site, and after the 1985 massive earth quake that seemed to have affected the hydrology of the lacustrine region, the city contracted The Food and Agriculture Organization of the United Nations (FAO) to research the problems and find solutions in the wetland; based on this investigation the city launched a rescue plan in 1989. It aimed at securing the aquifer by restoring the ecological balance in the wetland and protecting the cultural heritage in chinampas (Cisneros Quiroga 1991). As part of the plan, the city expropriated approximately one thousand hectares of wetlands from the ejidos<sup>36</sup> of Xochimilco and San Gregorio. These lands that were not chinampas, were cultivated communally or privately. The plan intended to convert some of these lands to chinampas to be cultivated and administered by an ecological park. It also offered to give the ejidos 210 hectares of new lands for

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<sup>35</sup> But see UNESCO (n.d.) for the limited assistance available today.

<sup>36</sup> The ejido system is a symbol for the Mexican revolution where peasants fought the right to own lands collectively. During the colonial period Xochimilcans utilized collectively the lands under expropriation in 1989. In 19<sup>th</sup> Century private individuals and two haciendas managed to get possession of part of them. After the revolution these lands were returned to the collective ownership of the ejidatarios. Thus Xochimilco has a historical baggage of land speculation and disputes (Hernández Silva 2003: 49-55). (Like the chinampa, the word ejido is in common use in English language literature and I do not italicize it.)



housing and conversion to chinampas (Diario Oficial 1989a, 1989b). In this way, the plan reasoned, the ejido structure could continue and its agricultural base would improve (Departamento del Distrito Federal 1990). The remainder of the expropriated land would be converted to a water regulation basin with a connection to the city's main drainage system. This arrangement was supposed to diminish the vast fluctuation of water levels in the wetland and the chinampas (Departamento del Distrito Federal 1990).

However, the ejidos vigorously protested against the plan, particularly the expropriation. They argued that instead of building a regulatory basin, opening up new canals would accomplish the water storage. They also claimed that new chinampas should be built for the ejidos rather than for the ecological park and that the ejidatarios and other Xochimilcans, rather than private companies, should administer the park. They also opposed the private operation of the planned recreational and tourism activities within the park. Overall, the ejidatarios were not opposed to the idea of restoring the ecology but they were concerned about whether the plan would benefit them and their communities to the same extent as the city dwellers (González Martínez 1991).

Other interested parties joined the discussion when a group of chinampólogos<sup>37</sup> and a handful of chinamperos organized a workshop about the plan. They criticized the plan's lack of consultation with local communities and the lack of attention to a comprehensive rescue of Xochimilco's environment and culture: i.e. improving the requirements for an economically feasible and environmentally sound cultivation in the

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<sup>37</sup> Chinampólogo is a word that I first heard in San Luis from José Genovevo Pérez Espinosa. The term refers to academics and chinampa practitioners and activists who are engaged in scholarly activities about the chinampas. Mr. Pérez says that it is important that foreign scholars work in the chinampas because their work spreads the knowledge about them around the world.

entire wetland. They also pointed out that the rescue effort has to include more research about the historic and prehistoric aspects of chinampería (Jiménez-Osornio et al. 1990).

Many other civic, environmental, academic, and indigenous organizations, and two political opposition parties also criticized the plan (Canabal Cristiani 1997: 229). They originally had two main points: first expropriating ejidal lands essentially discredits the Mexican revolution and the worth of peasants; second, they feared that the increase of tourism would become a recreational activity for city dwellers and benefit private capital, leaving little for Xochimilcans. Such a course of events would be a “blow in the back” of the community, they argued (Muñoz Lerdo cited in Canabal Cristiani 1997: 229).

Widespread and intense protests ensued and precipitated negotiations, public fora, infighting and split-offs, favors, police action, and, finally in 1990, a contested agreement. Still, after the signing of the agreement, core groups of the two affected ejidos continued to lay new demands, some of which were accepted<sup>38</sup>. However, the most significant symbolic point, the expropriation of ejido lands, took place. Agricultural and hydraulic improvements that the new rescue plan promised were realized at least to some extent, but many ejidatarios and chinamperos contest the official figures about drainage works or sewers and hydrological problems continue till this day.

In Cuernavaca (Figure 5), an ecological park, the *Parque Ecológico* was built together with recreational facilities: a plant market, and parking lots occupying an area of more than two hundred hectares. The *Parque*'s mandate is to display, cultivate, research, and disseminate information about the chinampas, chinampa communities, and chinampa

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<sup>38</sup> My review of the events ensuing after the new plan was published is based on Canabal Cristiani (1997: 229-318).

culture, to restore the wetland ecology in the park's confines, and to give ecological education. The park has a chinampa-library and has published reports on the chinampas and the culture of Xochimilco (e.g. Cabrera Vargas and Stephan-Otto Parrodi 1999).<sup>39</sup>

I talked with some farmers in San Luis who were familiar with the chinampas in the *Parque*. In their opinion, the plant selection is not 'traditional' and the size of the individual chinampas and canals is 'miniature'. According to these farmers, operating the 'chinampas' in the park by relying on 'traditional' technologies and canoe transport is not possible due to the way in which the complex is built. They also pointed out that the production in the *Parque* increases competition on the market place in general and, particularly, with the producers in Xochimilco. Overall, they were unhappy with the fact that city residents can utilize the park and enjoy a clean and restored environment with recreational activities and infrastructure, while the local residents whose livelihood and cultural heritage are rooted in the chinampas have to make a living in insufficient environmental and productive conditions without adequate government support (Anon. 2001, personal communications, Canabal Cristiani 1997).

As the production of ornamental plants in Cuemanco and near the *Parque* is less abundant than in the Centre of Xochimilco, or in San Gregorio and San Luis, the plant market in Cuemanco is unfavorably located for most producers. Their transportation costs to Cuemanco are high because they would have to hire or own a truck and travel a long way to the market; for this reason, local vendors do not fill up the market and the city has

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<sup>39</sup> However, as the chinamperos are not used to going to libraries, these publications are not easily available to them; yet, the publications pertain to the chinamperos' life, work, and community (Anon. 2001, personal communications).

allowed outsiders and intermediaries to utilize it (Delegación de Xochimilco n.d.). This practice is in competition with local producers and angers them. They also think that building a huge market that is not able to function to capacity is a waste of money that could be better spent helping local farmers in their marketing efforts (Anon. 2001, personal communications).<sup>40</sup>

Overall, it appears that the rescue plan of the 1990's has produced an entertainment, recreational, and educational facility for the city's residents. However, the people who live off this environment have benefited less from a project that explicitly claimed to rescue the chinampas and adjacent wetland fields, and the chinamperos and ejidatarios continue to struggle with the ecological problems emanating to a large extent from the city's excessive exploitation of water and uneven national economic development (Canabal Cristiani 1997, local informants 2000, personal communication).

One thing that the farmers achieved after the new plan was signed was the declaration of the wetland zone as part of the Protected Natural Areas (Areas Naturales Protegidas, from here on ANP; Diario Oficial 1992a 1992b). However, until 2001, the ANP lacked specific management regulations and the law's enforcement was minimal – a common feature in the history of conservation in Mexico (Simonian 1995).

While the expropriation and the specific measures in the rescue plan did not focus on San Luis, it had its own battle with the authorities in the 1990's. The city wanted to enlarge its tree nursery in order to reforest more effectively the denuded hillsides and thereby decrease erosion and increase the infiltration of precipitation. To this effect, the

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<sup>40</sup> The benefits and disadvantages are not quite so clear-cut, however. For instance, in Cuernavaca chinamperos who are involved in tourism can take advantage of the embarcadero that was built next to the plant market and the Parque.

city expropriated 66.3 hectares of privately owned chinampas and non-chinampa wetland in San Luis and its neighbor Tláhuac (Diario Oficial 1993). Again, the community argued against the building of a high-tech production plant unless it benefited local residents. Their demands succeeded when the delegation signed an agreement with the residents of San Luis, where the new establishment would first hire people whose lands were expropriated and then hire other San Luiseños. The city also agreed to build several markets in San Luis, one for plants, another for fresh vegetables, and a third for live animals. Also, a primary school and a day care facility were listed (Anon. n.d. a). Of these projects, the plant market and the day care facility have been realized. As of May 2003, the building of a new school had been announced but employment of San Luiseños in the nursery continues to be minimal.<sup>41</sup>

The tree nursery was built with Japanese and Canadian expertise and money.<sup>42</sup> Together with high-tech greenhouses it features a water treatment plant, gas station for the nursery's own use, modern office buildings, and landscaping works. However, the office facilities were underused, and in the fall of 2000 the city decided to relocate its Natural Resources and Rural Development office (Comisión de Recursos Naturales y Desarrollo Rural, from here on CORENA) to these facilities in San Luis (location in Figure 31). CORENA was also the principal party with which San Luiseños negotiated in 2000-2001 over the conservation efforts in 2000, the focus of this dissertation.

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<sup>41</sup> Local residents, personal communication May 2003

<sup>42</sup> The nursery's web page is at <http://www.visitasguiadas.df.gob.mx/visitas/acuexcomatl.html>

## The Conservation laws of 2000

Mexico City's legislative assembly passed the *Ordenamiento Ecológico*<sup>43</sup> (from here on the *Ordenamiento*) in August 2000, and unlike the previous decrees that regulated land use in the wetlands, this was to do so in the entire rural zone of the city. The significance of this spatial extent is that it approaches the hydrological problems in the city from a very broad perspective by considering the hill lands and the wetland zone as interdependent landscapes: agricultural and forest lands on the hills are the areas that allow the rain water to infiltrate into the ground and eventually underneath the wetland to recharge the aquifer, a major concern already in the 1980's but without specific measures implemented in the hill lands.

While the increasing water consumption, the high costs of bringing the water to the city, and the concerns over the availability of clean water prompted this law, it is also an opportunity and a challenge to the city government to perform its political mission to democratize and decentralize the city's governance. If the political memory is long enough, it is also an opportunity to 'right the wrongs' of the rescue plans of 1989 and 1990, when the land owners were not consulted initially and even after land owner pressure, only unwillingly (Canabal Cristiani 1997). For these reasons, the *Ordenamiento* of 2000 was to proceed in three steps. The first phase created citywide land use zoning and defined the associated land use practices. This phase was completed while the law was prepared and forms part of the law. In the second phase, local land use practices were to be negotiated on village-by-village bases in a participatory process. This is the phase

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<sup>43</sup> The description of the *Ordenamiento* is based on GDF (2000) and *Gazeta Oficial* (2000).

that started in San Luis in October 2000 and which I followed until my departure in May 2001. In the third phase, the local plans were to be consolidated to a delegation-wide plan. In this phase, CORENA intended to hire a non-governmental organization, specializing in local ecological management and land use plan, to mediate between CORENA and the communities; CORENA's director said that CORENA did not have the capacity to produce the detailed local plans. By the time I left San Luis, no NGO had yet been hired.<sup>44</sup>

Although some farmers had heard about the law and apparently some had been 'consulted'<sup>45</sup> when the law was prepared, it came as a surprise to most people in San Luis. The lack of broad-based consultation together with several of the land use regulations defined for the chinampas angered the farmers. Many considered it unreasonable to prohibit new greenhouses because this mode of production was perceived to be the most successful economically. But greenhouse cultivation requires the use of synthetic chemicals, which the city perceived as contaminating agents in the aquifer and therefore the city prohibited their use. The law also prohibits the use of the forest litter as a potting medium because its extraction causes erosion and deforestation in the hill lands and thereby jeopardizes the recharging of the aquifer. Finally, bringing electricity and fresh water into the chinampas is prohibited because that would invite housing construction. The farmers were particularly angry about these prohibitions because some of them

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<sup>44</sup> The Ordenamiento-legislation and the broad land use directives were drawn by the ministry of environment with the Universidad Nacional Autónoma's 'experts' as consultants (GDF 2000). The money to do this and the subsequent local plans came from the United Nation's Food and Agriculture Organization (FAO) (Director of CORENA in meeting with farmers March 8, 2001)

<sup>45</sup> The word consulted is in quotation marks because chinamperos who had been 'consulted' denounced the consultation as misleading and superficial. I will tell more about this aspect in chapter four.

would take effect immediately and others after only two years, which they considered too short a time period to create a successful transition, particularly because the law did not specify alternatives proven biologically and economically viable. While offering the landowners an unspecified monetary compensation for environmental services to the city, the law did not state clearly that the government would also absorb the costs and efforts necessary in researching new and alternative production technologies.

Chapter four focuses on the negotiations of the Ordenamiento in San Luis, and here I point out only their key features. During the negotiations, it became clear that in the chinampas, the already existing decree of protected natural areas (ANP) overrules the Ordenamiento, which is why the discussions shifted to creating a management plan for the ANP. The procedure would remain the same, a locally based participatory process, but from early on it was clear that the ANP would regulate the chinampas even more strictly than the proposed regulations in the Ordenamiento.<sup>46</sup>

Negotiations among the farmers started in October and with CORENA in November 2000. Remembering the battles in the 1990's, greenhouse growers from several villages in Xochimilco initially mounted opposition to the law, but when CORENA devised its schedule for the village-by-village negotiations, San Luiseños proceeded to negotiate with CORENA on their own. The negotiations ensued in a politically significant moment.

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<sup>46</sup> The person responsible for the ANP in the chinampas told farmers that "this is basically our decision and that's [traditional] what it is going to be; if there are other forms of traditional with such cultural [heritage], you can contemplate that" (UY in a discussion with farmers on Nov. 15, 2000).



## The political back drop

The year 1997 was doubly historic in the governance of Mexico City: for the first time ever, the city got a publicly elected mayor and city council (Asamblea de Representantes) and for the first time ever, the leftist Party of Democratic Revolution (PRD) gained the city's government.<sup>47</sup> These victories came on top of the party's success in federal congressional elections, in which it snapped a tight lead as the biggest opposition party, reversing the 'trend' of an oppositional right. For the party these were major victories in its long road to power, and sweet balsam on the two losses in presidential elections that its leader, Cuauhtémoc Cárdenas had suffered in 1988 and 1994; the victories in 1997 represented a potential third chance in that race for Cárdenas. If elected as president, he would continue the legacy of his popular pro-peasant father and president Lázaro Cárdenas and take on the party's mission of a democratic revolution.

In 1997, the left-off centre Partido Revolucionario Institucional (PRI) had the presidency and was the biggest party in the federal congress. Thus, the relationship between the PRI-president and the PRD-mayor of Mexico City could turn into a tight rope, where at one end was the president who sits on the money for the majority of the city's budget and has intimate links to the country's and city's elites and corporations, and at the other end is the popular mayor whom the citizens expect to deliver electoral promises of democratization and economic advances. Walking that rope, and at the same

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<sup>47</sup> Previously the president hand-picked the mayor among his trustees. (The historic significance of the 1997 elections increases when we remember that for almost seventy years, the mayor had been a man of the Institutional Revolutionary Party [PRI]. The first ever woman mayor, Rosalío Roblez, came to power in 1998.)

time planning for the next presidential election proved to be difficult for Cárdenas, partly due to the problems establishing administrative procedures in the governance of the city due to different party rule at different administrative levels and Cardenas' decision to run for the national presidency in 2000. He left office but over the short period remaining of his term, suffered from the lack of determination by the interim administration (Ward and Durden 2002).

No wonder then, that in the presidential elections in 2000, not only was Cárdenas unsuccessful but the hold of PRD in the city eroded despite retaining the mayor. It lost its status as the largest party in the city council, and in the national congress the right-wing party PAN defeated PRD and gained the presidency: the ideological gap between the president and the mayor had widened (Figure 30 portrays the election results of 2000). Andrés Manuel López Obrador of the PRD became the new mayor in the elections in 2000. He had to continue the decentralization and democratization of the city's administration, barely initiated by the previous government. Furthermore, violence and poverty in the city were still major problems, and, headed by the severe air pollution, the city's environmental conditions in general had not improved. Water shortages were frequent and water quality was questionable while transportation and traffic suffered from violence, jams, and irregularities. Affordable housing was insufficient and precipitated more illegal settlements, and unemployment pushed the envelope of informal economies (Ward and Durden 2002). In this political climate of 2000, CORENA initiated the locally based negotiations of the Ordenamiento.

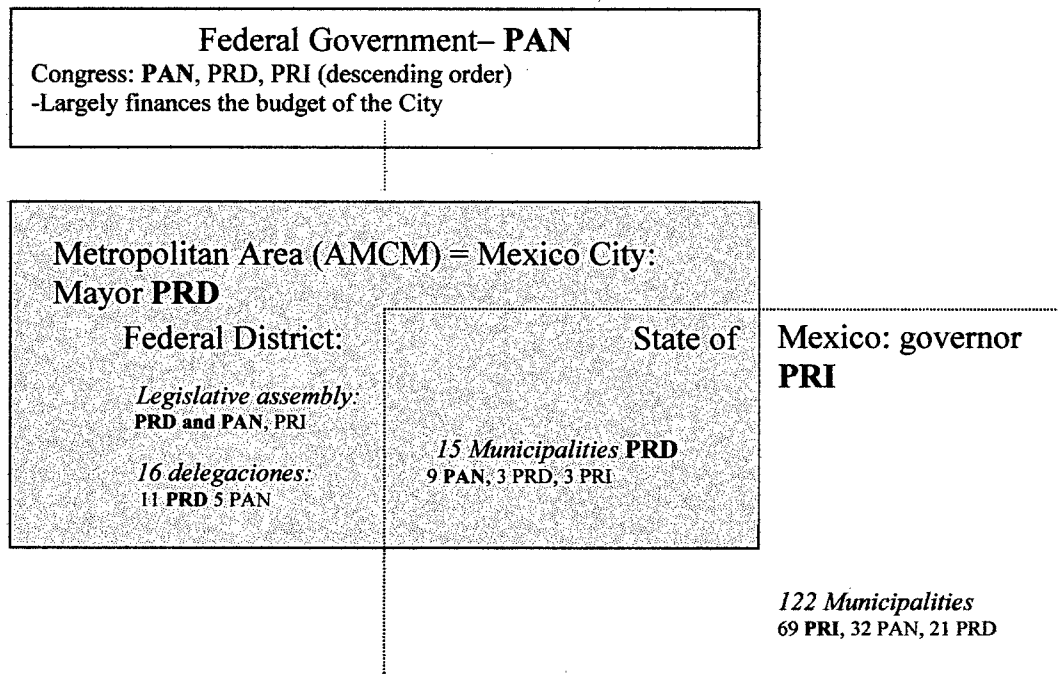


Figure 30. The distribution of the electoral power in the institutions of Mexico City. The party with the majority in each demarcation is in bold. The figures are based on elections of 2000, after which the negotiations of the Ordenamiento and ANP ensued (Data from Ward and Durden 2002).

In San Luis, some farmers had high hopes for the chinampas thanks to López Obrador's involvement in the 1970's in transferring chinampa technology to his home state Tabasco – people anticipated that he would still sympathize with that technique and its practitioners. One chinampero expressed his expectations for the new government like this, "Let us hope that this new government changes the style [of the PRI and assumes] the [style] we voted for. I admit that I voted for PRD because of the project that we were

involved in with a friend and with López Obrador. Therefore we have faith in [the new administration]”.<sup>48 49</sup>

While increasing democracy is important for the entire country, it is particularly important for the PRD and the capital city. Democratization would not only include procedures to increase citizen participation but would entail the devolution of central powers to the *delegaciones* and lower level administration, increase intergovernmental co-ordination, and decrease clientelism and corruption. López Obrador's government tackled the formal citizen participation quickly and reinstated and reactivated the existing but largely dormant law of citizen participation. In the *barrios* and *pueblos* this meant the invigoration of neighborhood committees, six of which operate in San Luis. However, while these have the right to make initiatives and complaints, the mechanisms to do so can be ineffective and muddled by clientelism and party politics (Ward and Durden 2002).

Thinking of the chinamperos, another factor makes it difficult for them to access neighborhood committees: They are an urban form of citizen representation and thus foreign to the ways or organization and representation that predominate among the agricultural population in the rural villages. Subsequently, chinamperos were not actively involved in the neighborhood committees in San Luis; rather, some perceived that while the two groups had overlapping interests, they were competing for the same resources.<sup>50</sup>

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<sup>48</sup> LFRG February 21, 2000 in a meeting between the farmers and the representatives of CORENA. By the “project” he refers to the one in Tabasco.

<sup>49</sup> In retrospect one can judge that López Obrador's administration did something right, since in the elections in 2003 the PRD gained seats in all levels of the city governance, giving López Obrador a full 6 years to work on his agenda.

<sup>50</sup> LKK, personal communication 2001.

Lack of co-ordination among the various administrative institutions both horizontally and vertically was also to be rectified according to PRD's election promises. Hampering this reform are clientelist relationships that have reproduced and maintained the power of the director and his or her immediate assistants in any given institution. Historically, such interests and the lack of co-ordination between institutions have been devastating to the chinampas because urban planning, rural planning, and hydrology, all massively collide in the chinampas but are administered by different institutions at different levels of governance. As a result, the 'water people' might be sending more water into the canals during a downpour, when urban drainage is doing the same, resulting in inundation of low-lying greenhouses and chinampas.

Similarly, urban planning is in charge of electrical power, but rural planning looks after the infrastructure of the chinampas, while the ministry of environment guards their conservation as a 'natural' area without built infrastructure.<sup>51</sup> As a result, farmers seeking resources to improve greenhouses or chinampas are faced with a "*molino de vueltas y rollo*" or a treadmill of paper, promises, empty rhetoric, delays, expensive and time consuming trips across the city, and enormous frustration that can easily lead to illegal electrification or to corrupting public officials. Those who cannot resort to such measures feel "*estancados*" or that they remain stuck, both in their production and between public offices. Thus, when pressing issues such as lack of electricity or sewer, the villagers felt changes in a municipal office were rare. "*No ha cambiado nada sino sigue lo mismo*"

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<sup>51</sup> Such overlapping and spread out administration is probably as common in Canada as in Mexico, but the difference may be the actual level of clientelism and corruption or the level of how they have become revealed.

[Nothing has changed; it is the same], was a common phrase I heard on the streets and in the fields in San Luis.

### San Luis Tlaxiataltemalco

To summarize and elaborate on the specific location of this study a few more lines about San Luis are necessary. I describe it as I saw it from my perspective, limited to and constrained by my specific interests, questions, and perceptions.

Today, San Luis is a diverse community and has spread out from the former lake margin beyond its core; people talk about “us”, those living in the core and “them”, people who live on the other side of the highway that crosses the village (Figure 31). “Us” are the approximately 1,200 families<sup>52</sup> whose forefathers have lived in San Luis for centuries. Approximately 300 of them are full or part time chinamperos and producers of other agricultural products such as corn, vegetables, and milk. Many of these families have a few chicken and pigs in the back yard to be slaughtered or sold at important occasions. However, the growth of families who live with several generations together has caused the expansion of the living quarters onto the patio in many houses so that kitchen gardens have become less commonplace.

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<sup>52</sup> The Health Centre in San Luis has estimated that the average family size is 5 (meeting at the health centre June 2, 2000).

The core area in San Luis is crowded: the streets that were originally built for pedestrians, horses, or mules barely facilitate trucks that today transport materials and products to and from the produce market, shops, and the main *embarcadero*, all close to the very center of the pueblo, the *zócalo* (Figure 31). People who visit the numerous

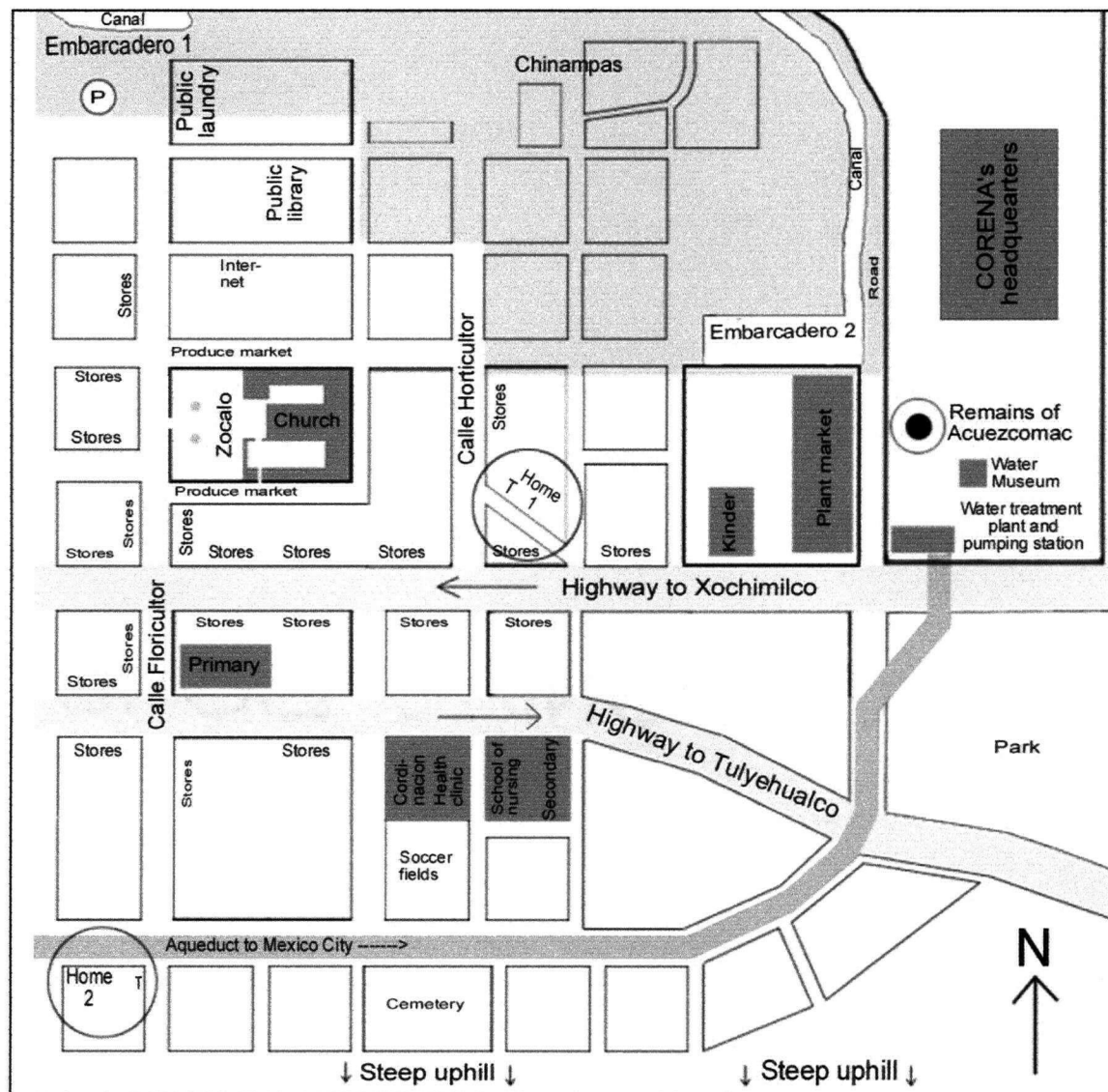


Figure 31. A map of those parts of San Luis where I lived. Discussion in text.  
NOTE: The map is not to scale; a walk between my two homes takes ten minutes.

stores in the area mingle with dogs, cars, bicycles, church goers, street vendors, and women who come from the public *lavadero* or laundry facility (Figure 31). The shops are concentrated in the blocks near the *zócalo*, owned and run often directly from homes or rented facilities.

The main *embarcadero* of San Luis is adjacent to the core area (number 1 in Figure 31). It has a small parking lot and is most often over crowded, particularly when trucks deliver forest litter or gravel and growers unload their product at the same time (Figure 32). The litter gets shoveled into canoes for transportation to the chinampa. This is also where many chinamperos bring their plants to sell them directly or to be transported to the plant market. It has another *embarcadero* for those chinamperos who can access it by the canals (number 2 in Figure 31).

The church is by the *zócalo* (Figures 31 and 33). It is a central place for religious services, community activities, political meetings, *fiestas*, and hobbies. The negotiations between the farmers and CORENA (Location in Figure 31) took place in one of the meeting halls of the church complex. Announcements of important community meetings appear by the church gates (Figure 33). The primary school is two blocks from the *zócalo* but the kindergarten and secondary school are a few more blocks further by the plant market. A soccer field, the health center, and the office of the local *cordinador* are a few more blocks away on the other side of the highway (Locations of all in Figure 31).

The majority of the approximately ten thousand people who live on the other side of the highway, the “them”, have moved to San Luis from surrounding areas or from the provinces. Also numerous families who are descendants of the ‘*orginarios*’ have built a





Figure 32. A truck has brought forest litter to the embarcadero, to be loaded on canoes. A couple is unloading poinsettias for taking them to the market.



Figure 33. The church in San Luis Tlaxialtemalco. Picture from GDF (2000: 27). The inset is an announcement of a community meeting taped on the church gate.

house here because of lack of space in the core area. People walk daily up and down the steep slopes of the Teuhtli volcano to go to markets, shops, and work. Many residents of this area work in the Center of Xochimilco, half hour minibus ride away. Others continue from there with another bus or the subway into various parts of the city, easily spending more than an hour each way to and from work.

I was fortunate to live on both sides of the highway and absorb a little bit of the atmosphere of both places (My homes are circled in Figure 31). The families of my hosts in the core (Home 1), the Espinosas and the Jiménez, have lived in San Luis for many generations. On their one side, behind the fence made of the dark volcanic rock, live Señor Espinosa's brother and his family. On the other side lives another '*originaria*' family, the Robles. They have jobs in Xochimilco and also operate a *tienda*, or little corner store with a telephone (T in Figure 31). Visits both ways were frequent and *fiestas* were often organized and celebrated together with Sr. Robles playing the mandolin and singing while women served food and guests enjoyed it all.

My hosts, Teresa and Luís, work from home and travel often to the city to acquire materials and to do business. They have numerous friends, relatives, and clients who come by frequently from the vicinity or from other pueblos and from as far as Texas. I enjoyed the many acquaintances I made in their home and the hospitality in the many *fiestas*.

Teresa and Luís keep chickens and pigs in the back yard and cultivate a little bit of corn and a few fruit trees in the front yard. They recycle most everything - not always because of recycling per se but because of necessity. They also get leftovers from their neighbors to feed to the pigs. They have a kitchen inside the house but Teresa often

prefers to wash dishes and cook outside. She went to great lengths to accommodate my food preferences in her cooking.

On the other side of the highway, I lived with Ms Reyna Ayala (Home 2 circled in Figure 31). Her house is next to the aqueduct that transports water from San Luis to the city. I used to go jogging along the aqueduct – it has no traffic and its surface is much smoother than that of the roads. Ms Ayala works in the city. She leaves at 5:20 in the morning to catch the bus by 5:30 and make it to the gym and swimming facility by 7 a.m. After her exercises she works until approximately 7 p.m., and returns home close to nine o'clock in the evening. On weekends she visits her family. Her siblings are scattered both near and far: some live in a near-by *barrio* within a short bus ride, and others find their home in the centre of Xochimilco. Sometimes her relatives come to her house and she throws a party – she arranged one for my birthday as well.

She has a well-tended ornamental garden with beautiful rose bushes, *bouganvillas*, poinsettia trees, and a few fruit trees as well. Suzuki, her huge dog, guards the house while she is away. Her one neighbor has a greenhouse and they sometimes exchange news and borrow things from each other. I never saw the other neighbor. One block down along the aqueduct is a *tienda*, where we would buy beer and water; we made other purchases in the stores around the *zócalo*. On weekends, we often cooked together in her modern kitchen but most days we had different schedules and ate at different times.

In both households I had access to electricity as much as I needed for my computer. However, neither had a telephone due to lack of lines in the neighborhood which is why I used the Internet in one of the stationary stores near the *zócalo* (in Figure

31 "Internet"). Many families also have a computer at home but they suffer from the electrical outages. As discussed earlier, water outages are also common.

During my jogging trips along the aqueduct, I often observed a man who used to graze his two cows with the grass that grows by the moist edges of the aqueduct. At one place, there is a tap in the huge tube, where people drive up with a truck or bicycle and fill up their canisters – not every home has running water.

Although my host families are friends and visit each other occasionally, their different lifestyles illustrate some of the social and economic differences across the highway. For some, the highway is a big cultural divide, while others cross it with ease because they have relatives or work on either side. Many chinamperos have a plot of land on the hills across the highway, where they might cultivate fruit trees or corn but most often these plots lie idle. Cultivation is difficult in the poor soil but perhaps more so due to frequent theft of crops. Poverty is "medium high" in San Luis<sup>53</sup> and crops left without vigilance run the risk of disappearing overnight. One farmer said that he would like to grow fruit trees on his hillside plot in order to keep it vegetated, but he found it impossible because people not only 'harvest' the fruits but take entire trees. As the hills are arid and eroded, cultivation has diminished and houses have taken over lower portions of the hills. Housing construction creeps up the hill almost by the night – the pressure from immigrants and the need to find additional building area for the locals aggravates the environmental conditions and social stratification in San Luis.

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<sup>53</sup> One of Xochimilco's city councilors came to visit San Luis in the fall of 2000 to hear what his riding wants to tell him. People demanded more water, electricity, better roads, and another school among other things. The councilor urged the villagers to utilize the neighborhood committees to get their voice heard. He said that this is particularly important in communities like San Luis with a "medium high" level of poverty.

Finally, I want to describe a day in chinampero families. While a day's chores vary seasonally, the production and marketing together with responsibilities at home organize life. Men and women have distinct roles in this "*trabajo de equipo*" or "teamwork" as many couples described their work. Mothers and grandmothers get up before dawn to prepare breakfast and start the laundry. Then, they ready the children for the day before heading to the plant market, usually before seven o'clock. The husband or the grandparents, accompany the younger children to the kindergarten or the school, while the older children take the bus to Xochimilco to high school or other parts of the city to the university.

The market is busiest in the early morning, and most women head back home soon after ten o'clock. On the way, they pick up produce and other food items from the *mercado* to prepare the lunch. Then, mothers meet the children at the school, feed them, and clean the kitchen. Many women do laundry and sweep the floors daily. Part of the afternoon goes to these activities, and many women dedicate another portion of the afternoon to the fields or greenhouses preparing plants for the following day: planting, watering, potting, and weeding (Figure 34). Then it is time to prepare supper, clean the kitchen again, and ready the family for the night. This is the "*triple jornada*", or triple work, that is common for many chinampera women: her responsibilities are divided among production, marketing, and home.

The husband's main responsibility is production. Around nine o'clock, before it gets too hot, he is in the fields and greenhouses to arrange ventilation and irrigation. Some go to the fields along paths, pushing a wheelbarrow loaded with equipment or materials. Others load them into a canoe and paddle to work. The plants also require





Figure 34. Elvira Balancario Sanchez and her husband Miguel Jiménez Robles plant seedlings in their greenhouse.

constant weeding, nutrient supply, and vigilance to keep pests and diseases at bay. Potting and planting seasons are busy times and require long days – one does not want to harvest late and miss the eventual season of festive plants such as the poinsettia or the *cempasúchil*.

The greenhouses and chinampas are always in need of repairs and maintenance: plastics have to be replaced, chinampa edges have to be repaired, equipment break down, and water pumps go on strike. Some men go home for lunch and also buy materials

during the break. Others eat in the fields if they have packed lunch or if women bring it when they join them for the afternoon chores. Just before the sunset, men close the greenhouses and cover outdoor plants if heavy rains or a cold night is predicted. Storages have to be locked up for the night. While heading home, men bring up the plants for the next days' market. But some men choose to sleep in simple huts in the chinampa in order to guard their crops – one man said that he just sleeps there out of the habit and joins his family in their house for only a night or two in the week.

In between these responsibilities, chinamperos participate in village affairs and festivities, gather at parent nights in the school, follow their children to hobbies, go to the church, and participate in other events in daily life. Many men also take short courses and workshops related to the production while women gather to make crafts. Children play soccer and computer games and attend other hobbies, work in the fields, study, and socialize, among other things. Some families make a good living and can afford to take holidays, while others get along moderately, and still others struggle every day.

All chinampero families depend on the chinampa for both material and historical significance while this resource is undergoing environmental and social changes. The conservation efforts affect individuals' and families' everyday lives that both have long-term continuity and undergo constant changes. Meanwhile, chinamperos in San Luis try to make a living by continuing to cultivate under these intensifying pressures and changing conditions. Some of those pressures and conditions are secondary effects from the city's growth but others are imposed by legislation.

Such events in San Luis provide a rich context for advancing ideas about power and knowledge in conservation: there the Mexican history of state-peasant relations is

played out at the outset of the 21<sup>st</sup> Century through conservation efforts that sensitize farmers to any attempts at political subordination and social or economic disadvantage. The struggles revolve around the material and the symbolic; while the city needs the water underneath the chinampas, the conservation plan also redefines the chinamperos and their way of life, as the next chapter illustrates.



### CHAPTER 3. “¿COMO ES POSIBLE QUE...?”: CONSERVATION AS COLONIALITY

*¿Cómo es posible que CORENA tenga invernaderos de punta, agua limpia, y luz pero nosotros no?*

Farmers' question to CORENA  
March 26, 2001.

How is it possible that CORENA has top-notch greenhouses, clean water, and electricity but we do not?

*El programa de manejo no va a llegar como una ley unilateral de la noche al día en cima. En base de toda la información técnica, ambiental, de suelo, [de] social, [en base de los] talleres, todos los elementos, vamos a ver en que situación andamos en este momento y en base de esto vamos a ordenar. Esa [de agricultura tradicional] es básicamente nuestra decisión en la área y la respuesta concreta no la tengo todavía... pero si [la chinampería] es la única producción tradicional, eso se da.*

CORENA's negotiator responsible  
for the ANP, February 21, 2001

The management plan will not be imposed unilaterally overnight. Based on all the technical, environmental, [and] social information, [and that] about the soils, based on the workshops, with all the facts, we will see in what situation we are right now and based on this we will legislate. This [traditional agriculture] is basically our decision for this area and I do not yet have a concrete answer [about the specific practices]... but if [chinampería] is the only traditional production, then that will be practiced.

The two quotes indicate that the desires of the chinamperos and those of the government are ‘worlds apart’ in terms of what kinds of technologies each desire for the chinampas. Many chinamperos would like to develop their greenhouses because in the last fifteen years greenhouse cultivation has enabled them to improve their family economies and increase their prestigious community expenditures significantly. CORENA, however, wants them to revert back to ‘traditional’ and chemical free agriculture, which it assumes would not contaminate the canal water and eventually the aquifer from which the city draws its fresh water.

While farmers often lack the resources and infrastructure to expand and develop the greenhouses, CORENA operates top-notch greenhouses in its tree nursery on wetlands next to the chinampas in San Luis and expropriated from San Luiseños. A high fence and armed guards separate the chinampas and CORENA's facilities. On one side of the fence, the greenhouses lack electricity or utilize it illegally just as they illegally draw drinking water to the chinampas to use instead of the contaminated canal water. On the other side CORENA, has its own gas station, electricity, and a water purification plant from which a dismal excess trickles down to the canal bordering the chinampas; so small is the quantity coming from CORENA's side that it cannot clean the murky water in the chinampas, and in their canoes the chinamperos continue to struggle their way through the dense aquatic vegetation that thrives in the contaminated water.

Adding bitterness to this conflict is the fact that CORENA's facilities are on land expropriated from San Luiseños, many of whom claim that the tree nursery has not fulfilled its obligations towards the community that the city agreed to as part of the expropriation deal: in their opinion the nursery, and more recently CORENA's administrative operations, which were relocated to this area in the summer of 2000, have not hired San Luiseños or provided other benefits to the village as had been promised.<sup>1</sup> Furthermore, while the farmers claim that 'traditional' agriculture is no longer economically viable or ecologically feasible and the planned organic agriculture substitutes are not functional or competitive either, they also point out what they perceive to be an injustice in the conservation legislation. This legislation's restrictions do not apply to production outside of the city limits, where large industrial greenhouses, some

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<sup>1</sup> Meeting between farmers and CORENA March 26, 2001.

financed by foreign capital, produce millions of poinsettias and other 'cash crops' of the chinamperos, and, in their opinion, flood the markets in Mexico City.<sup>2</sup>

These conflicts exemplify why it is important to view 'culture' and 'nature' as critical sites of struggle rather than conceiving of 'culture' as a self-enclosed system of meanings that endures outside of history, power and politics (Moore 1998). Because I approach the negotiations as a political struggle, the technical solutions, many of which perhaps could be implemented with more time and experimentation, are not the focus of my inquiry – rather I see them as a 'veil' behind which relationships between the state and the 'peasants' are contested, renegotiated, and reconstituted. One way to examine these struggles is to look at the underlying assumptions of the institutions involved in the conservation plan – as Schmink and Wood have pointed out, ideas are never innocent but "either reinforce or challenge existing social and economic arrangements" (1987: 51). In an analysis of social history embedded in the Ordenamiento, this chapter asks: In what ways is the state's conservation plan informed by assumptions about chinampa agriculture, rural communities, and their role in conservation that are rooted in the colonial era? My analysis shows how colonially-based power informs conservation; by recycling and rearticulating colonial and historical discourses about and related to the 'indigenous', the Ordenamiento confines Mexico City's rural communities to predetermined land use practices and social organizations and denies them equal opportunities to economic development and cultural change according to their own preferences.

The chapter proceeds by outlining historical relations between the state and peasants in Mexico, specifically as many chinamperos experience them. Thereafter, I

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<sup>2</sup> Meeting between farmers and CORENA Feb. 21, March 6, 2001.

explain the theory of the coloniality of power that informs this analysis and how it can be deduced from historical writings. The analysis of the Ordenamiento then follows, after which I conclude by discussing the implications of coloniality to conservation and social relations.

### State-peasant relations

My interest in reading the conservation plan as a social history of the relations between the Mexican state and peasants came from the chinamperos. Once when I commented to one man on what seemed to me CORENA's administrators' 'empty talk', he gave me Guillermo Bonfil Batalla's book México Profundo, Una Civilización Negada (1987).<sup>3</sup> The man suggested that if I wanted to understand what was happening in the chinampas, I should read the book. Bonfil Batalla [a Mexican anthropologist] claims there are two Mexicos: Occidental and Profundo [Occidental and Profound]. México Occidental is founded on colonialism and the foreign cultures that, since the Conquest, have dominated Mexico. México Profundo, in turn, is defined as a rich network of local cultures emanating from the indigenous and mestizo communities. According to Bonfil Batalla, México Occidental has never valued México Profundo as its equal.

Bonfil Batalla's Mexico can be criticized for being too dualistic, but what is relevant for my analysis is that some farmers read and identify with Bonfil Batalla's description of Mexico's social relations.<sup>4</sup> If they come to the negotiations with ideas that

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<sup>3</sup> Published in English by the University of Texas Press as *México Profundo: Reclaiming a Civilization*, Austin 1996.

<sup>4</sup> As an indigenous community, the contemporary chinamperos are not an average peasant community in Mexico; they are much better off in many ways. Many own the land on which they produce, many have

are capable of exposing the hollow rhetoric of México Occidental, it is not surprising why they point out striking disparities in agricultural technologies and ask why such disparity exists.

There are open wounds between the chinamperos and the state that illustrate Bonfil Batalla's view of Mexican society. Although the Mexican Revolution made good on the land seizures that took place in Xochimilco in the 1600's and 1800's and outlined in chapter two (fn 8; Hernández Silva 2003) the expropriations of ejidal and private lands in the 1990's and the perceived undelivered promises that conditioned them are still debated between the government and Xochimilco's agricultural communities, exemplified by the chinamperos point that CORENA and its tree nursery have not fulfilled the agreement about the expropriation. Furthermore, for the chinamperos, the loss of the springs and the fresh water from the canals without adequate returns lies at the heart of the inequality they see between themselves and the city.

The chinamperos' self-description as peasants is, in the context of Mexico's agrarian history, a politically charged identity, particularly when it intersects with indigenous identity (Mallon 1995). Instead of analyzing 'peasant' and 'indigenous' as categories, I am interested in the specific contexts and discourses that have shaped ethnic thinking and practice. My ultimate goal is to understand how environmental conservation

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university education, they are not subsistence farmers but since the Precolonial period have had close economic relations with the administrative center. Further, in many families the material standards today are much better than in a remote community based on ejidal organization and the cultivation of staples. And, apart from the in-migrants who have come to work in the chinampas from the provinces, the chinamperos no longer speak a native language; only a few people in San Luis can cite a few words in Nahuatl and know the meaning of some Nahuatl place names. Nor do they necessarily identify with the indigenous identity.

This description pertains only to the chinampa communities, which have their own social stratification. In other rural communities in Mexico City for instance land title is different i.e. partly based on the communal land holding of ejido. They also specialize in a range of different products, such as the *nopal* (a cactus leaf) in Milpa Alta and roses in Magdalena Contreras. See also the discussion in this chapter under "Folkloric pasts and subordinated presents".

policies, through their underlying assumptions, constitute and rearticulate colonially-based social relations and how the “colonial modifies modernity” today (Saldaña-Portillo 2002: 287).

#### Framework and method

To accomplish my goal, I draw upon the idea of the coloniality of power and the processes of racialization, which I will define in a moment, to unearth the assumptions underwriting government framings of the peasants in the Ordenamiento. I turn to a number of Latin American scholars who point to the ways in which colonial discourses and practices inform the present. I discursively examine the Ordenamiento’s perceptions and representations of rural villages and their land use practices to uncover how it reproduces colonial inequalities between social groups. As Bruce Braun has shown in the Canadian context, contemporary practices and representations of environmental conservation efforts may naturalize Eurocentric and colonial ideologies and thereby reproduce inequalities between the First Nations and the state (Braun 1997).

Latin American scholars have examined similar dynamics in the context of colonial economies, nation building, and globalization and talk about the “coloniality of power” (Mignolo 1999, Quijano 2000). It originates in colonization, which created unequal power relationships between the colonial centers and their colonies. Spatial, social, political, and discursive organization of colonial economies and the inhabitants of the colonies reproduced this power dynamic. After the independence of the colonies, their elites perpetuated the unequal power between themselves and especially the indigenous

populations and women, initially to establish separation from the colonial power and subsequently to further nation building. The specific processes and discourses have varied, even been contradictory and conflictual (Appelbaum et al. 2003). Finally, coloniality of power continues to define and underwrite Latin American societies, be it in economic policies, the production of knowledge, or relations of labor (Quijano 2000, Lander 2000).

José Rabasa, a Mexican-born historiographer suggests that accounts of Pre-colonial history in Latin America constitute coloniality in several ways. “First they proscribe Meso-American cultures and then reduce the effects of the destruction to shadows of the ancient grandeur” and they “inform contemporary modernization programs that folklorize forms of [indigenous] life and deplore the loss of old, thereby confining Indian cultures to the museum and the curio shop”. Colonialist writings also conceptualize “[a]ncient Mexico as dead – [but they] do not exclude a ghost-like continuity that forevermore threatens the social order of progress”. In other words, writing in past tense undermines the presence of indigenous cultures, further minimized by portraying indigenous life ways as a hindrance to progress (see the discussion on the ‘Indian problem’ below). For these reasons, Rabasa suggests Mexican historiography “is not so much a question of Indians having historical significance only insofar as they could be integrated into the church or the nation, but of using their history against them” (Rabasa 2002, all quotes on page 52).

As one way of reading the place of the indigenous as Other to Spanish and post-independence identities, the work of Mexican scholar María Josefina Saldaña-Portillo illustrates Rabasa’s points during the colonial and post-independent periods. She claims,

[f]or three centuries, Spanish colonial governmentality in the Americas successfully articulated processes of exploitation with procedures of cultural formation to produce racial and ethnic differences. These differences in turn have structured modern national identities... and continue to inflect the “lineaments of power” within the modern nation-states.

(Saldaña-Portillo 2002: 287)

According to Saldaña-Portillo such colonial and modernizing projects realized themselves by disrupting Indian ways of organization and applying shifting meanings to the ‘Indian’ over time. In this dynamic, the classification of the ‘Indio’ played a key role, while the diversity of indigenous groups, and their forms of social organization, were reduced and simplified. Saldaña-Portillo uses the term “Indian difference” to describe how notions of essential biological and cultural differences were constituted through a series of colonial and nation building projects that appropriate indigenous populations and culture to further these projects while keeping native people at a disadvantage (Saldaña-Portillo 2002).

The discourses of the “Indian difference” constitute racialization as the process of “marking human differences according to hierarchical discourses grounded in colonial encounters and their national legacies” (Appelbaum et al. 2003: 9). The production of the “Indian difference” exemplifies policies and mechanisms through which processes of racialization come into being. By looking at the process of racialization, instead of the category of race, I hope to avoid reifying differences and to move to understanding how “ideas of [indigenous] have created [or maintain] dichotomies” and inequalities in Mexico (Ibid.: 4).

As the “Indian differences” are reproduced and rearticulated through time, Saldaña-Portillo claims, they “seem truly authentic attributes of Mesoamerican



indigenous culture” but they are actually colonial and post-independence creations and continue to “bear the insignia of colonial exploitation” (Ibid: 287).<sup>5,6</sup>

She identifies four key processes in the production and reproduction of the Indian difference from the early colonial period to the 20<sup>th</sup> century.<sup>7</sup> I outline these four processes which are specific mechanisms or policies operationalized at a specific point in time. They created and naturalized discourses and representations that are central to my subsequent analysis because they expose discursive elements and mechanisms at different junctures of Mexican history that, as I will show, reappear in the Ordenamiento at the beginning of the 21<sup>st</sup> Century.

The first mechanism of creating “Indian difference” involved the reorganization of native administrative systems and the relocation of native populations in townships where they were labor for colonial enterprises and were taught Spanish and Christianized. They also paid tribute to the colonial administration as a form of ‘compensation’ for the “guardianship” the crown supposedly applied to indigenous towns (Saldaña-Portillo

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<sup>5</sup> Sometimes indigenous groups have adopted the same discourses to further their own interests (Appelbaum et al. 2003).

<sup>6</sup> It is noteworthy here, that while similar in some respects, the Mexican colonial dynamic is also different from what has happened and is happening in Canada, where settlers removed indigenous populations ‘out of the way’ and into reservations, believing that they would become assimilated and/or otherwise ‘disappear’ soon. It is only in the last twenty years or so that more inclusive discourses about First Nations people have appeared in Canada. Like in Canada, in Latin America, too indigenous populations died in masses due to European diseases and atrocities, but in Latin America they were and continue to be intricately interwoven with the colonial economy as work force and interlocutors (Quijano 2000). Their survival was imperative for the colonial administration, which realized its projects through the forced or voluntary inclusion of the indigenous populations (Gibson 1996).

Once the building of the independent Mexican nation state began, it was again imperative to include them to assert a broad-based Mexican independent nation against the former colonial regime. Thus, after repeated cycles of indigenous ‘inclusion’ on the basis of the ‘foundation of the Mexican identity’, and although resisting contemporary attempts of their appropriation or marginalization, indigenous people in Mexico today also stress that they are Mexicans. (Saldaña-Portillo 2002: 297, 299, 305, 306). In these ways and despite conflicts with the state and its manipulation of their citizenship, indigenous people and their culture have always been prominently ‘present’ both economically and discursively in Mexico, which stands in contrast to their relative erasure in Canada, where indigenous populations have been excluded from the ‘state’ until recently ideologically, symbolically, and materially.

<sup>7</sup> Appelbaum et al. (2003: 3-15, 17-21) emphasize that parallel and sometimes contradictory processes have taken place throughout the history of Mexico and Latin America.

2002: 288). These townships were called pueblos but Saldaña-Portillo calls them “atomized Indian towns” and describes them as the “most pervasive and successful” institutions in terms of realizing colonial enterprises (Ibid. 288).

The pueblo is the term the Spanish gave to the indigenous communities they encountered in New Mexico in the 17<sup>th</sup> Century but in Mexico the pueblos are a colonial product.<sup>8</sup> The foundation of San Luis Tlaxialtemalco in 1603 is part of the colonial reorganization of indigenous populations into the pueblos and it “left a profound mark in the indigenous memory, [because] they had understood very quickly that the relocation to new areas meant the loss of their lands” (Títulos de la Congregación de San Gregorio Acapulco 1603, cited in Pérez Zevallos and Reyes García 2003: 47). The relevance to my analysis of this process is the fact that the term refers at once to an indigenous community and a community that has been completely reorganized and deprived of rights and resources – it, therefore, effectively naturalizes the notion of difference by separating indigenous peoples and governing them by different rules, while masking the fact that the state of the pueblos is the outcome of a colonial process. In this chapter, I examine the Ordenamiento in terms of how its use of the concept of the ‘pueblo’ operates in the cultural politics of conservation in contemporary Mexico City.

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<sup>8</sup> The term implies social structures that made the indigenous societies appear to form one house or one family (Santamaría 1992: 892). However, to highlight the colonial machinations of indigenous communities it is important to make a distinction between the pueblos of the New Mexican Indians (today known as the Pueblo Indians) and the pueblos in Mexico on the basis of how they were formed: The pueblos in New Mexico were the indigenous social organization and village structure the Spaniards encountered but in Mexico, the pueblos are the result of colonial relocation and reorganization of indigenous people, which meant the breakdown of indigenous administrative systems, social structures, and forms of land title.

The second major concept and process involved in creating the “Indian difference” that Saldaña-Portillo identifies is *indigenismo*.<sup>9</sup> It is a series of programs which encompassed the ideological and economic appropriation of the native population to nationalistic processes, initiated by the newly independent Mexican government in the 19<sup>th</sup> Century.<sup>10</sup> At the turn of the 19<sup>th</sup> Century, in an attempt to reject the former colonial power and assert an independent Mexico, the Creole administration sought the natives’ support by venerating the indigenous resistance, particularly the resistance that the Aztecs had put forward against Cortés (Saldaña-Portillo 2002: 290). These discourses are still meaningful in constructions of citizenship amongst people in Xochimilco: they proudly told me how the Xochimilcans had fought against Cortés: first successfully and even wounding him, but eventually succumbing to the overwhelming force (Farías Galindo 1984). That people cite these ‘legends’ illustrates Rabasa’s point that indigenous history (of war) is, on the one hand, folklorized and, on the other, relegated to a curioshop and a ‘vernacular living’ museum that recycles the legends about those wars. The process racializes indigenous populations by characterizing them as folkloric and ‘museic’, i.e. unlike the ‘developed’ and ‘progressive’ ruling elites or middle classes. Additionally, in the early 19<sup>th</sup> Century this folkloric and romantic discourse erased the subordination and misery in which native populations lived at the time (Rabasa 2002); and analogically, today the Xochimilcans’ proud history is in stark contrast to the city’s attempts to contain rural communities, as I will show in this chapter. Specifically, I am interested in how the Ordenamiento glorifies what it implies is ‘indigenous’ and how in the process the

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<sup>9</sup> The term “indigenismo” is usually attached to the “revolutionary indigenismo” that operated in the early 20<sup>th</sup> century Mexico. However, adhering to Saldaña-Portillo’s use of the term, I attach it also to processes at the early independence, i.e. the “historical indigenismo” in her terms (Saldaña-Portillo 2002: 292-293).

<sup>10</sup> Mexico became independent from Spain in 1821.

everyday realities of peasants and their unequal relationships with the state become obscured.

The third significant wave of the rearticulation of the “Indian difference” came in the late 1800’s, when the state ordered the transfer of collective indigenous (and church) lands to large private non-Indian land holdings or *latifundios*<sup>11</sup>. The ruling liberal ideology considered collective land a “backward colonial institution” and thereby culturally an “Indian problem” that could and should be ‘fixed’ by creating a “deethnicized small-holding peasantry” (Saldaña-Portillo 2002: 292). In reality, however, indigenous populations were dispossessed and were forced into labor on large landed estates (Gibson 1966). Significant for my analysis is the idea that a cultural practice, imposed on the indigenous population,<sup>12</sup> becomes viewed as an ‘Indian problem’ that is perceived to prevent the elites and the state from advancing their interests and is eventually solved by marginalizing the natives.

Another expression of an ‘Indian Problem’ that combined with folklorization occurred after the Mexican Revolution. In the first half of the 20<sup>th</sup> Century, leftist revolutionary elites, particularly during the presidency of Lázaro Cárdenas (1934-1940), desperately tried to unite the nation split by the revolution. To that effect, the government “resuscitated the Indian warrior as the symbol of revolutionary nationalism and as the emblem of the Mexican people’s true ancestral rights” (Saldaña-Portillo 2002: 292). However, the government also considered them as a threat to the unifying efforts; there

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<sup>11</sup> Two laws expedited this land transfer, the Lerdo Law of 1856 that ordered the church to sell its lands to the public and the 1857 constitution that ordered collective land holding to be privatized. Although the execution of this part of the constitution was delayed (Bethell 1991), it nevertheless enabled ‘land transfers’ in the wetlands. For instance a hacienda with close ties to the president of the republic, ‘acquired’ (Xochimilcans perceived this as land seizure) land from the wetlands in Xochimilco. This move reduced their communal pastures and areas where they harvested wild crops (Hernández Silva 2003).

<sup>12</sup> The colonial administration imposed communal land holding on the pueblos.

was an 'Indian Problem' again. Due to their ethnic specificity, the natives were perceived to be lacking the essential sense of patriotism. To resolve this contradiction, the government adopted the policy of assimilation through enlightenment without eliminating existing Indian culture (Knight 1990: 80). Subsequently, widespread rural educational programs infused Indians with the "new religion of the country - post-Revolutionary nationalism" and incorporated "Indian customs and history into revolutionary history" (Gamio 1960, 159; quoted in Knight 1990: 82). I will examine the Ordenamiento in terms of how it conceives a contemporary 'Indian problem' that threatens the state, and how it suggests the 'problem' should be resolved.

While Saldaña-Portillo's historical analysis ends with the revolutionary *indigenismo*,<sup>13</sup> two other eras and their associated discourses are relevant to my analysis. First, after the Second World War developmentalist discourse inside Mexico adopted many ideas from abroad (Lander 2000), particularly when international development started to operate worldwide. According to its critics, the philosophy underlying Western development represents another wave of colonization of the 'Third World' with the imposition of modernist ideologies on indigenous and other non-Western populations (e.g. Escobar 1995, Crush 1995, Sachs 1992). The Green Revolution, or the modernization of agriculture with Western technologies and production ideologies represents one of the largest such projects in Mexico in terms of how it promoted national interests of the United States and a certain sector of the Mexican elite that saw national development in a particular way (Perkins 1997: chapter 5). In the process, however, indigenous groups often suffered cultural and economic losses, despite explicit intentions

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<sup>13</sup> Her final analysis relates the four processes to the contemporary struggle between the state and the Zapatistas (Saldaña-Portillo 2002).

to the contrary (Hewitt de Alcántara 1976). This critique of development allows me to examine how the Ordenamiento naturalizes the development in the city's rural areas as 'indigenous' and essentially different from the economic paths of the rest of the city's population (GDF 2000: 26).

Second, when conservation movements and ideas surged in the West due to disappointments in the modern project, particularly its social disparities and ecological failures, they were often articulated through romantic notions of a more sustainable and harmonious past – as evidenced by the celebration of 'traditional' agricultural methods and lives. These ideas traveled to Mexico and other 'developing' countries with conservation projects and ideologies as well as with numerous agroecologists in search of sustainable alternatives for the industrial agriculture in the United States and elsewhere (e.g. Chapin 1988, Guha 1998a, 1998b, Simonian 1995, Sundberg 1999). For many, the chinampa and other indigenous technologies came to represent both sustainable agricultural ecosystems and practical agricultural methods to be followed elsewhere (e.g. Altieri 1987, Coe 1964, Wilken 1987, Gómez-Pompa 1978). The early versions of these 'eulogies' lack a consideration of how the socio-economic and political circumstances in which chinampa agriculture has been transformed affect the possibilities for technology transfer – instead 'indigenous' or 'traditional' technologies are uncritically appropriated by development and conservation ideas to 'cure' modernist problems in the West.<sup>14</sup>

Mexican conservationists have also adopted such discourses (Simonian 1995) and I am interested in how they manifest in the Ordenamiento: how does the Ordenamiento portray

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<sup>14</sup> In terms of the chinampas, a more critical analysis only appears in the mid 1990s' (e.g. Torres-Lima et al. 1994; but see Chapin (1988) for a critique of a failed technology transfer attempt in Mexico in the 1980's). Erickson (1998) and Denevan (1995) provide an example of a critical consideration of chinampa-like agricultural methods in realized development projects and Heimo et al. (2004) discuss the complexity of prehispanic wetland agriculture and the implications to its contemporary revival.

the 'traditional' agricultural practices in the city's rural areas, and what does the portrayal imply, on the one hand, about the social relations between the farmers and the state and, on the other hand, about the environmental-society relations.

It may sound far fetched that a conservation plan could constitute coloniality of power. However, the conceptual frameworks of Walter Mignolo and Aníbal Quijano, and historiographers like José Rabasa and María Josefina Saldaña-Portillo provide me with a framework and method to unpack the ideas and practices that the government of Mexico City suggests for conservation at the outset of the 21<sup>st</sup> Century. By complicating and deconstructing the discourses that the Ordenamiento circulates about rural communities, my analysis represents an alternative reading and writing of Mexican history that, while preserving the "memory of old", includes rather than excludes contemporary Indian presents in a "mode of living history" (Rabasa 2002: 52).

## Government's discourses

### The Texts

In their first meeting with the farmers, CORENA's negotiators distributed to the participants one version of the Ordenamiento Ecológico (GDF 2000). This version (from now on called the Ordenamiento) is intended for the general public and therefore rewords and elaborates upon the official document outlining the legal framework (Gaseta Oficial 2000, from now on the Legal Text). It is important to focus my analysis on the Ordenamiento because this one has both a wide and focused distribution. This is the

version that the city published specifically as an “abridged version for public distribution” (GDF 2000: front cover) and gave to the chinamperos in their first meeting: Only after a specific request, did the farmers get the official document which is void of descriptions about the rural communities. The abridged version also describes very briefly the results of the public consultation done to inform the legislators. This description is not in the Legal Text. The abridged version also appeared on the internet and farmers were told to consult it there.<sup>15</sup> Thus, by prioritizing the abridged version for public distribution, the government wanted to promote a certain image, first of all, of itself (as a caring one that considers local communities and the public opinion) but more importantly for my analysis, of the rural communities.

First, the Ordenamiento outlines the area under conservation: 59% or over 88,000 hectares of the city’s area is under this legislation (GDF 2000: 4). Then, the booklet moves to explain the objectives of the conservation plan: i.e. to “confront the multiple problems that our city confronts” (GDF 2000: 6), both social and environmental such as the reinforcement of the “social property of the agrarian nuclei” (Ibid.: 7) and the “continuation of the ecosystems, [their] environmental services, and the rural production” (Ibid. :8). The document specifically states that it is the city government’s and resident’s “responsibility to help and compensate” land owners for the environmental services that their land provides to the city (Ibid. :8). It then moves on to describe the legal process and bases of the plan, what the intended methods of conservation are, and the “normative zonation” (Ibid.: 14).

Next, the booklet explains the threats to, and the prognosis and proposed conservation measures for, the different resources, and then moves on to describing the

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<sup>15</sup> FJ October 3, 2000 farmer’s meeting.



rural communities. The last section of the booklet details the land use zones and their associated resources and productive activities (Ibid: map on pp. 52-53). The text ends with advice of what to do if one encounters somebody "causing harm to the land, natural resources and environment" (Ibid.: 58), whereafter the appendices give tables and maps of the zonification and land use regulations.

Overall, the booklet is attractive: it is printed in color on high quality paper and it has one or two color photographs on almost every page, including photographs that depict life in the rural communities. It also uses hieroglyphs that at least appear to belong to an indigenous language to identify different resources. The booklet is free of charge.

Compared to the Legal Text, the popularized version covers in equal detail and depth the actual land use regulations that the law stipulates. What is different is the additional colorful and general section on the ecosystems and the value they bring to the city as well as the discussion on the rural communities. It is intended to be readable by the lay public, though I am not certain about the extent to which it is understood. But in San Luis, most of the leaders of the chinamperos who were negotiating with the government representatives have university education. Soon after reading this booklet they requested to get a copy of the official text. My questions about the booklet relate to its popular or propagandist qualities, specifically in terms of how it depicts the rural communities.

The Ordenamiento speaks about the social organization in the agricultural communities in Mexico City:

*El Programa reconoce los valores culturales, económicos y ambientales de los usos de suelo que los pueblos, ejidos, comunidades y pequeños propietarios rurales han realizado tradicionalmente.*

*The program honors the cultural, economic and environmental values of land use that the rural pueblos, ejidos, communities, and small holders have realized traditionally.*

GDF 2000: 8

*Los pueblos mesoamericanos originarios de la Cuenca de México son los dueños de la mayor parte de las tierras de la zona rural del actual Distrito Federal, y aún subsisten bajo las figuras agrarias de pueblos, ejidos y comunidades, así como de pequeñas propiedades rurales. Estos pueblos conservan una cultura rica en conocimientos sobre el aprovechamiento y manejo de los recursos naturales, además de una eficiente producción rural tradicional.*

GDF 2000: 25

*The original Mesoamerican pueblos in the Valley of Mexico own the majority of the lands in the rural zone of the Federal District and they still subsist in agrarian formations of pueblos, ejidos, and communities, as well as rural small holders. These pueblos conserve a rich culture in the knowledge of the use and management of natural resources and an efficient traditional rural production.*

Emphasis mine

At the outset, it appears that these statements honor the fact that rural land in Mexico City belongs to people whose roots go back to the pre-colonial era and cultures, and the fact that social and cultural differences are significant among the city's population. The Ordenamiento also distinguishes between several types of land holding in the rural areas, and the Legal Text explicitly states that these will be respected alongside with current land use practices (Gazeta Oficial 2000). The Ordenamiento then outlines the rate at which rural ejidos have disappeared and attributes the loss to urban growth: today only half of the 93 "agrarian nuclei" that existed in the 1940's remain (Ibid.: 25). It predicts that if this trend of urban growth continues, the result will be a series of other losses:

*Pérdida del patrimonio colectivo y familiar de los pueblos originarios sobre las tierras y recursos naturales, así como la del control jurídico y legal de las propias tierras;*

*Pérdida del patrimonio y derecho al crecimiento natural de los pueblos, ejidos, comunidades y pequeñas propiedades rurales;*

Loss of the original pueblos' familial and collective heritage to their lands and natural resources as well as to the judicial and legal control of their lands;

Loss of the heritage and right to *natural growth* of the pueblos, ejidos, communities, and rural small holders;

*Afectación de la base ecológica para la práctica de actividades agropecuarias y agroforestales, que posibiliten el desarrollo cultural, económico y sustentable de los núcleos agrarios.*

Ibid.: 26

Adverse effects on the ecological base of agricultural and agroforestry activities, which *enable the cultural, economic, and sustainable development* of the agrarian nuclei.

Emphasis mine

Today, the challenge at hand for the city is how to persuade rural communities and farmers to accept the conservation plan and change their agricultural practices accordingly. Considering the coloniality of the relationships between peasants and the state in Mexico, this challenge can be articulated in another way: how to appropriate the land and resources of indigenous communities to service the needs of the center of Mexico's political and economic life and power? I identify a legal and a discursive path to this goal.

First, to ensure that the implementation of the conservation plan will be democratic, the Ordenamiento has to recognize and respect existing laws of land title and culture in rural villages. This makes perfect sense considering the ruling party's history of carrying out the land reform after the Revolution and remembering its election promises of increasing democracy in the city's administration. What I find problematic, however, are some of the document's assumptions about the rural communities. While it is reasonable to assume that certain agricultural practices, social forms of organization, and cultural values are intricately linked, I question the allusions of them as 'original Mesoamerican', 'traditional', and 'natural' as if they were 'indigenous' attributes, and as if they were affected only by outside sources so that they will either demise due to urbanization or 'survive' it thanks to the conservation of the land, thereby also guaranteeing the 'natural growth' and culture in these communities. This multiple preservation would be accomplished by regulating land use, on the one hand, and on the

other hand, by paying farmers compensation for the ecological services they provide for the city (Ibid.: 8, 27). The goal is to make agriculture and agroforestry so profitable that farmers will not need or want to capitalize on the land, which would lead to changes in land use from agriculture and forestry to urban purposes (Sosa 2000).

My task here is not to question the intentions of these statements, the people who made them, or who tried to implement the conservation plan. Instead, I will analyze these statements in terms of systemic and naturalized discourses of coloniality of power that inform the Ordenamiento. Overall, I argue, the document racializes the rural communities by casting on them the difference of an ahistorical and 'natural' 'Indian', a concept which symbolizes Mexican identity, and has been used to rally indigenous populations behind various interests of the state, as outlined in the introduction of this chapter.

The first part of my analysis examines how on the one hand, the Ordenamiento lumps terms and concepts that imply the 'indigenous' from the colonial and post-independence eras and, on the other hand, deplores the possible loss of social forms of organization. I will show that the government's rhetoric ignores past subordination of indigenous communities and establishes a contemporary form of subordination. The second part explores how the Ordenamiento argues for the conservation of what it terms as 'traditional' land use practices and locally-based development. I argue that this strategy 'locks' the rural communities into predetermined and subordinated material practices and economic opportunities. The last section identifies the Ordenamiento's conceptualization of a contemporary 'Indian problem' that threatens the city's interests. I show that the conception and proposed solution of this 'problem' limit the rural communities' and farmers' choices of livelihood and thereby denies them equal economic opportunities.

## Analysis

### Folkloric pasts and subordinated presents

One way the Ordenamiento seeks the approval of the rural communities is through rhetoric that invokes the 'Indian past' at different historical junctures. In the quotes that open the section on the government's discourses (on page 127-128), the words "original Mesoamerican", "pueblo", and "ejido" are terms that belong to distinct eras in Mexico's history and symbolize Mexico's identity and roots. However, they become problematic folklore when one uncovers the injustices and social inequalities that the history of these terms contains.

The 1942 term Mesoamerica refers to the culture area that prior to the Conquest expanded over what comprises today southern Mexico, Guatemala, Belize, El Salvador, and parts of Honduras, Nicaragua, and Costa Rica. In this area, people had built cities and formed city-states, and the most elaborate and powerful of them at the time of the Conquest was the Aztec Empire (Porter Weaver 1981). By using the concept of the 'Original Mesoamerican', the Ordenamiento implicitly refers to these cultures and the pre-Colonial era and thereby invokes the past, specifically an indigenous past that it casts into the present. By assuming that these cultures and their forms of social organization "still" exist ["*aún subsisten*"], the Ordenamiento folklorizes them as if they had continued from the Precolonial era and should continue into the future with an unchanging "rich culture in the knowledge of the use and management of natural recourses and an efficient traditional rural production" (GDF 2000: 25). If the

conservation plan failed, these 'original Mesoamerican curiosities' would be lost, which further justifies their conservation.

This logic follows the pattern that José Rabasa has identified as common in colonial writings: they folklorize forms of life and deplore the loss of old, and confine Indian cultures to the museum and the curio shop (Rabasa 2002: 52). By first asserting the 'Original Mesoamerican' communities, the Ordenamiento folklorizes them, and then immediately deplores their loss both in the past and potentially in the future. This discourse reduces them to an imaginary living museum where rural communities continue age-old agricultural traditions and conserve, not just the land, but also themselves.

The second folklorization occurs with the term *pueblo*, as if the *pueblo* was a Mesoamerican village organization and as if it had continuity from the Precolonial to the present. Despite the fact that the term *pueblo* is in common use in Mexico's villages or towns, with at least a colonially-based indigenous majority population, I find it problematic that the Ordenamiento alludes to it as the desirable rural organization. The formation of and consequences from the *pueblos* were devastating for indigenous communities and the power of the *pueblos* continues to diminish. As described earlier, the *pueblo* organization was one of the fundamental rearrangements of the indigenous population that the Spanish rule undertook to realize its enterprises (Saldaña Portillo 2002: 288): Xochimilcans repeatedly complained about excessive tributes and the harsh treatment by colonial employers (Pérez Zevallos 2003b).<sup>16</sup> With the breakdown of the

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<sup>16</sup> At the time of the Conquest Xochimilco belonged to the Aztec Empire and Tenochtitlán extracted tribute from its vassals. It had nominated landlords to individual chinampas in order to produce food for the empire as well as the landlord's consumption (Brumfiel 1991). In the indigenous political organization, Xochimilco was divided in three regions or *tlahtocayos*, controlled by *tlahtoanis* who ruled their subjects in a reciprocal relationship. They were re-enforced through tributes, payments to the subjects, marriage, the appointments of functionaries, and collective ceremonies and rituals (Cabrera Vargas and Stephan-Otto 1999). The *tlahtoanis* controlled lands that were passed down to his heirs (I have not come across names of female

indigenous administrative systems came a breakdown of the autonomy and sovereignty of indigenous societies, which led to their marginalization and limited livelihood opportunities due to the appropriation of their lands outside the pueblos. A certain level of autonomy prevailed but the colonial rule imposed dependency relationships within indigenous communities and between them and itself (Pérez Zevallos 2003a and 2003b).

The separation from and destruction of the indigenous lands was one of the most contentious issues in colonial relations and resonates to this day. For example, in 1595 San Luiseños fought against “one Castilian” who settled permanently on land that the locals had lent to him (Nuestra Palabra, 1959 [Conflicto por Tierras de los Naturales de San Luis Tlaxialtemalco contra Juan Andréas Meretil], cited in Pérez Zevallos and Reyes García 2003: 41). An indigenous organization in the Valley of Mexico claims that today “in the rural zone of the Federal District... thirteen conflicts exist about boundaries between communities... The majority of these conflicts were imposed by the colonial

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*tlahtoanis* but I have not looked into this in more detail). The colonial administration acknowledged the *tlahtoanis* and lower level Precolonial administrators (*caciques and señores*) and understood the system, which enabled them to ‘penetrate’ and manipulate it. Subsequently the colonial rule sought to isolate indigenous rulers from each other and increase their obligations and loyalties towards the colonial administration.

The indigenous towns and villages in the valley continued to supply Mexico (City) with food, labor, and other resources but the nature of this relationship had changed from the Precolonial tribute and market production to forced tribute and exploitive labor. When disease killed significant portions of the indigenous population, without subjects the *tlahtoanis* became even more powerless. Of course the other factor causing erosion of the Precolonial administration was the influence of the church that not only Christianized the local population but also subjected its services and material contributions.

By the late 1500’s in Xochimilco the indigenous administration had broken down, having separated the intimate connections between the *tlahtoanis* and their subjects, co-opted the former into a clientelist relationship with the crown, and caused the impoverishment of the villages and a corruption of their relationship within the pueblos and with the *tlahtoanis*. In 1553 indigenous leaders were excluded from the colonial administration of ‘indigenous affairs’ causing the Xochimilcan *tlahtoanis* to circumvent this order by pretending to conform with the new colonial arrangement of only one center in Xochimilco while in fact, they continued to conduct affairs along the three indigenous *tlahtoques*. However, the colonial rule of Xochimilco passed the *tlahtoanis* and named lower-level indigenous leaders as the governor of Xochimilco. Thus the two governance systems co-existed but the colonial one officially overruled the indigenous one and in the 1600’s the governor of Xochimilco was no longer a person with indigenous heritage, and local leaders of the church and crown ‘expropriated’ (without pay) land of indigenous leaders. This review is based on Pérez Zevallos (2003a and 2003b) unless otherwise indicated.

government and perpetuated till this day by the Mexican State as a strategy to destabilize the political unity of indigenous communities and to favor their dispossession of their lands and natural resources” (Alianza de Pueblos Indígenas, Ejidos y Comunidades del Anáhuac 2002).

The weakening of the power of the pueblos has continued in the 20<sup>th</sup> Century as illustrated by statements of contemporary indigenous institutions in Mexico City. It has organized the pueblos under an umbrella organization called *Cordinadores del enlace*. It is a council of elected pueblo leaders, called *cordinadores*, which the city has to consult in matters that affect the pueblos. However, some *cordinadores* claim “the control and power of the *delegaciones*<sup>17</sup> has diminished the representation of the local *cordinadores* in the pueblos” (González Sánchez 2003), and therefore the pueblos are concerned for their political relationship with the state; while they have free elections internally, they are not satisfied with their political power in the city’s upper administration (González Sánchez 2003).

By naturalizing the pueblos as a remnant of pre-Colombian Mexico, the Ordenamiento takes the focus away from their political struggle and revisions them as somehow independent land users and resource managers threatened by urban growth but capable of ‘conserving’ themselves through their own actions. This political ‘trick’ has not gone unnoticed in the pueblos, which recently pointed it out in a statement about the Ordenamiento:

All the same, the politics of rural development and original indigenous people by the government of Andrés Manuel López Obrador until today have been scant and null[;] until today *it has not wanted to listen to us who*

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<sup>17</sup> Administratively Mexico City is divided into sixteen *delegaciones* or precincts, each of which has an elected political leader. San Luis pertains to the Delegación de Xochimilco.



*have a legal representation as indigenous communities in the Federal District, but instead it carries out frequent meetings with luxurious corporations (like Carso) which always have speculated with the communal lands of our pueblos.*

The rural politics that should be carried out by [CORENA] have not happened; instead *they support the archaic productive methods that continue to cause degradation in rural zones*; the money is canalized through political criteria and, with governmental assistance, they reinforce the old corporate *cacicazgos* [local strong men and their 'clients'] of the PRI [former ruling party], which have done so much damage in our pueblos.

There is no progress in the delivery of the disputed payments for environmental services, while the ground water level and springs in the communal lands are overexploited and, [the administration] *continues to ignore the very demands for the payments for environmental services by the legal representatives of San Pedro Atlapulco and the pueblos of Milpa Alta.*

Alianza de Pueblos Indígenas, Ejidos y  
Comunidades del Anáhuac 2002, my emphasis<sup>18</sup>

These historical and contemporary relationships between the pueblos and the state have not been politically, economically, or culturally advantageous to the indigenous communities but they have made space for the state. The Ordenamiento's rhetoric of the pueblos can be analyzed in terms of the colonality of power because of its erasure of the past subordination (Rabasa 2002), which is accomplished by folklorizing the pueblo and prioritizing this social form of organization.

The Ordenamiento's third folkloric discourse concerns the ejidos. The ejido is an agrarian community on federal land, where the members hold user rights to the land communally and work it collectively, while they also work individual parcels privately.

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<sup>18</sup> The fact that the pueblos assert themselves by alluding to the 'pueblo' as a Precolonial settlement and, at the same time resist the very notion by outlining how the Mesoamerican political organization has crumbled, is to be analyzed as a discursive mode different from how the Ordenamiento utilizes the idea of the 'pueblo': the pueblos assert equal rights and resist unidirectional power; specifically regarding the conservation plan, the pueblos assert their right to economic and natural resources and political representation *while* organizing autonomously internally. This argumentation is an example of how discursive elements 'travel' across power divides (Appelbaum et al. 2003). The Ordenamiento, on the other hand, as the above analysis shows, utilizes the idea of the pueblo to appropriate them to the service of the city.

Several ejidos exist in Mexico City but they have a very different history from that of the '*pueblos originarios*'. While the pueblos were formed in the 16<sup>th</sup> and 17<sup>th</sup> Centuries, the ejidos were created in the early 20<sup>th</sup> century as a consequence of a revolution orchestrated by rural landless peasants. Many of them were indigenous people but the revolution was not an indigenous revolution, as it was not a cultural but a political movement concerned with the relations of production, specifically the lack of land base of the peasants (Knigh 1990). The ejido was an attempt to restore land base to communities that had been deprived of their means of subsistence during the colonial and post-Independence reorganizations of land ownership and, therefore, been reduced to poverty and social exclusion. For peasants, the ejido thus symbolizes the gains from an agrarian struggle.

Until 1994, the ejidal lands were federal property and could not be sold, giving control of land to the state: as the owner of the land the state could dictate and restrict its use to agriculture. In 1994, the administration of president Salinas Gortari revamped the constitution so that ejidal lands became equivalent to private property that the ejidatarios can sell. While many opinions about this constitutional change exist, the most vocal ones, for instance that of the Zapatistas, point out that the change 'sells' the fruits of the agrarian revolution to economic globalization (Stephen 1997a).<sup>19</sup>

For the conservation program in Mexico City, the privatization and commercialization of ejidal lands represent a loss of control because now ejidatarios are free to sell the land to anybody, who may or may not be interested in maintaining the current land use. These buyers can come from anywhere with substantial connections and investment power, as experiences in the past illustrate. In mid 1990's, a developer wished

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<sup>19</sup> It is commonly viewed that Salinas Gortari's objective was to facilitate foreign investments by making ejidal lands subject to sales.

to buy land in the chinampas in order to build a luxury housing complex, a golf course, and shopping mall (Canabal Cristiani 1997). Rumors about Canadian investors were circulating in Xochimilco when I was there.

Containing such urban development in rural zones is a challenge in the political culture of corruption and side deals where buyers abound (La Reforma 2002c).<sup>20</sup> In this light, it is understandable that the Ordenamiento prefers the preservation of the ejidos. But as a discourse of power, these appeals to the ejido represent another element of coloniality because of how they further the interests of the state: the discourse associates indigenous values with social organization and venerates them for their symbolic importance for the Mexican revolution and its historical efforts of bringing social justice to agrarian communities in the process of nation building. For state institutions like CORENA, maintaining the ejido would make it easier to control land use changes; however, based on the problems the system has suffered in the past, I question the prioritization of the ejido as the optimal form of agrarian community organization in the rural areas of Mexico City in the year 2000 and into the future. From the beginning, the lands assigned to the ejidos were often poor quality, the amount of land is, in today's economic conditions very small, and the resources needed for improvements and investments on the ejidos have often either gone to wrong pockets or been too small (Thiessenhusen 1995: 29-49, Gates 1993). Nor is it automatically sure that the ejidos' social and economic value can be retained by conserving the land base because the ejidatarios struggle in making an adequate livelihood.

In the chinampa zone there are two ejidos, Xochimilco and San Gregorio, which are administered together. Most of their lands are in that part of the wetland that is

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<sup>20</sup> CORENA's director talked about this problem at length to me when I interviewed him (April 21, 2001).

frequently inundated, and the soil there has become so saline that growing anything on it is near impossible. Most of the ejidal land is abandoned and the ejidatarios have found other sources of income.<sup>21</sup> Therefore, with or without conserving the environment, the conservation of the ejido *and* traditional agriculture (i.e. chinampería) as a viable economic activity seems questionable at least, when judged by the ejidatarios' current choices. That is why suggesting that the conservation of the environment will lead to the conservation of a social organization seems untenable. As the history of the ejidos shows, despite good intentions, they have not given rural and indigenous communities or peasant families an adequate livelihood or equal opportunities with the rest of the society. Therefore, insisting on the ejido runs the risk of limiting ejidatarios also in the future.

By lumping together ideas from different historical eras and attributing to them an indigenous origin and historical function in relation to the state, the Ordenamiento appropriates indigenous histories in order to further the city's interest in the water below the farmers' fields. However, despite the Ordenamiento's allusions to 'taking care of' the pueblos', the history of the Conquest and Mexico's agrarian policies suggest that the pueblo and ejido are structures by which the México Occidental has subordinated the México Profundo. Therefore, the Ordenamiento reproduces the coloniality of power by rearticulating indigenous values and cultural forms in a way that turns indigenous history against the very people it talks about (Rabasa 2002: 52).

Furthermore, as the state of the ecology in the chinampas today demonstrates, the causalities between the environment, social organization, and land use are complex and what is most certain, it is not possible to point out one single actor responsible for the improvements or degenerations of the environment. Therefore, allusions to a direct cause-

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<sup>21</sup> Local informant (OCOP), 2004 internet conversation March 13.

and effect relationship between land use practices and environmental quality need to be unpacked for their discursive purposes, which I will do next.

### Romantic appropriations and restricted livelihood options

“These pueblos conserve a rich culture of knowledge about the management of natural resources and they practice an *efficient traditional rural production* [with] cultural, economic, and environmental values of land use”.

(GDF 2000: 25; my emphasis)

The Ordenamiento does not state what specifically “an *efficient traditional rural production* [and the associated] cultural, economic, and environmental values of the land use” are but because this statement appears together with the ‘original Mesoamerican pueblos’, they and ‘traditional’ practices become mentally and discursively associated. I am interested in how the assumptions and ideas that the term ‘traditional’ holds organize the pueblos and rural land use. I argue that they are romantic ideas that complement the folkloric discourses of the ‘Mesoamerican pueblo’ and the ejido and by so doing further mark the smallholders socially and culturally in ways that deny them equal livelihood opportunities with the majority of the city’s residents. In other words, they produce the notion of essential differences between rural and urban residents.

As described in the introduction of this chapter, conservationists’ and developmentalists’ notions of ‘traditional’ agriculture are intricately tied to disappointments in modern technology in the West. With similar disappointments in Mexico, development and conservation experts there adopted ideas that romanticize indigenous agricultural technologies (Simonian 1995). For instance, the magazine of the FAO claims that the chinampa system is “ancient farmlore” and “marshland magic of the

Aztecs" (Werner 1994a: 13, 12), capable of resolving "current problems" (Werner 1994b: 12). Another article in a journal of the United Nations' Environmental Program is convinced by an experimental construction of chinampas in tropical zones of Mexico that "there is no reason why we cannot use this system in the tropical swamps" (Gómez-Pompa 1978: 55) and that the chinampas are "[a]n old answer to the future" (Ibid.: 51). With a promising theoretical agroecological model and a few experiments of technology transfer of the chinampas they became a prominent model for ecodevelopment in wetlands during the 1980's (Chapin 1988).<sup>22</sup>

These practical projects are situated in a late twentieth century discourse in North America that casts native relationships with the environment as unchanging and sustainable. This literature created the idea of an 'Ecological Indian' who is free from polluting the environment and destroying natural resources that modernity had brought about. According to this ideology, the 'Ecological Indian', somehow "understands the systemic consequences of his [sic] actions, feels deep sympathy with all living forms, and takes steps to conserve so that earth's harmonies are never imbalanced and resources never in doubt" (Krech 1999: 21). Thus, these ideas assume "certain cultural premises about the meanings of humanity, nature, animate, inanimate, system, balance, and harmony" (Ibid.: 22). They resulted from scientific thought and ideas of control, which in turn led to development ideas based on natural 'balance' and 'stability'. However, those ideas no longer hold water; instead, change, chaos, and unpredictability now are considered "intrinsic and natural at many scales of time and place in the biosphere"

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<sup>22</sup> Mac Chapin (1988) outlines the ecological and socio-economic problems in attempts to transfer chinampa technology to tropical areas in Mexico. According to him the main problems were the ecological disparities between the Valley of Mexico and the tropical areas, top-down project planning and execution, lack of attention to markets, and the uncritical developmentalist 'enthusiasm' about a 'pre-colonial' agricultural technology.

(Botkin cited in Krech 1999: 23 fn 16). The significance of this new view is that “in an open nature in which balance and climax are questionable, [indigenous people] become, like all people, dynamic forces whose impact, subtle or not, cannot be assumed” (Krech 1999: 23).<sup>23</sup>

Research about land degradation prior to the Conquest testifies to the potential and actual non-sustainability of indigenous land use (overview e.g. in Denevan 1992). For instance, Barbara Williams (1972, 1989) reports severe and widespread erosion on the hill lands in the Valley of Mexico around 1540, and already two thousand years before the Conquest erosion as severe as what occurred after the Conquest took place around the highland Lake Patzcuaro (O'Hara et al. 1993.) Similarly, vast areas in Mesoamerica and South America were already deforested thousands of years before the Conquest but colonial and 19<sup>th</sup> Century travelers misinterpreted the post-Conquest regrowth in the forests as untouched forests (Denevan 1992, Siemens 1998).

These examples suggest that Precolonial agricultural technologies either directly caused environmental change and deterioration, did so because they were not able to adjust to environmental changes, or were affected severely by changes in social or political conditions such as drastic population increase or war (Williams 1989). A contemporary analogue is the environmental degradation that is intricately linked to economic and cultural marginalization of indigenous rural communities: they use whatever means they have available to them in order to make a living and in many cases, are unable to attend to the long-term environmental effects of their short-term survival strategies (Blaikie and Brookfield 1987, Martínez-Alier 2002, Guha 1997).

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<sup>23</sup> This is not to say that indigenous people would not have shown concern for the state of the environment and acted upon that concern (Krech 1999).

The marginalization is often a result of colonially-based policies that have discriminated against indigenous people, leaving them without a sufficient land base and other resources necessary for making an adequate living (Escobar 1995: 22). The statement quoted earlier about contemporary land disputes in the Valley of Mexico, imposed by the colonial administration and perpetuated by the Mexican State (Alianza de Pueblos Indígenas, Ejidos y Comunidades del Anáhuac 2002) illustrates how rural producers perceive their marginalization as a result of a long historical process. In this process, which only recently has started to value technologies that have Precolonial origins, agricultural policies have disadvantaged smallholders (e.g. Barry 1995, Esteva 1983, Gates 1996, Hewitt de Alcántara 1992, Otero 1996).

The discourse of the 'Ecological Indian' and the environmental and social realities of indigenous land uses prior to and after the Conquest inform my reading of the Ordenamiento: by desiring the continuity of 'traditional' production, the Ordenamiento implies that 'traditional' is ecologically and culturally sustainable and, by linking it with the idea of 'Mesoamerican', the Ordenamiento suggests that Precolonial values uniformly translate to sustainable land uses. Therefore, advocating 'traditional' practices as a solution to economy and ecology without addressing marginalization as a political issue, the Ordenamiento's claim to conserve the existing social organization and the "rich culture in the knowledge of the use and management of natural resources and an efficient traditional rural production" (GDF 2000: 25) 'freezes' contemporary rural communities to predetermined and subordinated ways of life.

This positioning not only 'organizes' the 'Indian' but re-enforces the social order: conserving the 'Indians' makes them what Gupta has described as "the indigenous, the



alternative, eco-friendly, sustainable space outside of or resistant to, modernity” (Gupta 1998: 179). This notion is very important, because the Ordenamiento’s traditionalist discourse creates an ‘Indian’ whose land use practices stay outside of modernity, i.e. the chinamperos and other peri-urban peasants of Mexico City are left outside of the *economic opportunities* that are open to agriculturalists outside the city and the livelihood strategies open to the city’s non-farming residents.

Tradition in this interpretation does not represent something that is best left behind or not yet sufficiently modernized (Gupta 1998) – tradition in this discourse is what “modernity lacks” and “refers to modernity’s failure” (Braun 2002). In the chinampas, modernity in the form of urban sprawl, threatens the city’s water resource, and the Ordenamiento suggests ‘tradition’ can save it. As Bruce Braun explains, “the traditional reenters the discourse of modernity *as that which guarantees indigeneity’s nonmodernity*” (Ibid: 93, emphasis original). This discourse intersects with coloniality in suggesting that modernity belongs to ‘non-Indians’ and non-modernity to indigenous populations (Bebbington 1996, Saldaña-Portillo 2002). Thus, according to my reading, the Ordenamiento’s notion of ‘traditional’ agriculture, on the one hand, appropriates its practitioners for the interest of the state and, on the other hand, works against them (Rabasa 2002) by depoliticizing certain agricultural technologies and practices and ‘locking’ their practitioners to the associated social and economic positions that have historically been and continue to be subordinated.

Next, I suggest that the Ordenamiento’s statements about development in rural communities operate in similar ways. The Ordenamiento claims that with the current pattern of urban expansion the “*natural growth* of the pueblos, ejidos, communities, and

small rural properties” would be lost, and, if conservation does not take place, “the ecological base of the agricultural production, *which enables the cultural, economic, and sustainable development of the agrarian nuclei*” would be lost, too (GDF 2000: 26, emphasis mine). The idea of “natural” when used about indigenous people goes back to colonial discourses, which described the landscapes and their inhabitants in foreign lands in particular ways that furthered European possession. They created the “Pristine Myth” according to which indigenous people’s land use practices had not altered nature (Denevan 1992) but rather nature somehow subsumed the very people (Gregory 2001: 90-91). Compounded with descriptions of potential agricultural lands as “wastelands” in indigenous use (Sluyter 1999: 390), these ideas created the notion of empty land available for European appropriation without interference by native populations.

Examples of such descriptions about native people abound. For example, in 1840 Madame Calderón de la Barca, the wife of Spain’s first ambassador to Mexico observed the ‘Indians’ along Canal de Viga, where the elite used to go for outings:

Sometimes we go to the Viga at six in the morning, to see the Indians bringing in their flowers and vegetables by the canal. The profusion of sweet-peas, double poppies, bluebottles, sock gilly-flower, and roses, I never saw equalled. Each Indian woman in her canoe *looks as if seated in a floating flower-garden*. The same love of flowers distinguishes them now as in the time of Cortés; the same which Humboldt remarked centuries afterwards. In the evening these Indian women, in their canoes, *are constantly crowned with garlands of roses or poppies. Those who sit in the market, selling their fruit or their vegetables, appear as if they sat in bowers formed of fresh green branches and coloured flowers.*

Calderón de la Barca 1996: 179-180, emphasis mine

When unpacked as a colonialist discourse, this seemingly appreciative rhetoric appropriates the Indians and their relationship with nature to the service of the elite by offering Madame Calderón de la Barca’s eyes a beautiful sight, an aesthetic ‘painting’,

and a spectacle where the Indians are “collapsed” into nature (Braun 2002). With such colonial overtones of ‘Indians as natural’ and by associating “natural” with “growth” and the “original Mesoamerican pueblos”, the Ordenamiento assigns the city’s rural residents an historical attachment to nature and assumes that it will guide the development of these communities in the 21<sup>st</sup> Century.

In the Ordenamiento, the idea of “natural growth” may also assume a kind of ‘organic’ change, apparently typical of the ‘*pueblos orginarios*’, ejidos, and rural communities and achievable by conserving their natural resources. Yet, in the chinampas alone, many kinds of changes have taken place that, are intricately linked to developments outside of these agrarian nuclei and reflect the desires and capabilities of chinampero families and individuals. Chinamperos follow a diverse set of livelihood strategies that include agricultural production as the primary occupation for many, equally important alternative occupations for some, and yet others who despite owning chinampas pursue a totally different career. Therefore ‘natural’ growth, even if it had several possible paths, could not automatically guarantee that “the ecological base of the agricultural production, which enables the cultural, economic, and sustainable development of the agrarian nuclei” would be saved (GDF 2000: 26). What the assertion of natural growth does instead discursively essentializes and homogenizes rural communities, and constrains them to certain land uses and social forms of organization that presumably would secure the city clean and adequate water. By so doing the proposed development path recreates and perpetuates colonially-based social groups with some privileged over others (the peasants), who in turn are deprived of equal access to livelihood choices and opportunities.

### ‘Indian Problems’ and imposed dependency

The final item that I consider as restricting rural livelihoods is the Ordenamiento’s implicit production of an ‘Indian Problem’. As Saldaña-Portillo shows, and as has been common in other colonial contexts (Reyhner 1998), the “Indian” or “Native” is cast as essentially different and therefore lacking in certain traits; this lack is framed as a “problem” and an obstacle to progress or development. For instance, it was the Indians’ perceived lack of patriotism which necessitated the inculcation of the Mexican canon after the revolution (Knight 1990), and in the mid 19<sup>th</sup> Century the ‘problem’ was the natives’ communal land holding which the liberal ideology considered backwards and in need of uprooting (Saldaña-Portillo 2002: 292). Both these ‘problems’ were perceived to hamper the efforts of the state, be it in building the nation state or economic development, and they necessitated the widespread ‘education’ of rural populations and the reorganization of Indian economies to better suit the elites’ pursuits.

I argue that although the Ordenamiento describes the rural communities as important land ‘stewards’ and recognizes their cultural differences, its overall logic nevertheless creates an ‘Indian problem’ that is perceived to threaten the state. The key to the ‘problem’ is the fact that if rural land users do not adopt conservation ideas and practices that prevent further environmental deterioration, Mexico City is at risk: the city is already experiencing water shortages and new sources are much more expensive to

exploit than the aquifer inside the Valley of Mexico (Cirelli 2002).<sup>24</sup> It is therefore of utmost importance for rural communities to accept the conservation plan.

However, there are ‘problems’ in the rural communities that are difficult to contain. As already mentioned, the sale of ejido lands is now legal and ejidatarios can sell their lands to whomever they wish; consequently, the government has lost control of the fate of these lands. As the minister of environment has stated publicly, the sale of rural lands to real estate speculators is the government’s primary concern, and that is why it intends to pay green subsidies to farmers in order to guarantee that agriculture is more profitable than selling the land (Sosa 2000). Many farmers oppose subsidies bluntly either as simply inadequate or as ‘handouts’. They know from the past that handouts can create dependency; one farmer put it this way, “We do not want a fish from the government but we want them to teach us how to fish”.<sup>25</sup> His statement shows how the farmers want to acquire skills that enable them to pursue alternatives and new opportunities. For the government, however, the farmers’ desire to *salir adelante* (to get ahead in life) and ‘develop’ is an obstacle for conservation – contrary to past framings of the natives, whose ‘traditions’ were considered a hindrance to development.

According to CORENA, the second ‘problem’ in the rural communities is their “broken social network”.<sup>26</sup> The director of CORENA described it as the breakdown of indigenous administration in the pueblos, which he attributed to the divide-and-rule

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<sup>24</sup> Although Mexico City has developed alternative water sources, the aquifer underneath the wetlands of Xochimilco and the surrounding communities provide the easiest and cheapest source of water. Other sources lie outside of the City’s limit, need to be negotiated with a more complex set of political and administrative bureaucracies and interests, and cost much more money to utilize – in the year 2001 the city spent daily one million US dollars to just pump the water from its sources to the consumers (Director of CORENA in interview March 6, 2001). The aquifer in the City is close by and requires minimal uphill pumping unlike the sources that lie behind the mountain range and a hundred kilometers away.

<sup>25</sup> A farmer (OCOP) in a meeting with CORENA Feb. 21, 2001.

<sup>26</sup> Director of CORENA, Adrian Arroyo Legaspi in interview April 24, 2001. He used the phrase “*tejido social roto*”.

policies and politics during the 70-year reign of the PRI.<sup>27</sup> This 'chaos', CORENA maintains, facilitates the corruption in illegal land transactions and housing construction.<sup>28</sup> This line of thinking, however, implies that a 'true pueblo and ejido' community system would be harmonious, conflict-free, and without self-interested parties – an idea that is as problematic as other romantic perceptions of rural communities.

CORENA also believes that its task is to 'repair' the broken system and reconstitute the communities' trust in the government by "giving the farmers a downpour of information"<sup>29</sup> about what the Ordenamiento is and what it implies. However, this logic is a patronizing idea of containing rural populations by 'feeding' them government's ideas top-down and peppered with predetermined social arrangements and 'truths' in mind. It shows coloniality of power in the Ordenamiento's and government's line of thinking by replicating 'forced' educational programs that in the past have subordinated Mexican peasants and indigenous communities to the interests of the state.

## Conclusions

While the government representatives may well be aware of the contradictions the farmers point to in the Ordenamiento, the problems that I see in CORENA's positions are the unilateral flow of information, and the government's prioritization of certain agricultural practices with ideas that entail contemporary subordination through

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<sup>27</sup> He only referred to the post-Revolutionary policies of the PRI, the PRD's rival party, and did not consider the destructive effects of the colonial period. He claimed that the PRI carried out a divide-and-rule strategy in rural communities, and only when I suggested that such strategy has five hundred years of history in Mexico, he smiled and said, "*Así es*" [That is correct] (Ibid.).

<sup>28</sup> Ibid.

<sup>29</sup> CORENA's negotiator responsible for the ANP (UU) in interview April 24, 2001.

colonially-based racializing discourses of the 'Indian' (Appelbaum et al. 2003, Rabasa 2002, Saldaña-Portillo 2002, Hilbert 1997). These strategies circumscribe rural communities to social forms of organization and economic activities that for the government are easier to contain than their free or mutually negotiated choices of livelihood paths and production technologies.

Despite the fact that the government initiated negotiations with the farmers and claimed that the talks would be participatory, the process has shown that if it does not follow the government's ideas: the farmers' voice is silenced. The government 'dumped' San Luiseños' *consejo* as a negotiating partner and furthermore, by February 2004 the government had withdrawn economic and material assistance to greenhouses.<sup>30</sup>

These developments suggest cycles of changes between the environment and the society (Nightingale 2003) where identifying a definite starting point is arbitrary. If one chooses, for instance, the legislation and initiation of the Ordenamiento as a starting point, it precipitated social changes in San Luis, affected what knowledge and how knowledge is used in agricultural decisions, which in turn affect the environment, from which other policy and social changes followed.

Thus, this chapter has demonstrated that the colonality of power and history shape conservation ideas, structures, and practices and that the future of Mexico City's rural environment and water is not only a question about agricultural technologies but also, if not primarily, about how to resolve historical inequalities that affect how the rural communities' future is determined, who has the power to decide, and whose knowledge prevails. In sum, conservation and environmental quality are far from just technical solutions; they are ridden with power interests articulated through environmental and

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<sup>30</sup> Local informant [OCOP] 2004, Internet conversation March 13.

social discourses (Moore 1998, Paulson et al. 2003, Zimmerer 1996). In this case, colonialism informs the Ordenamiento, which together with the negotiations are 'writings' in Mexican social history (Rabasa 2002, Saldaña-Portillo 2003) as much as efforts in conservation. Therefore, the farmers are sensitive to any policies that hold the possibility of subordinating them to the control of México Occidental and limiting farmers' choices. As the next chapter will discuss, however, 'the farmers' are also a contentious group and social entity whose power and knowledge shape the course and content of the negotiations.



CHAPTER 4. “¡QUE NOS ORGANIZEMOS UN FRENTE COMUN PARA REVOCAR  
ESTA LEGISLACION! ”: CONSERVATION AND LOCAL POWER.

Introduction

When the flower growers' association in San Luis (Asociación de Productores de Plantas de Ornato, APPO) met for the first time to discuss their approach to the Ordenamiento, after opening the meeting and explaining the issue at hand, the chair of the organization urged, “Let's form a public front<sup>1</sup> to turn over this piece of legislation”! “*No se nos consultó*”, he added [They did not consult us]. And another member of the board of APPO said, “*Negociar con el gobierno es pérdida del tiempo. Ya no lo voy a hacer. Todo lo que yo he logrado, he logrado solo*” [Negotiating with the government is waste of time; I won't do it any more. Everything I have accomplished I have done on my own].<sup>2</sup>

Their suggestions were in a stark contrast to the Ordenamiento's explicit plan to negotiate the land use practices on a village-by-village basis in a participatory process. Although the preparation of the legislation included a public consultation, so few chinamperos had been contacted that word had not spread around, community-wide discussions had not taken place, and those who had been contacted said later that the questions were broad and suggestive. The procedure angered the farmers, and remembering the history of conflicts between the government and the peasants in Mexico

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<sup>1</sup> The terms *frente* and *común* have multiple connotations. *Frente* signifies front but it also has the meaning of resistance. *Común* can mean common interest but also ‘of community’ in the sense of “belonging to all” and “held in common” (Santamaría 1992: 170 and 348, resp). In the context of overturning the Ordenamiento, I translate *común* as “public”, combining both meanings.

<sup>2</sup> Farmers' meeting October 3, 2000

in general and the city and the Xochimilcans, in particular, it is no wonder that the latter are suspicious of processes that to them appear top-down and unilateral.

The goal of this chapter is to understand the chinamperos' resistance to the Ordenamiento, but more importantly, I ask, how do the governments' assumptions about rural communities form local responses to the conservation plan, how do local power relations influence what knowledge enters into conservation efforts, and how might local power affect the environment?

I came to ask these questions after I had read about previous rounds of conservation efforts in Xochimilco. During the negotiation of the conservation plan in the 1990's, outlined briefly in Chapter 2, different community groups voiced their concerns, presented alternative plans, and used varying negotiation strategies. From the narration of those events (Canabal Cristiani 1997), I developed the impression that opposition to the plan was 'solid' among Xochimilcans and that 'everybody' in Xochimilco was out 'on the streets with banners' protesting the plan; this impression made me ask, however, who was not publicly involved, and how did those who were, become selected?<sup>3</sup>

Michael Watts (2000) points out that often community is invoked as an undifferentiated unity, with intrinsic powers and a single voice. But work in community-based resource management and conservation programs has shown that communities have internal divisions, 'power games', different and even conflicting interests, varying understandings of and meanings for resources and 'nature', and ephemeral and long-lasting disputes (Watts 2000; Moore 1998). Therefore, Parpart (2000) has suggested that understanding local power dynamics is key in achieving a more inclusive development

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<sup>3</sup> Having said that, I recognize that the narration makes it clear that not all groups agreed to the objectives and strategies.

process and Watts (2000) and Paulson et al. (2003) call for more work on power as fundamental in political ecology.

I approach community as a socially constructed category (Watts 2000: 267) where not everyone participates or benefits equally from what is said and done in the name of the 'community'. Watts emphasizes that because communities are "differing fields of power" (Ibid.: 267) we need to be sensitive to the internal political forms of resource use and conservation. Thus,

the community – as an object of social scientific analysis or of practical politics – has to be rendered politically; it needs to be understood in ethnographic terms as consisting of multiple and contradictory constituencies and alliances. This can be referred to as stakeholders... but often what is at stake is something that comes close to class analysis or at the least the identification of wildly different forms of political power and authority".

2000: 268

Alongside class, other axes of power are equally important. For instance, gender hierarchies mean that women are frequently absent from community representation (e.g. Mosse 1994). Social constructions of racial differences serve to exclude indigenous people (Rocheleau et al. 2001). Different generations can have widely varying explanations for environmental deterioration or conservation measures (Zimmerer 1996), and historical events such as relocations place some groups differently within the community and against the authorities (Sundberg 1999, Moore 1996, 1998). Additionally, symbolic meanings and material practices vary among different community groups (Moore 1998).

While lines of power in communities are constantly being contested and reconstructed (Watts 2000), so are the attachments or identity positions of individuals and groups. Linda Smith talks about "nested identities" when she points out that identification

with and belonging to a community can be diverse and include “multiple layers”, depending on genealogical and cultural points of reference, geographical locations, cultural expressions, and mental connections (1999: 126).

These social parameters of power have environmental implications in that embedded in them is knowledge that directs resource and land use practices (Paulson et al. 2003). While the causal relationships between those and the state of the environment can be complex, important here are the claims various actors make about those relationships. The government asserts that green house cultivation causes environmental deterioration (but practices it itself) and ‘traditional’ methods are more sustainable. The farmers contest these arguments plus point out that it is the city’s water policies and practices that are the main reason for environmental deterioration. Just as the government has ‘hidden’ goals behind its statements, as I exposed in the previous chapter, one needs to assume that the farmers, too, engage environmental arguments with political goals.

Drawing upon my ethnographic research, which included sitting in the farmers’ internal meetings and in their negotiations with the government representatives, and my interviews with farmers, this chapter analyzes the micro-politics of participatory conservation in San Luis. I first analyze the farmers’ resistance in order to understand their collectively expressed position. Thereafter, I focus on the power dynamics in how they represented themselves when negotiating with the government. To this end, I identify the ‘multiple stakeholders’ in San Luis in terms of who participates in the negotiations, and on what basis. Who, or more importantly, whose knowledge is excluded and why? Who decides to withdraw from the process and why? Why are certain people included and some excluded? I focus on how local power is constituted, negotiated, and

perceived, and how individuals and groups of farmers approach the negotiations from different subject positions.

My political analysis of a community's approach to conservation emphasizes the relativity of voices and the fluidity of community relations and power in the community. Class alone cannot explain silencing, which occurs along several power axes as a result of voluntary and involuntary exclusion, and while exclusion can be 'total' it may also be partial and enable an excluded group or person to retain 'selective' voice and power. And finally, intersecting with external forces, local forces and discourses constantly reshape power and 'community' representation beyond the axis of class.

The conclusion of the chapter discusses what can be deduced in terms of what environmental knowledge enters the negotiations, thereby directing the conservation effort. What, if anything, can one infer the environmental consequences to be of these inclusions and exclusions?

The 'united' resistance: Entering into the existing field of relations

On October 3<sup>rd</sup>, 2000, the smoke from burning moist grass and people's cigarettes kept mosquitoes at bay in the darkening evening at the main *embarcadero* in San Luis. Farmers had come from all directions, some directly from the fields with their equipment in hand, some after a shower and supper at home, some with small children, a few by vehicle or bicycle. Jorge, leaning onto a pick-up truck, adjusting his cowboy hat and wide leather belt with a horse on the bright buckle, chaired the meeting. Five or six men surrounded him, talking to each other. Around the fire close to fifty people exchanged

news and greetings, and wondered about the meeting that was called to “defend our families’ inheritance and conserve the source of our work” (Asociación de Productores de Plantas de Ornato 2000). At the outset of the meeting, I counted 53 men chinamperos out of more than two hundred in San Luis.

After welcoming everyone, Jorge explained that the purpose of the meeting was to organize the farmers to oppose the conservation plan. According to him, the plan would prohibit all ‘modern’ technologies like greenhouses and synthetic chemicals that were now mainstream and essential for great many producers in San Luis.

Jorge, a young man aspiring to become one of the front runners of cultivation in terms of economic and technological advancement, fiercely spoke against the plan as did other leaders of the producer association. Statements like, “They eat us alive” [*Nos comen vivos*] and “Without greenhouses, how are we going to eat?” articulated their fears. Jorge said, “We as neighbors need to unite and go to the office [of CORENA] and make a case”. His question was, “How do we organize ourselves? I can’t [do this] alone. I suggest that we form a *frente común* with a board of ten to fifteen people.” In other words, he proposed establishing a local group to confront CORENA’s plan.

Then he urged people to sign up for the *frente común*. At this point, the crowd fell silent; some stepped backwards and others left altogether. Nobody volunteered and nobody nominated anyone. Jorge said that if people do not sign up, he would resign as the chair of the producer association.

One other leader, Martín, who had much experience with the government in various issues, also pleaded for action. He said that negotiating with the government was a waste of time. “We can complain but we can also *consenticize* [increase critical

awareness] ourselves. For the government we are the ones that least interest them”, he suggested. “It is most important that we organize ourselves; we lack the spirit of participation”, he lamented. As one of the long-time leaders, he spoke to the younger men, “It is fair and necessary that new people take over. If there is not help from the rest, one cannot operate alone. [We] the old ones are running out of enthusiasm and strength, although not the spirit”.

One man came to this issue of leadership with an accusation, “There is a lot of apathy in the board [of the producer association]”, he claimed. Then Martín replied, “The need to organize [the *frente común*] is a response to the apathy that we have. If we do not organize ourselves, we will suffer a lot of abuse in the future. Let us make clear what we want [now]. We were not consulted [when the law was originally formulated] but now the responsibility [to act] is with each of us”.

Santiago also resisted the Ordenamiento by challenging its proposition of shifting to organic agriculture. He explained that currently a course in organic fertilizers was being given in the community. “I see that the results are not excellent and the progress is slow – I do not trust them”, he said and invited everyone to take a look at the results in his greenhouse.

At this point, a few younger men walked up to Jorge and signed up for the new *frente común*. A few more followed and soon ten names were on the paper. They decided that Jorge would be the head of this new body that they were to call *el consejo* (local council – from now on I use the term *consejo*). To finish the meeting, Jorge gave out the

Internet address where the Ordenamiento could be found. He also had one paper copy, which people could read right there.<sup>4</sup>

Thus the chinamperos opposed the Ordenamiento on several grounds. The anger from the lack of broad-based consultation during the preparation was the fuel that burned and ignited other antagonisms in this meeting. One key issue was the prohibition of vital inputs for floriculture, such as chemicals and the forest litter, which the chinamperos thought would put their livelihood at risk because the suggested alternatives would raise their production costs so high that they would no longer be competitive with producers outside of the Valley of Mexico, where such regulations are not in place. Statements like “Nobody agrees that [the law] can cut our wings now that we have started to fly” articulated their feelings of injustice. Their claim that, “We are part of [the city] and we have the right to live our work and traditions”,<sup>5</sup> illustrates their feeling that they were asked to bear the burden and cost of providing clean water to Mexico City.

The memory of the extreme poverty of the 1960’s when many of these now-farmers were children and young adults, is in sharp contrast to how floriculture has enabled many San Luiseños to improve their family economies and their contributions to the collective well being and cultural identity in San Luis. The transition from living in a one-room shack with four children, a few pigs, and a “hunger of which you [i.e. Maija Heimo] have no idea”<sup>6</sup>, to living in ‘modern’ houses with interior kitchens and bathrooms, studying for higher education, and affording to put thousands of pesos every year to community fiestas has required the innovation, work, persistence, and faith of two generations. The success of greenhouse cultivation has convinced many families who are

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<sup>4</sup> His copy was the one analyzed in chapter 3.

<sup>5</sup> Feb 17, 2000.

<sup>6</sup> YOE Febr. 7, 2001.



not leaders in this new technology that they, too, want to start greenhouses even if their means do not allow them to build the most recent and elaborate production. Thus, technologically, politically and economically the chinampero's resistance makes sense.

However, despite the fact that many in San Luis think that without greenhouses there would be no cultivation in the chinampas at all, the greenhouses are just one type of production. Not everybody is interested in tying themselves to this high-risk enterprise, and even among the greenhouse growers, attitudes and aspirations vary about how to develop this technology considering its economic, ecological, and social aspects. Consequently, the seemingly united *frente común* has cracks and more develop when the negotiations proceed.

#### Elite interest groups

Although the broad-based *consejo* was formed in the farmers' first meeting, existing divisions between groups, families, or elites also became visible. Ramón, who is also one of the leading greenhouse growers, suggested that instead of forming a new *consejo*, they could communicate with CORENA through the existing body where he participated, namely the city wide council of floriculturalists.<sup>7</sup> Instead of supporting the blunt opposition against the Ordenamiento and CORENA, he suggested negotiation. He suggested that the farmers request that the government set up and finance a greenhouse for research and extension. He envisioned that it would contract university and business

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<sup>7</sup> Ramón was elected to this body earlier in the summer of 2000. In it, he represents all floriculturalists in Xochimilco, not just those from San Luis, when the city's rural development sector consults this body about how to develop agriculture in the city. The city's negotiators are partly same individuals as those that came to negotiate about the Ordenamiento.

experts to establish experiments with the necessary new technologies, particularly biological control of diseases and pests, as well as organic fertilizer and soil management, give advice to farmers, and offer employment to local people.

Another man pointed out that because the ecology of the chinampas is destroyed [*se rompió*], it is unrealistic to return to traditional techniques; this is why research and development of new techniques and the re-adaptation of 'old' techniques is necessary. Supporting Ramón's idea, he said that many clauses about cultivation options in the Ordenamiento are too general to apply to floriculture without experimentation. This is why they need to proceed gradually, "We are approximately three hundred families in floriculture – we cannot make such a change in two years. The government [must] invest in the change", he then justified the experimental greenhouse.

A third man suggested that, yes, CORENA should finance the experimental greenhouse but a farmer-led board should oversee the development and research – after all, among the chinamperos there are a whole host of people with relevant education like biologists, agronomists, engineers, biochemists, medical doctors, accountants, and teachers who would be well qualified to sit on such a board.

Ramón also spoke openly about the problem of chemical contamination from greenhouses. Referring to public criticism of how the chinamperos use chemicals, he made the point that "if we do not start to use biological control, our own community will chase [the greenhouses and] us from here despite the fact that the greenhouses have prevented urbanization in the chinampas. We need to make many changes", he said; "This is about our own health; the greenhouses are like storages full of contaminants. The problem of agrochemicals concerns us all; with them we put our families at risk– the

issue is not the law but our health". And finally he said, "We need to protect and take care of the source of our work. We have become the enemies of our own community".

In this first meeting, shades of grey started to emerge in the opposition to the Ordenamiento. One line of argument did not accept any interference from the government into the cultivation practices, while another position was more compromising in admitting some of the responsibility of the change and suggesting collaboration with the government to find new alternatives. But the difference also involves who has power in the community. In this scenario, a young man with goals for the future needs to establish his support, while a more experienced grower, who already has won broad-based support in the community, tries to assert his influence locally, which would enable him to further his already existing connections with the government. This division became even clearer and took on additional nuances in a subsequent meeting, when the discussions with the government about the Ordenamiento were already well under way.<sup>8</sup>

On April 7, 2001 growers in San Luis met to address requests that CORENA had made. CORENA had asked that the farmers provide information about their use of chemicals and their acquisition and use of the forest litter, the *tierra de hoja*. This information proved to be sensitive for reasons that were not immediately clear to me, and some farmers thought that they should not give out details about the production. However, simultaneously Ramón was compiling information for the government about the extent and type of production in order to apply for funds for the community from the rural development plan, which is separate from the conservation plan. He suggested that

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<sup>8</sup> Despite the *consejo*'s mandate to overturn the Ordenamiento, the growers in San Luis met with the representatives of CORENA several times, and the content of these meetings shifted from outright opposition to developing a prioritized list of issues that needed to be dealt with in order to resolve the contentious points.

the two sets of information be combined. At this point the chair, Jorge said: "We have to decide who is going to carry the torch for us", indicating that he felt that his leadership had been challenged as the principal representative of the farmers when dealing with the government about the Ordenamiento. Ramón replied that he represents all floriculturalists in Xochimilco in the city-wide agricultural advisory council and is collecting the data in that capacity. "It is not important for me to be the leader [in the negotiations about the Ordenamiento]", he ceded, "but please let me do this job because we are already under way and this is potentially going to be a lot of money."

A lively discussion and 'shouting match' ensued, where I had difficulty following the simultaneous discussions on several topics that came up. In broad terms, what started as a question about the *tierra de hoja* turned into one about who would be the leader, which then spread out to debates about how the money that Ramón was applying for would be divided, who should be the recipient if the chinampa was rented within the family or to outsiders, and what information would be included in the data Ramón was collecting. Questions and arguments were 'flying' across the meeting room for more than thirty minutes. In the end, Jorge's leadership in the negotiations of the Ordenamiento was reconfirmed and Ramón was given permission to compile his list on the condition that he exclude certain information and, from then on, stay out of the negotiations of the conservation plan. Ramón agreed to these conditions.

Although Ramón was not entirely silenced in community processes and representation, his exclusion from the negotiations about the Ordenamiento illustrate local power struggles and how a 'community' and its elites are not a homogeneous single voice but rather competing sections that emerge and settle their interests in everyday politics

within economic activities. In this case, the collaborative attitude and existing relationships with the government of one leader threatened the mission of a community group; his willingness to absorb some responsibility for the change and divulge certain information to the government put at risk the resistance-strategy of the *consejo*. The *consejo* preferred to keep the government in the dark about detailed information about the cultivation and thus by withholding knowledge hoped to strengthen its positions.

A competition between these two leaders might have pre-existed – I do not know what had happened before and, therefore, cannot say that this division is a product of this particular process. Nevertheless, a possible previous division was at least accentuated and rehashed in this process, and became even clearer as time went on because Ramón no longer participated in the negotiations of the Ordenamiento.

Due to his other role, Ramón met with farmers regularly, organized a group of volunteers to gather the information he needed, and helped people in putting together their individual applications for funding. When I attended the meetings lead by Ramón, Jorge's followers rarely participated. But Ramón said his list was 'complete', indicating that Jorge's followers had provided their individual information.

While there are several other leaders in San Luis, the situation described between Ramón and Jorge serves as an example of how local power is negotiated and divided. The situation is complex and fluid, and exhibits overlapping systems of social organization.

The environmental significance of such contestation and exclusionary representation is the source and type of knowledge that influenced the conservation plan. If the resistance to the plan makes empty the development of biological and organic methods, is the environmental health compromised? (Do the farmers continue with

'business as usual' which often, by their own admission, means environmentally questionable procedures? The short answer might be yes however, by the time I left from San Luis, too short a time had elapsed to see the consequences.

On the other hand, would the resisting farmers find other avenues to experiment with and adopt environmentally more healthy practices? And if they did, would this information be publicly available as it would be from a state-sponsored collective research greenhouse? Or would it be guarded in order to gain competitive advantage over other producers, which was common practice in San Luis.<sup>9</sup> And finally, even if such techniques were available, would they be adopted for the sake of the environment if they did not give economic advantage?

My suggestion is that one cannot assume that environmentally sound methods are adopted even if a farmer knows about those advantages. Many factors influence the decision of what method is used. I observed in San Luis for example, that some of the leading farmers with university education in agriculture or biology did not trust the biological control of the larvae of the white fly in poinsettia. They claimed that for various reasons that were related to the biological product itself, its delivery,<sup>10</sup> and its management it was not as effective as the chemical controls they used. Therefore, they would end up using chemicals anyway, increasing their costs. Others claimed that they were successful with the biological control but its management was very 'tricky' and often requested parallel physical controls.<sup>11</sup> However, when carefully executed, the cost

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<sup>9</sup> People talked to me quite openly about how they guard their 'tricks' and try to be ahead of others in order to either have something different to sell or get a better product.

<sup>10</sup> A nematode is used to eat the larvae of the white fly. The product is imported alive from the United States but often a substantial portion of the nematodes arrived dead.

<sup>11</sup> For instance spacing and watering the plants optimally, selecting the 'right' material for the greenhouse floor, and placing insect tapes with glue above the plants to catch flying adult flies.

of biological control was smaller than that of chemical control alone. Such differences in how a new technology is perceived show that the existence of the technology does not guarantee that it will be adopted unless in the end, the product is healthy and the costs decrease. Farmers would not sacrifice their profits for environmental health.

## Class

Another perspective on community is class (Watts 2000). I consider class as “systems of stratification derived from social relations of work and property” (Johnston et al. 2000: 85). This definition incorporates the descriptive (i.e. the nature of the relations of classes), and the relational (i.e. the processes through which these relations emerge and are negotiated). The latter is also how Gibson-Graham defines class, “the social process of producing and appropriating surplus labour” (1996: 113), constituted by other social processes and intersecting with non-capitalist organization of production and labor. Finally, I acknowledge that an individual can hold several class positions simultaneously (Gibson 1992).

In order to understand how class informs community and, therewith, conservation, I look at the social processes of producing community under stratified land title by analyzing relations between two groups of people, specifically those producers who own land<sup>12</sup> and are from San Luis and those who rent land and have come from San Luis from

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<sup>12</sup> Some of these landowners also rent other chinampas, where they have built additional greenhouses and increased their production. In such cases it is the production technology, the greenhouse alongside with their origin from San Luis that distinguishes them from the renters, who employ ‘traditional’ technologies with significantly smaller investments and a selection of plants with less market value and less risks.

other states. Here, I look at class as the process of negotiating social relations that reinforce difference in land holding.<sup>13</sup>

Characterizing the production in San Luis purely in terms of class would not do justice to the complexity of village relations but the chinamperos' political economic position invites a class analysis. The chinamperos often call themselves "*campesinos*" [peasants], which is justified by the amount of land they own: a few hectares at most in the chinampas but more typically half a hectare or less – in this sense they are petit bourgeois. However, greenhouse production has increasingly integrated them into global circuits of market economies and shifted their thinking towards making higher profits, taking greater risks, and spending money beyond necessities.<sup>14</sup> The intensive use of purchased inputs, specialization in, and mass-production of, certain plants, concentration of production<sup>15</sup>, rental of land, and the use of hired labor on these small plots mean that they are far removed from the subsistence economies or limited market integration of previous generations.

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<sup>13</sup> There might be other class divisions in San Luis as well, for instance those based on education. But what emerged as indicative during the negotiations was the conflict between land owner and renters, specifically those renters who had moved to San Luis from other provinces (there are also San Luiseños who rent chinampas, but since they are locals, they have a marketing advantage over those from the provinces in getting a stall in the market – this will be discussed in more detail in the description of events in this chapter. Having said that, these relations of land holding intersect with other social categories, such as the level of education (which I am not discussing explicitly) or the adoption of certain values such as 'traditional' rural values or middle class urban values. Some of these characteristics come up later in the chapter but they did not emerge as significant in the events that ensued among the farmers and to me indicated a class division.

<sup>14</sup> This is not to say that 'peasants' would not consume if they had the opportunity; or take risks if they needed to. What I am emphasizing is the relative degree to which greater integration of market economies has moved or facilitated 'peasant' strategies and values towards capitalist ones. While 'capitalists' in economic production and producing for urban markets, these producers may keep in high regard 'peasant' and rural values such as 'traditional' communal festivities or religious customs that integrate pre-Christian and Christian beliefs and practices. In all, class lines are not easy to draw (why I focus on the processes that produce social differences) and aspects of class, culture, and race intersect in multiple ways.

<sup>15</sup> In San Luis ten families out of a total of approximately 320 chinampero families produce half of the poinsettias.



Many chinamperos, particularly the green house growers, believe that the Ordenamiento threatens their livelihood; however, they see a difference in the degree of the effects. At one end of the scale, one farmer predicted that if “any greenhouses survive [the Ordenamiento], they will likely belong to those who are now the strongest economically and most advanced technologically”.<sup>16</sup> Another sees himself having options; he has already looked at opportunities to buy land cheaply outside of the Valley of Mexico, where he could increase the size of his operation and choose the technology of production without the inconveniences and legal restrictions he has in the chinampas<sup>17</sup>.

At the other end of the scale are the renters who grow on small plots without greenhouses. Most of them used to be hired labor in the greenhouses, young men and couples who, due to lost livelihood opportunities at home, have migrated to the city from other states to work in greenhouses<sup>18</sup>. Some live in a small brick-house, but others squat in rudimentary huts on a piece of land either in the chinampas or on the hills – as this is illegal housing most do not have access to electricity or sewage, although some have acquired these utilities through illegal means.

Many of these former workers have lived in San Luis for years; some return home temporarily or permanently after saving money. After years of salaried labor some have gradually improved their economic situation and stayed to rent a piece of land and cultivate on their own account in San Luis. Rarely have these families bought land or built a greenhouse, but two had accomplished that, too. Most, however, cultivate less

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<sup>16</sup> CDO in my interview February 12, 2001.

<sup>17</sup> GR in my interview February 17, 2001. He referred to the lack of electricity and clean water, the additional work and costs that the canal transportation causes, and the restriction imposed by the Ordenamiento and ANP. The Ordenamiento and the ANP are laws in the city and so far similar laws regarding greenhouse production are more lenient in other provinces.

<sup>18</sup> This rural to urban migration has characterized Mexico for the past fifty years, but since the austerity measures initiated in the 1980's and associated with global economic institutions and trade relations, lost rural livelihood opportunities for small holders have created their mass out-flux (e.g. Gledhill 1995).

demanding plants like herbs in open air and, while utilizing little external inputs they effectively apply ‘traditional’ inputs and principles. The locals call them “*los de fuera*” or “those from outside”.<sup>19</sup>

Because these now independent producers are not from San Luis, they are not allowed a stall in the market (Figure 35) and therefore must seek other outlets for their product. In 2000, their marketing strategies included selling directly from the field or from the main *embarcadero* – this saved them time and money in transportation. Thanks to this saving, some sold their plants for prices lower than those asked in the market.



Figure 35. The graffiti on the loading deck at the plant market's *embarcadero* says, “The market is only for those from San Luis – no outsiders” (the word partially covered by the boxes is *fuereños*, which refers to the *los de fuera*, those from outside).

<sup>19</sup> I did not investigate the divisions among the renters. But such divisions may be based on their place of origin, kinship ties, or rural or urban background. However, as they presented themselves in the confrontations with the locals, they promoted their case unanimously.

The renters' marketing strategies angered the locals. They also accused the renters of not participating in organizing village fiestas or working in the *faenas* [collective work parties] around the market, cleaning the canals, or repairing paths. In sum, the locals' perception of the renters was that they take all kinds of advantages but give nothing back. At one point, many locals were so annoyed that seventy of them signed a letter where they requested that landowners not rent land to *los de fuera* and that the producer association expel from San Luis renters who do not comply with equal pricing and collective work.

None of the renters had participated in the negotiations for the Ordenamiento; when I asked Jorge about this, he thought that it did not really concern them because their cultivation methods were not most immediately or gravely threatened by the conservation plan. That made sense to me because renters did not have greenhouses and instead of plastic containers as pots many utilized soil cubes made of the canal muck and other methods based on local inputs. However, when I heard that the renters were not included in Ramon's "complete" list of farmers in San Luis, I realized that they were marginalized in many ways; after all, Ramón was working towards obtaining significant amounts of money to be used collectively for the community and individually by the farming families.

When the renters heard the threats of eviction, they quickly organized themselves and asked to meet with the producer association. I attended the meeting in its early stages.<sup>20</sup> As is usual for community meetings, this one took place in one of the church halls. Locals first gathered on the churchyard, where they were hovering around the

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<sup>20</sup> April 7, 2001.

*quiosco*; the renters gathered outside the churchyard on the street. I had seen many of them in the chinampas but had talked to only two of them – in fact, a man by the name of Gonzalo and his wife Sonia had agreed to an interview that was to take place the previous day, but when I arrived, Gonzalo said that there was no point in asking him questions about his cultivation when “they” [the locals] were planning to kick them out. I asked him to tell me more about that and he said that there would be a meeting the next day, at which the locals would set the rules. Thus, the interview never really happened as we ended up talking and playing with their child. Seeing Gonzalo and the others now on the street, waiting for the “locals to set the rules”, I was interested in their perspective.

I sat down between two men and said to one of them, Jaime, “I have never seen you guys together like this; you seem to be really well organized”. The other man, Aurelio, replied, “They threaten to kick us out but we have families to feed and we live here. We have the right to work like anybody else and if someone rents us land it is between him and us, nobody else’s business. We cannot go back, we have nothing at home to live on, and we have been here for many years.”

Once people had gathered in the hall, the meeting started off with a special flair: unlike the usual organization of people sitting spread out in the facility without obvious signs of authority.<sup>21</sup> This time, Jorge, the chair of the producer association and the *consejo*, and a man by the name of Luís sat behind a long table at one end of the hall. At the time, Luís was the elected political leader of San Luis, (a chinampero himself but not a member of the *consejo*); on his right side sat Mario who was the secretary of the *consejo*. Luís opened the meeting and stated that because of his role as the community representative and because of the significance of the meeting, he had been asked to chair

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<sup>21</sup> This means that the meetings lacked signs that to me would have signified obvious authority.

it. He would act as a facilitator and leave the content to those in attendance, he said.

Approximately twenty chinamperos were lined along the walls, sitting on the benches - some of the most influential community leaders were absent.

The renters were standing at the other end of the hall, some outside the room. When the meeting was called, some of them entered and Aurelio, their chair, stepped up and gave a written statement to Luís. He read it out loud. In broad terms, it stated that the renters consider themselves permanent residents in San Luis and as such they have the right to work there like anybody else, including the right to rent land and cultivate plants. Because they do not have space in the plant market, they need to sell their product wherever they can. They also said that in the future they would not reduce prices and they would participate in the costs and labor of the *faenas*. However, they considered that power lines are the responsibility of the owners of the plots they were renting, and they would negotiate their share with them, while the landowner would have to negotiate with whoever set up the main line. A few representatives of the group had signed the letter.

Luís read the names and then said, "Well, they can write but I do not take this seriously - here are signatures but no names [in print]. Who are you? Step up and say your name." Now Aurelio handed him another sheet with more signatures, including the names in print. Luís started to call them out and he asked the individuals to identify themselves. I counted twenty-five men stepping up, one by one saying: "*presente*" [present]; a few of those called were absent.

Symbolically, the beginning of this meeting re-enforced the cultural and social position of the renters as "*los de fuera*": in public the chair made derogatory comments about the way in which they represented themselves and, sitting behind a desk, an elite

villager called out individuals as if they were dogs that should obey a whistle – this is the image that came to me in the meeting and has stayed to this day.

Then the discussion started and one local man said: “*Me molestan* [They annoy me]!” Somebody claimed that people who are not from San Luis should not be able to benefit from the community, but someone else said that nevertheless, they are here, cultivate, and sell, and therefore need a stall in the market. “They have the right to try to get ahead; it is just like us when we go to *el otro lado* [cross the border] to work in the US,” he claimed.

After a while, Luís said that the negotiation should continue in smaller groups and he asked the leaders of the renters to sit at the table with the local leaders. Thus three men sat on each side of the long table with their respective ‘supporters’ behind them, leaning over, talking over the heads of the seated men, at times shouting and waving their arms.

At this point I decided that my presence would be too much of an intrusion, so I walked out to the courtyard, where a few of the locals were smoking and talking. In interviews, I later learned that the meeting was very heated but that a consensus was reached; the renters would get a stall in the market and, if they continued to sell directly from the field, they agreed not to reduce the prices. They also agreed to participate in the *faenas*, but their participation in organizing the religious fiestas would be a matter of choice, just as it is for everyone else.

This meeting illustrates one way in which local power struggle shapes the politics of conservation. First, for the conservation project, the renters as a ‘non-local’ group and ‘sub-community’ apparently did not ‘exist’ as the Ordenamiento homogenizes rural communities to ‘Precolonial pueblos’ with ‘traditional’ forms of social organization.

Instead, the government tended to seek contact with a few selected leaders whom they could identify as sympathetic. Second, the local leaders and their followers did not ask the *los de fuera* to participate in the negotiations of the Ordenamiento either because, as Jorge had said, he thought that they lacked interest because their 'traditional' cultivation methods were not threatened. Thus they were silenced passively, perhaps partly of their own initiative (or the intimidation they must have felt within the community) but also due to lack of initiative from the other parties involved. However, the renters' cultivation practices and use of resources would affect the environment in some way. And potentially the renters might also have some information that could be applied to the chinampas or that they had invented in the chinampas, although they have not been chinamperos for generations back like many locals.

Due to their position as renters, lack of money for investments, indigenous identity, and geographical background, the renters are perhaps the most marginalized group among the farmers on the chinampas in San Luis. In an answer to a question about which chinamperos are the most marginalized families in San Luis, a relatively well-to-do chinampero replied,

*Los de fuera* are the most marginalized because they have to sell their labor and they live in very inadequate houses in the middle of the contamination in the chinampas. They do not have access to education or health care like the rest of us. This has to do with them being from outside and indigenous – sometimes people call them *cacalites*, which is a pejorative.

LFR Febr. 15, 2001

This man thought that two organizations should help the migrant families. First, the Instituto Nacional Indigenista<sup>22</sup> should offer them housing with adequate services,

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<sup>22</sup> Federal organization like the Department of Indigenous Affairs in Canada

education, and health care. Secondly, the organization of Pueblos Originarios<sup>23</sup> should help them. Of significance here is that he did not assign responsibility to the precinct or the city's social or rural development programs or to the farmers who hire people from this group. Instead, his perception of the responsibilities racializes<sup>24</sup> the migrant families and, by intersecting with class and the migrants' rural origins reproduces their marginal social and economic conditions that this racialization historically implies<sup>25</sup>.

However, they organized and defended themselves and basically used the same argument the *consejo* had put out to CORENA, i.e. that they are entitled to equal opportunities. As a result of this meeting, the renters had the chance to get ahead economically by gaining better access to markets, and it seemed that at least at that point, they also had become a little bit more accepted in the community. Significantly, after this meeting, a few of the renters began to attend the farmers' internal negotiations.

This section has described a struggle where class is in a primary position. The *consejo* assumed that the renters would lack interest, thereby creating a distance between themselves and the renters. However, by excluding them from the negotiations of the Ordenamiento, such assumptions also marginalized the renters to an inferior economic position because whatever benefits the Ordenamiento might bring, they would not reach the renters. Elites also held antagonism towards the renters; although the now-renters had been paid relatively well when working as salaried labor, once they became independent producers and thereby competitors with the locals, hostilities ensued. Pejorative names,

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<sup>23</sup> Pueblos Originarios de la Ciudad de Mexico is a city wide and city-ran forum for the villages that are presumed to originate from the Pre-colonial era.

<sup>24</sup> I define "racialization as the process of marking human differences according to hierarchical discourses" (Appelbaum et al. 2003: 9).

<sup>25</sup> Another chinampero maintained that the situation of the renters is not about race; however, as shown in the previous chapter, race is often not discussed explicitly but racial relations, which include inequalities, have become naturalized and the expression of inequalities often happens in economic terms.



lack of services, and exclusion from equal marketing strategies had put the renters in an inferior position both socially and economically.

As a result of the confrontation between the locals and the renters their relationship changed and some renters started to attend the farmers' internal meetings where they would access knowledge from which they had been previously excluded: information that they would gain in these meetings will enable them to change their own strategies both in production, their social and cultural position in the community, and their relationship with the government. Thus the market competition that flared the confrontation between the two classes, also created circumstances where the class difference could diminish.

In terms of conceptualizing 'local power', this example shows that while class is a key factor in this struggle, it is a fluid construction and a constantly reconfigured process, where both in efforts to maintain class differences and in intended or unintended measures that potentially diminish them, relations of production intersect with cultural and social dynamics in a community. Class relations, race, and the leadership-system, show how power positions overlap and intersect, thereby illustrating the "wildly different forms of political power and authority" (Watts 2000: 268).<sup>26</sup>

What can one conclude about the significance of this class struggle and, at least a temporary settlement for conservation? First, as noted earlier, either explicitly or implicitly class struggle involves knowledge; as relatively privileged classes have access to knowledge different from what relatively disadvantaged classes can obtain,<sup>27</sup> the

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<sup>26</sup> Other forms of power exist which I did not examine systematically. They include kinship, political connections, for instance.

<sup>27</sup> As noted earlier, many of the locals have university education. Although I did not investigate the educational levels of the renters, considering that fact that many of them are from remote areas and poor

quality of knowledge that enters into or is excluded from negotiations is specific. Second, how the relative position of the renters affects their access to new knowledge, eventually changing their agricultural practices and the associated environmental consequences. Third, because the Ordenamiento perceives rural communities homogeneous, it fails to address the specific contributions or challenges that marginalized groups may present.

Besides class and elite factions other axes of power become apparent when the negotiations proceeded. Individuals started to voluntarily drop out from the process, further defining the power that knowledge entails and brings to the conservation effort.

#### Voluntary departures

##### Competition, skills, and powers

Initially the *consejo* had ten individuals and the representation of chinamperos in it was broad in terms of the chinampas' spatial distribution and also in terms of production technologies, although greenhouse growers were the majority. As seen already, the *consejo* thought that the Ordenamiento affected most the greenhouse production, why one can expect their overrepresentation in the *consejo*. But its meetings with CORENA were open to anybody, thereby broadening the representation even more. For instance community leaders that were not in the *consejo* or on the board of APPO attended these meetings and so did many herb growers.

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families, their level of formal education is likely not what the locals have acquired. Having said this, it appeared that the leader of the renters, Aurelio, who was the first to sign their letter, had more experience in formal writing than what some others of them may have.

When the *consejo* was formed, a man by the name of Martín had promised that the former leaders of APPO would support Jorge and the *consejo*. Martín is one of the key individuals in bringing greenhouse technology to San Luis and he has been able to do so with help from various government programs. Therefore his support to the *consejo* and his participation in the negotiations was crucial.

Typical for the meetings was that certain issues were discussed over and over again without any apparent 'progress' or decisions. In one of the meetings the question about allowable technologies came up repeatedly. At some point in the discussion Martín threw his hat to the floor and said,

There is no point in being here; our fields need us. We want the authorities to visit us. We can't keep coming here [because] we have important things to take care of. I insist that you come to the greenhouses to see in what conditions we work. These meetings eat away at my productive time and jeopardize my economy!

Martín Espinosa Febr. 12, 2001.

He did not attend another meeting and said in an interview with me that,

"CORENA fills me with anger". He also said about other chinamperos:

[With floriculture] one earns enough to live well but one has to be engaged [*que se preocupe*]. Most people want to live well with four hours [of work a day]. But it requires seven days [a week] and 365 days [a year]— you cannot rest fourteen hours a day!

I spent twenty days recently doing strategic planning.

[In San Luis we] have forty or fifty fiestas [every year] — they are necessary distractions where one enjoys life and conserves traditions. It is fine [because] a person is not a donkey [always at work]. But work is indispensable and you have to know what it is for. [So,] why is it that we party 24 for hours but do not want to work 24 hours?

Why do we collaborate [when organizing] the fiestas but not [in getting] electricity [to the chinampas]?

Only a few of us [challenge] the authorities; the rest ask for [alms].

Martín Espinosa Febr. 13, 2001.

As somebody who has made laborious technological changes and significant investments in his operation and has higher education in a discipline that is key in contemporary greenhouse cultivation, Martín's frustration is understandable. However, in terms of local power, the question to ask is why does a key leader with significant experience and knowledge that would be useful in the negotiations withdraw his support from the 'entire' community?

His statements suggest two things. First, while the economic preoccupation is no doubt on everybody's mind, the success of some has created an individualism that erodes concerns of community well being. If there ever was such a thing as collective preoccupation and activity towards an as broad as possible well being,<sup>28</sup> the capitalist mode of production has 'induced' individualism where those who enjoy success 'can afford' to withdraw from a collective effort – or put in another way perhaps, need to withdraw in order to guard their interests.<sup>29</sup> Thus a leader withdraws because he thinks that the whole process does not benefit him – on the contrary, he thinks that it disadvantages him by taking his time away from work with plants.

This brings up the second point: among the farmers the economic competition has reached a level where not all can survive and where free exchange of information and skills has become a disadvantage.<sup>30</sup> Thus the economic

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<sup>28</sup> I do not want to risk idealizing 'indigenous' societies as egalitarian.

<sup>29</sup> It was a common complaint among farmers that they had become individualists and competitors in production.

<sup>30</sup> At Christmas 2000, farmers were concerned about the saturation of the markets of poinsettia; its price development had stalled, while the price of inputs had increased. Chinamperos claimed that poinsettia from

imperatives of some sacrifice community interest and the pursuit of the success of those who do not possess all the necessary skills, means, or what is perceived to be 'correct' attitudes for that matter. In fact, several people maintained that they are egotistical and guard their 'tricks', and some went as far as saying that causing trouble for a neighbor is not a very bad thing to do.<sup>31</sup>

The withdrawal of a leader's support illustrates multiple forms of power in contrast to predominant views of power as the more powerful having and using their "power over" the less powerful. Feminists have critiqued this view as limited (Townsend et al. 1999: chapter 2). They have pointed out that power takes various forms from "power over" to "power from within", "power with", and "power to" (Townsend et al. 1999: chapter 2). Relevant here is that the withdrawal of the support of a leader erodes the community's power from within or its capacity to increase its own self-reliance and internal strength (Townsend et al. 1999). It also diminishes the community's power with, or its "capacity to achieve with others what one could not achieve alone" (Townsend et al. 1999: 31) and its "sense of the whole being greater than the sum of the individuals, especially when a group tackles a problem together" (Rowlands 1997: 13). The lack of one individual's skills and experiences from the collective process also compromises the community's "power to" or its "ability to gain access to a full range of human abilities and potential" (Rowlands 1995: 22 quoted in Rowlands et al. 1999: 33). And finally, this withdrawal potentially increases CORENA's power over the community. A powerful

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large greenhouses in other states were flooding the market in Mexico City. At Christmas 2004 the situation had further tightened so that some growers in San Luis had not sold all of their product (OCOP 2004, phone conversation).

<sup>31</sup> I also observed cheating and what seemed to me intentionally neglecting agreed arrangements and promises. These are not specific strategies employed in San Luis (I resort to them, too), but illustrate ways in which people organize their relationships.

individual's departure thus seems to disadvantage the community through several lines of power.

Literature of participatory development and conservation is 'traditionally' concerned with the silencing of already marginalized groups such as women, the poorest, or indigenous people (e.g. Burkey 1993, Mosse 1994). However, the dynamics in San Luis show that also relatively well off or established voices may become excluded from the community representation or negotiations, even when their contribution would be of utmost importance to the process. Thus, silencing in local politics is relative and may occur within any group in the community also within the elites as the following examples show.

#### Other forms of marginalization – ideological silencing

A few weeks after Martín had left the negotiations, Raúl, a 'traditional' herb farmer with modest resources told me that he, too, had decided to leave the *consejo*. He disagreed with what he called the *consejo*'s "culture of conflict" and felt that the rest of the *consejo* did not listen to his ideas because he was "just a poor 'traditional' farmer". He told me this after one of the *consejo*'s board meetings. I attended that meeting; its purpose was to discuss the forest litter, but as usual, the discussion spilled over to many issues. I describe some of it in order to point out dynamics that had displeased Raúl.

In the meeting<sup>32</sup> one man said, "All of us have to fight against everything; if not, in two years our work is dead", and another one followed, "The laws are against the peasants. We have to unite ourselves and put pressure as high up as necessary – all the

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<sup>32</sup> Feb. 17, 2000.

way to Lopez Obrador [the mayor of the city]". "If not all [growers'] organizations collaborate, [the government or the law] will kill us" and "We have to go the extreme, fight all this, propose alternatives", "We are part of the entire [city] and we have the right to live our work and traditions", and "Nobody agrees that [the law] can cut our wings now that we have started to fly" were other opinions.

They also considered what kind of production would most suffer from the prohibition of the forest litter: "With herbs there is not much problem; geranium won't work without litter; poinsettia won't work", they listed.

During the entire meeting, Raúl did not say a word. Raúl used traditional methods like composting when possible and he also cultivates corn, rare in the chinampas in San Luis in the year 2000. Once he said, "I pray God that I will never have to build a greenhouse". He thought also that there was economic potential in growing herbs because they needed few inputs, which he got from local materials instead of a store.

Some time after this meeting Raúl invited me to his house for a family celebration. Together we took the bus from San Luis a few stops out of the village, and while we walked up the steep and dry hill to the outskirts of his neighborhood, we talked about the *consejo*. He said that instead of continuing in the *consejo*, he had decided that he was going to forge his own connections and develop his fields according to the knowledge he could get from his father and his own experiments. He had already started and at another occasion he explained to me how he had planned to purify the canal water around his chinampas: He would divide the canal in little compartments and utilize different biological agents in each compartment, thus stepwise purifying the water when it travels down the canal. In addition to Salix-trees (*ajuehote*) he would plant *álcatras* on

the edges of the chinampas to stabilize them and he could sell the *álcatras* as a cut flower, a practice his father had utilized earlier. Soon after telling me about these plans, he invited me to look at how he had re-enforced the chinampa edges with these plants.

Raúl was disillusioned with the *consejo*, and I was disappointed in his decision to leave it because I thought that of those who participated he was one of the few who was articulate and convinced about 'traditional' methods and had new ideas of how to use them together with some 'modern' technologies. His knowledge and ideas would have been relevant and valuable for the conservation plan, and I therefore tried to encourage him: I asked him what would be the worst thing the rest of the *consejo* could tell him if he were to express his ideas. He did not answer. I suggested this, "They would shake their heads and say, 'Oh Raúl! You with your miserable herbs, what can you say'?" He laughed and then said, "That's it. I do not want to express myself because I am afraid of being ridiculed and silenced". I tried one more time, "Well, they cannot hurt you if you decide that you will not get hurt; you can stay above their arrogance." He did not reply. He had made up his mind.

Raúl's experience and decisions show that marginalization does not occur only along the lines of power that are commonly considered, namely class, race, and gender.<sup>33</sup> While Raúl had initially 'jumped' the class line by joining the *consejo* where the majority were greenhouse growers, his departure from it was a result of his ideas of negotiating

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<sup>33</sup> Any one of these lines of marginalization can intersect, of course, which happens in this case where Raúl is from a lower class than the majority of the members in the *consejo*.



and cultivating that challenged the outright resistance of the *consejo* and its unwillingness to consider alternatives.<sup>34</sup>

The significance of Raúl's departure lies in the fact that the conservation efforts at large lost the opportunity of benefiting from his enthusiasm, experiments, and knowledge in methods that the Ordenamiento proposed. Whether Raúl would enter the formal conservation plan in some other capacity remained to be seen but for the time being, he had chosen to work privately, relying on his family and acquaintances.

For similar reasons, a member of the elite also chose silence. Joaquín has a university degree in a field closely related to agriculture. He is innovative about how to combine 'modern' and 'traditional' technologies and products in order to enhance economic returns, sustainability, and community collaboration – all in accordance with the general goals of the conservation plan. He also has connections to relevant government and research institutions, and he has been successful in raising money for community projects on his own.

He speaks his mind in all meetings – and he is repeatedly frustrated. "They don't listen to me", he claims. "I have lived in San Luis for [many] years now and my children go to school here, but they don't count me as one from San Luis because I am originally from [name of village]".

In one meeting he said,

We can do certain things and others we cannot. Alternatives exist but we have not tried them... It is not bad that they restrict us in this way [prohibiting the forest litter] but we need consultants here, not researchers. I think that we can put this right; they cannot close us off completely... We need help to find the market niche for the organic product with a price

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<sup>34</sup> One could also conceive that Raúl's willingness to negotiate with the government is a result of internalized colonization (Kuokkanen and Riihijärvi 2005) another form of reacting to colonization alongside with resistance.

40% higher than that of the conventional product. We have to find the market... It is not bad what [the government] proposes but it is put in a bad way; we cannot give them the opportunity to decide. We have to decide! [Let's say to the government], 'okay, we will comply but help us'.

Joaquín Gonzales February 20, 2001

Joaquín's statements are in stark contrast to how the *consejo* visualized the situation in the meeting described earlier: Joaquín seeks collaboration but on the farmers' terms, while the *consejo* seeks opposition to stop the law entirely.

The kind of help Joaquín envisions from the government is based on a new model of extension, i.e. consultants who charge for their services and sell ready-made packages of technology with related knowledge, something not yet very common in San Luis but what Joaquín has encountered in the many courses and workshops he has attended throughout the country. Examples of technologies he proposes are precision irrigation and hydroponic cultivation. Both of these require an even more accurate application of chemicals than what is currently necessary and a different equipment from what is currently in use but they would presumably also conserve resources such as the forest litter, water and fertilizers, and cause less contamination than current practices.

While these technologies are not unheard of among the farmers in San Luis (they are largely untried, however, within the floriculture and horticulture in the chinampas), Joaquín thinks that the farmers' unwillingness to demand their introduction from the government originates from the fact that he is the one who suggests them, and by extension, from his background i.e. moving to San Luis from another village<sup>35</sup>.

In addition to Joaquín's interpretation of the resistance to what he says, I suggest that *what* he says might also play a role – after all, his views and terminology of the

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<sup>35</sup> Joaquín is the son of a chinampero and has practiced chinampería when young but he studied a slightly different field and worked for many years in industry before buying land in San Luis and dedicating his time and work to floriculture. His wife has a job with a wholesale business.

market, science, and collaboration are quite different from what most other farmers would use. Most of them do not engage with market research and, in terms of adopting new technologies they imitate what a few leaders do rather than actively research and apply inventions.<sup>36</sup> Further, some of those who actively search and apply new things (like Martín, whom I described earlier), do not participate in the negotiations or they oppose them vehemently. Thus, on the one hand, Joaquín's willingness to collaborate with the government is in a striking contrast to the general opposition among the farmers and their method of dealing with the government, and, on the other hand, how they develop their cultivation practices. His discourse includes a politics new in San Luis: instead of expecting and accepting "fish" from the government, he wants the government to "help the farmers to learn how to fish", and he wants the farmers to become assertive and take initiative. "No more of the top down [policy] but from the bottom up... we need to let go of the fear", he said<sup>37</sup>.

Both the *consejo* and Joaquín advocate collaboration within the community but for different purposes. Joaquín argues for collaboration in order to take ownership of the process and to turn the law's conditions to the farmers' advantage, while the *consejo* pleads for collaboration in order to resist what they perceive threatens their work. Some of the technological solutions the two discuss are remarkably similar, like the use of compost to replace the *tierra de hoja* for instance, but the vision of the process of their implementation is different: the *consejo* insists that the government develop the alternatives and give them ready-to-go to the farmers but Joaquín advocates a collaborative and bottom-up process in developing them.

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<sup>36</sup> I met several chinamperos who experiment and actively search for new technologies but most agreed that a more common route to changes is to copy what the few already have introduced.

<sup>37</sup> February 20, 2001.

To what extent the farmers' resistance towards Joaquín is due to his origin or discourse, is, however, less important than the fact that from the process, a person becomes eliminated who might know of other sustainable solutions that might contribute towards allowing greenhouse cultivation to develop and expand despite the law's prohibition. After a couple of meetings Joaquín decided to leave the negotiations; he said to me, "I am tired of going over and over the same thing. I can do much more in a different process and in projects that I start myself", he believed.<sup>38</sup>

Joaquín's different strategies are also reflected in his other activities in San Luis and the neighboring community, where he occupies several positions in the village dynamics. He talks about "hybrid" production, where traditional technologies and products are redefined and combined selectively with modern technologies to put out new products into markets that farmers from San Luis have previously not been selling to. These are high-priced niche products, sold directly to corporations, restaurants, or urban life-style and image markets: he envisions for instance several types of organic food with value added on the farm or in the community. He also strongly advocates collaboration with almost any partner that is willing and committed: for instance he has an idea of forming a business that collects organic waste from the city's food markets, sorts it, and manufactures suitable sections to a compost to be sold to flower growers. Such an enterprise would require collaboration between farmers, vendors in different locations, and the municipality, something that has been difficult to establish previously. Additionally Joaquín is working with a few grass roots groups in different restoration,

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<sup>38</sup> February 20, 2001. He did start other projects with ideologies different from what the negotiations employed.

research, and development projects. Their ideas are grass roots, interdisciplinary, multi-stakeholder, and based on unconventional marketing strategies.

To his children, he emphasizes the indigenous part of their heritage. He is well read in history and he follows popular culture and politics in an analytical way.<sup>39</sup> At the same time, he is comfortable with urban life style: he takes his family to urban outings, teaches his children English before it is obligatory in the school, and eats out in restaurants at times. These are all activities that are not common among the farmers in San Luis<sup>40</sup>.

In sum, Joaquín associates and integrates with multiple discourses from indigenous or 'traditional' to 'modern' to 'rural' to 'urban', and to neoliberal. At the heart of his motivations lie his personal aspirations, familial responsibilities and necessities, and desire to organize community.

I understand Joaquín's positions and strategies through the idea of nested identities, where identification with and belonging to a community can be diverse and include "multiple layers", depending on genealogical and cultural points of reference, geographical locations, cultural expressions, and mental connections (Smith 1999: 126). Seen through this lense, while firmly rooted in his indigenous and chinampero backgrounds that he shares with many others in San Luis, Joaquín at the same time seems to be 'a world removed' from an imaginary or real homogeneous or united chinampero tradition, community, and resistance due to his greater exposure to neoliberal and urban discourses. In any case, he is not able to continue with the negotiations.

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<sup>39</sup> Joaquín was the person who pointed out to me the album by the well-known Mexican feminist singer Amparo Ochoa. Part of a song from that album, "Mujer" [Woman] is presented in next chapter.

<sup>40</sup> This is not to downgrade the education, working experiences, or aspirations of anybody else in San Luis – many families possess qualities similar to Joaquín's but the difference I see is how they become applied.

However, to assume that his voluntary silencing puts him, or Raúl for that matter, at a definitive disadvantage, would be hasty. Their actions afterwards show that their input and contribution to the 'community' were lost because they withdrew from the negotiations, but personally, they did not suffer. By May 2003<sup>41</sup>, Raúl had been able to rent an additional chinampa and buy a car; clear signs of economic advancement. Joaquín had finished building the second floor in his house and was involved in several community projects within the chinampas and in the hill lands. He had also managed to create interest among a few growers for the new technologies he had proposed and he had expanded his own production of certain greenhouse equipment by employing two people.

The stories of Raúl and Joaquín suggest that marginalization and silencing need to be approached as relative in terms of how they occur, from what social class the silenced individuals come, and what the outcomes of the silencing are. This relativity points out how community processes and power dynamics can take multiple paths and have various outcomes both socially and environmentally. To predict them seems impossible.

## Conclusions

Although the *consejo* initially had broad representation and could have pooled a range of knowledges towards a transition to environmentally sound production, it adopted the mandate of resistance to the entire conservation plan. Together with individual priorities and community dynamics, the resistance created tensions that narrowed rather than broadened the knowledge-base that came to the negotiations. Furthering its original

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<sup>41</sup> I paid a short visit to San Luis in May 2003, and met up with Raúl and Joaquín among others.

mission to "turn over the legislation", the *consejo* advocated 'modern' practices and rejected the government's reasoning about the feasibility of the 'traditional' or organic cultivation methods. Internally the *consejo* rejected alternative opinions and suggestions that would have accommodated the government in any way, such as Joaquín's willingness to comply if the government helped them or his vision of new peasant politics. Similarly, without voicing it explicitly, the *consejo* eliminated Raúl's generally collaborative attitude and his knowledge of traditional production in deteriorated conditions, leaving the community's voice to represent primarily greenhouse growers.

But also greenhouse growers and thereby individuals of the upper class of the chinamperos with experience with experimentation or with negotiating with the government left the *consejo*. Joaquín felt frustrated with the *consejo* itself, believing that its unwillingness to consider his suggestions of how to impart extension and how to work creatively with traditional, modern and hybrid knowledges was a result of himself not originating from San Luis; Martín was frustrated with the government representative's unfulfilled promises and their empty talk and he put his own interest at the forefront; and Ramón's initial suggestion of collaborative but farmer-controlled experimentation vanished entirely from the *consejo*'s agenda and Ramón himself was expelled due to a rivalry about community leadership.

In addition to these dividing processes, the negotiations also brought about a uniting or at least conciliatory feature in an agreement between the locals and the renters. Although the impact of this newfound collaboration was not obvious by the time I left San Luis, it nevertheless represents a 'positive' change in community relations and

between classes, and is an example of their multi-directionality, spurred by widely experienced threats to livelihoods.

What my observations permit me to conclude then, is that individual's or groups' skills and goals, class position, values, and knowledge can lead towards inclusion or exclusion – a strong and united community cannot be taken for granted as a range of routes and strategies of inclusion and exclusion are available for individuals or groups. Some people move fluidly between discourses, classes, practices, and modes of organization, while others may follow a social organization closer to what is more customary in the village. If anything is typical for community processes in San Luis it is fluidity, multi-directionality, and unpredictability across and within different positionalities. Thus a-priori assumptions of community dynamics need to be complicated (Watts 2000).

Events in San Luis suggest also that power should be viewed in several forms. It does not only exert itself from the top-down but power operates simultaneously both up and down the hierarchy as well as through networks and within different hierarchical positions across the network. These different forms of power are not disconnected, but one form of power affects another, sometimes with different directions; consequently, empowerment and disempowerment can happen concurrently with varying degrees and dimensions in different levels of community.

When people's willingness, ability, and purpose to form alliances vary greatly, and given such diversity of subject positions and strategic visions, how much can one predict about the environmental impacts of their strategies and decisions? Does it mean that because the *consejo* managed to delay the government's conservation plan the



chinamperos would continue producing in a way that harms the environment, if that is what gives them the best economic result in the short term? Will Joaquín be able to find an alternative route to implement his ideas of hybrid and environmentally healthier technologies, and will they be economically viable? Will the biggest greenhouse growers be able to expand and find environmentally healthier methods, if the government pulls out from negotiating with them, thereby withdrawing the potential resources that would have been available? Will Raúl find alternative alliances to develop his ideas of ‘retrofitting’ traditional technologies despite the difficult environmental conditions? And is there any obvious or predetermined route that cultivation or environmental conditions will take?

When I left San Luis in June 2001, the conservation process was in such early stages that its environmental consequences were not yet visible. However, in May 2003, I was able to get some indication of how things were proceeding. The government had ‘dumped’ the *consejo* due to its “unwillingness to negotiate”.<sup>42</sup> Tens of new greenhouses had been built in San Luis alone – in direct contradiction to the conservation plan’s explicit prohibition. Growers were increasingly searching out methods for biological pest and disease control. A locally based and farmer-run group of approximately two hundred signatories was negotiating with various government institutions about an alternative restoration and conservation plan for the chinampas. By March of 2004, the government had withdrawn all financial and material assistance to greenhouses and initiated a program in organic production including organic certification and market research<sup>43</sup>. Raúl had expanded his cultivation and been able to improve his economic situation – he still hoped that he would never have to build a greenhouse!

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<sup>42</sup> A government representative, personal communication in May 2003.

<sup>43</sup> Local informant 2004 (OCOP), personal communication, internet conversation in March 13.

To summarize, multiple positions, strategies, desires, and alliances are at work simultaneously in a community and they can agree with or contradict a-priori predictions or plans for conservation that public servants or the government policies advocate. They can complicate conservation efforts as did the *consejo*'s opposition, or they can help those efforts either by participating in the formal process or by private initiative, such as Joaquín's community programs and Raúl's restoration efforts. At the same time relevant knowledge can be left out from the process when individuals who feel that they are marginalized in the community do not participate in the negotiations. They may successfully proceed on their own but their contribution to the larger project goes unrealized.

Initially a couple of women appeared in the meetings with CORENA and the farmers' very first internal meeting but thereafter only men participated publicly. The next chapter will look at how women choose their productive strategies, engage their gender-specific knowledge, and forge their community relations outside of the negotiations of the conservation plan.

## CHAPTER 5. "*SI NO USAMOS LA TIERRA DE HOJA, NO TENEMOS QUE COMER*".

### CHINAMPERA WOMEN'S ENVIRONMENTAL KNOWLEDGE, CHOICES, AND AGENCY

"If we do not use the forest litter,<sup>1</sup> we don't have food to eat", chinampera women in San Luis told me when I asked them what they think of the extraction and use of the forest litter.<sup>2</sup> As the principal potting medium in greenhouses, the litter represents a means of satisfying the basic food needs, which is primarily women's responsibility. That is one component in their role as a homemaker, a role they have assumed in the division of labor in the family economy. It intersects with their role as a producer and the 'marketing manager' of the product as well as their role and prestige in the community. This chapter examines women's power to negotiate their multiple roles and how they interact with their environmental knowledge and their decisions that affect the environment. How do women engage their environmental knowledge in the context of the conservation plan? I argue that chinampera women in San Luis strategically engage their specific knowledge about markets, production, and environment in ways that complicate ideas of how women discriminate between the environment and their other needs and obligations and how they engage in a public process. In this dynamic their apparent silence in the public process of conservation is not always a sign of passivity and powerlessness but can instead constitute power and negotiate power. Thus this complex dynamic pushes "the meaning

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<sup>1</sup> Chinamperos use the forest litter as one component of the soil in the pots; it is relatively cheap, gives certain valuable qualities to the soil, and so far has been possible to disinfect successfully at a reasonable cost. It comes from forests in Mexico City and the surrounding states. Its extraction is said to cause deforestation and erosion in the hill lands, eventually diminishing the rate of recharge of the aquifers, depletion of soils, and a more arid climate.

<sup>2</sup> ON and HO Sept. 15, 2000.

of silence [from] being unwilling or unable to speak [towards] being complex and multidimensional" (Mahoney, 1996: 603).

Feminist studies in political ecology suggest that women acquire specific environmental knowledges in their gender-specific activities. Excluded from some knowledge because of patriarchal and class relationships (e.g. Thomas-Slayter et al. 1996; Agarwal, 1992), women occupy positions and perform tasks that men do not and develop and obtain information that is tied to those specific activities be it in food production (Fortmann 1996; Miller et al. 1996; Brú-Bistuer 1996), raising families (Seager 1996) or belonging to a minority population (Seager 1996, Miller et al. 1996). Women also have "[collaboratively] engaged in protecting, interpreting, and reinterpreting their needs, environmental concerns, and the issues pertaining to the security and well-being of their families, households, and communities", thereby highlighting "the importance of gendered human agency" (Thomas-Slayter et al. 1996: 288-289). Seager maintains that "women's responsibility for the environments of their daily lives makes them the most reliable narrators for observing and assessing environmental change" (1996: 297).

For instance, studies about how the exclusion of women's knowledge can jeopardize an entire development project (e.g. Carney 1996) and how women's environmental and agricultural knowledge explains environmental history and political economy (e.g. Wangari et al. 1996) illustrate the importance of women's knowledge. Indeed, critical participatory development research and practice now hold 'obvious' the consideration of gendered knowledge and the explicit inclusion of women's knowledge in development projects in order to achieve a more efficient, equitable, and comprehensive understanding of environmental problems, their solutions, and social change (e.g. Parpart,

2000; Mosse, 1994; Townsend et al, 1999; Rowlands, 1997; World Bank 2000/1, Eade, 1999; Datta and Kronberg, 2002; Campbell, 2000, Vainio-Mattila, 2000).

However, my research in San Luis made me ask, if women's environmental knowledge and activism is critical to sustainability, why do women in San Luis appear to prioritize economic considerations even when they may jeopardize the environment? Similarly Maureen Reed's research on forestry communities in British Columbia shows that many women whose livelihoods depend on forest industries do not always support environmental movements that seek to restrict logging and protect the forest and its habitats (Reed 2000). What I take from this argument is that women are not a homogeneous group (e.g. Parpart 2000; Mosse 1994) and it is important to understand women's different subject positions within a community. From these fluid and shifting social formations women interpret or relate their observations and knowledge about the environment and make decisions that affect the immediate or more distant environments they depend on. In other words knowledge is embedded in social contexts, which enmesh with political economy and culture (Parpart 2000).

So perceived, women's environmental narratives manifest women's environmental knowledge through a cultural and political strategy and struggle; they are carried out individually, in various forms and entities of collective action, and in formal or informal settings. This struggle is discursively 'played out' in statements about the environment and is reflected back upon the environment through women's land use decisions and actions. I therefore hesitate to take it for granted that "women's responsibility for the environments of their daily lives makes them the most reliable narrators for observing and assessing environmental change" (Seager 1996: 297) because,

while they may have the knowledge, what they do with it becomes the strategic and critical to understand. For instance, do they remain silent about the environmental problems they are aware of (or create) and carry on 'business as usual' or do they engage in formal or informal public processes that, while in the long term might improve their environment, in the short term jeopardize their other interests?

Earlier literature that has sought to explain Latin American women's agency has presented a dualistic view in which women's public presence is constituted through patriarchal and/or masculinist relationships. According to this view, patriarchal social relations silence women, limiting them to the realm of home and the reproductive, while men appear and speak in public and wield power and agency<sup>3</sup>. In such a view, "silence is... a symbol of passivity and powerlessness: those who are denied speech cannot make their experience known and thus cannot influence the course of their lives or history" (Gal1991: 175).<sup>4</sup> These generalizing notions of patriarchy lead to representations of women as powerless victims. However, post-colonial feminist scholarship has shown that such Western interpretations essentialize Latin American women (and men) as homogeneous groups (Mohanty, 1991, Marchand, 1996, Gutmann 1996) and apply Western and patriarchal notions of power and women to Latin American people.

In attempting to complicate the assumptions of how women gain and use their agency and environmental knowledge, Maureen Reed (2000) challenges feminist research that defines 'activism' in terms of 'progressive' and 'anti-status quo' imaginaries and

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<sup>3</sup> This literature and perspective is critically reviewed e.g. in Cubitt and Greenslave (1997) and Mohanty (1991). For instance, Mohanty shows how the idea of 'all' third world women being oppressed and committed to reproductive work at home, homogenizes third world women by disregarding issues such as class and race, which significantly affect women's voice (Ibid. 63-66).

<sup>4</sup> Yet women wield power and can make themselves heard with means that are not obvious like talking with 'gossip' (de Sousa 1993; I disagree with the term's sexist connotation as gossip pertains both to men and women) (de Sousa 1993).

ideologies. She argues that our concept of activism must also encompass the actions and knowledge of those who 'campaign' to preserve the status quo (for instance, contemporary forestry practices that environmentalists challenge) and may even promote practices that 'progressives' view as environmentally harmful. By doing this, her work invites a more nuanced understanding of how women's knowledge and interests are embedded in their local, everyday context and shows how women's silence may constitute a form of power that they engage to further their own goals.

Taking these points forward in the context of chinampera women's every day lives in San Luis, I explore the complex web in which women make decisions that affect the environment. Specifically, I complicate the relationship between knowledge and agency by looking at the web of economic relations and social expectations in which women's lives are embedded. I consider both the material and cultural aspects that constitute women's economic activities including the division of labor in agricultural production and domestic work and class and village relations, cultural values, and material aspirations. I also look at how women's environmental knowledge operates in the web of economic, family, and community interests, and how women address the patriarchal relations that affect their ability to engage their knowledge in the formal political process of the city's conservation plan. To facilitate the presentation of a complex issue the chapter is divided into five overlapping sections. They focus on how women's knowledge, agency, and participation intersect with and are constituted by (1) the economy of floriculture and women's economic goals, (2) chinampa economy and village prestige, (3) social relations and women's feminine identity, (4) cultural and class differences, and (5) institutional culture of citizen participation and feminist work. This

information allows me to acknowledge the agency and power of those floriculturalists in San Luis whose views may not concur with those of the 'progressive' conservation project and who do not participate in its negotiations. Understanding the reasons for their absence helps me to appreciate how multiple constraints and opportunities form women's daily lives and direct their decisions to advance goals consistent with their values even when their decisions may undermine the long-term health of the environment they depend on.

The analysis draws upon my ethnographic research with women chinamperas in San Luis, which took place primarily in the plant market. Amidst attending to their clients and plants, and sometimes small children, we discussed their activities and daily lives. In the beginning I had a list of questions I tried to ask everyone but after a while I started to focus more on their perception and knowledge of the environmental relations of cultivation and what they thought about the Ordenamiento. I taped a few discussions but mostly I took quick notes during the discussion and would expand on them in the evening. I also talked with some women in their homes. In some cases we would have more uninterrupted time but in others, other members of the family would join in and speak for the person I originally wanted to talk with. Two women invited me to go with them to their chinampas, where they explained to me their work and its significance. During these visits I did not make notes or use the tape recorder; instead I engaged with the work and tried to observe how people interact and how information is shared in



everyday working situations.<sup>5</sup> After those visits I went home and wrote up the notes from memory.

#### The economy of floriculture, women's roles and agency, and the environment

One day I interviewed Teresa in the market. Her family has several 'top-notch' greenhouses and they are perceived as leaders in the cultivation of poinsettia in San Luis. Teresa's role is similar to that of many other women: she is the principal vendor of the products and she administers the family economy.<sup>6</sup> An incident that took place while I was talking with her illustrates her responsibilities. During our discussion, Teresa's husband came by and asked her for money to purchase some chemicals. After giving the money to him, she explained to me: "Together my husband and I administrate the money. He might say, "such and such a thing is missing from the field..." and as the wife I have to give him [money] for what is missing."<sup>7</sup> They have a conjugal agreement where he is responsible for the production and she looks after the money – although she says that together they administer the money, she is the one who collects it at the market and he is the one who comes to ask for it from her. She also perceives that within this arrangement she has an obligation towards him as his wife. Several husbands and wives talked about

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<sup>5</sup> Having said that, I admit that my presence would bring an element of 'rarity' to interrupt the everyday. On the other hand I noticed that once I learned the work and engaged in it, asking questions about technicalities, willing to learn more and challenge myself, conversations often became more relaxed in tone.

<sup>6</sup> Women's role as economic administrators is common among chinampero families – while the men are out in the fields and greenhouses most of the day, women sell in the market and make purchases during the day in the village. These can include purchasing inputs for the production. I also heard contrary accounts, where women do not get money from their husbands (although he might have it), to the point where the children's well being is threatened. Without going to such extremes, according to the social worker in the Centre for Family Violence, women who do not have their own income are vulnerable to their husbands' will (interview June 7, 2000). However, chinampera women are positioned differently in that they are in charge of marketing the product and collecting the money – they literally put it in their pockets, giving them control of it.

<sup>7</sup> ON Febr. 1, 2000.

teamwork [*trabajo del equipo*] where each has his or her responsibility and the other respects that.

She elaborated on her responsibilities and those of her husband, "It [work in production and work at home] is work of the two because the wife has obligations at home, and coming here to sell [plants] is helping the husband."<sup>8</sup> At this point, another woman, Juliana joined us. She said, "in the market, the wife defends the work of the husband; that's how it has to be because for him it is hard in the fields [*a él le cuesta mucho trabajo en el campo*] tolerating the sun all day, being hungry [*sufrir el hambre*], having to put up with the rain... so that's why it is also the wife's responsibility to protect his work."<sup>9</sup> When I asked how they protect his work, Teresa explained, "How should I say... so that the plants do not go bad, that they get sold for a little more on the market; if one lets the plant go bad, one does not take any well-being [*sacar bien*] of his work or actually [*más bien*] the work of the two, because it is the two who are subject to the work [*sometidos al trabajo*]."<sup>10</sup>

I told them that a young man had said to me that "Generally it is the men who make decisions here", and I asked Teresa and Juliana what they think about that. Teresa replied, "I say that it is always the two because I also have an opinion, say, about what we should do [in the field]... I too decide whether yes or no."<sup>11</sup> Julieta added, "In the marriage, he cannot make all decisions, she, too can make them. And in the fields, there are also things that he cannot decide upon alone but together with his wife in order to see

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<sup>8</sup> ON Febr. 1, 2000.

<sup>9</sup> HO Febr. 1, 2000.

<sup>10</sup> ON Febr. 1, 2000.

<sup>11</sup> ON Febr. 1, 2000.

what will go well and what will not.”<sup>12</sup> Teresa concluded by saying, “That is how we think because not everybody thinks like this. There are others who say, ‘why would I ask her opinion, I am just going to do this, and that’s it’.”<sup>13</sup>

Teresa and Juliana’s explanations show how their feminine roles intricately come together in the economic, domestic, and matrimonial spheres of life. The women perceive that yes, they have specific roles like the vendor, where they are independent and accompanied with certain professional responsibilities and skills like making sure the plant stays healthy and sells for profit. At the same time that role is part and parcel of being a wife, raising a family, and growing plants in the fields.

I am interested in how these intertwined responsibilities are linked with what happens in the environment.<sup>14</sup> When I visited Cecilia and her brother in their chinampa, I got some understanding of this. Cecilia and her brother belong to large family where all members cultivate the chinampas with varying techniques independently, in formal associations, or as a family enterprise. In this family, Cecilia and her mother manage the money and do all the work in the household, while the men dedicate themselves to cultivation. The father of the family explained to me that women come to the fields only to select plants for the market. Since some of their men also stay overnight in the chinampa, on the week ends the entire family might get together there to take time off eating, talking, and resting.

While the division of labor between men and women seems straightforward in this family, Cecilia’s and her brother’s discussion shows how her knowledge originating from

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<sup>12</sup> HO Febr. 1, 2000.

<sup>13</sup> ON Febr. 1, 2000.

<sup>14</sup> I emphasize that the environmental problems and contamination are extremely complex and the production of ornamental plants on the chinampas is only one contributing factor.

her specific responsibilities allows her to negotiate this division and utilize the associated power. Cecilia had invited me to join her when she went to the chinampa to select plants for next day's market. Cecilia told her brother which plants he should prepare but he suggested something different. Cecilia told him: "No, they do not sell." Then her brother looked at me and laughingly said, "She is the boss here!" I replied, "Really [*verdad*]?" to which Cecilia answered, "I am the only one who knows what plants sell and when. These [the ones the brother selected] are too small; people do not buy small now. Pick out the tallest ones and line them up in the box like this [shows how]", she ordered her brother. He proceeded as told and then said, "She is right – I would not know what to take out. If I had do the selling, we would not sell anything!"<sup>15</sup>

The incident shows how, as the vendor Cecilia has intricate knowledge of the market place in terms of the clientele and seasonal variations in their purchasing habits. What characterizes the clientele? In the plant market in San Luis most of the buyers are retailers who come to San Luis from all over the city and other states where they sell on the markets of big cities like Guadalajara, Cuernavaca, and Puebla. Ornamental plants go largely to a middle- and upper-class urban clientele and to industries and businesses that give them as gifts and use them to decorate their offices. They purchase the most expensive portion of the poinsettias for the Christmas festivities<sup>16</sup>. Thus by making decisions about what plants to grow Cecilia and other women vendors act upon the values and wishes of the clientele. In so doing, their knowledge of the market 'translates' back to

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<sup>15</sup> This conversation took place between OO and her brother on Aug. 11, 2000.

<sup>16</sup> Poinsettias come in many sizes and colors. The smallest ones carry only a few 'flowers' and in the market cost approximately twenty pesos. The biggest ones are more than a meter-high 'bushes' that can carry more than one hundred 'flowers'. They also costs hundreds of pesos and are often produced under a contract. (The word flower is in inverted quotation marks because strictly speaking the flowers are leaves that turn red [or some other color produced though breeding] when light conditions change).

the fields and to the environment: The plant selection is increasingly shifting from environmentally less harmful herbs and 'traditional' festive flowers to ornamental plants like the poinsettia, grown using 'modern' technologies like fertilizers, pesticides, plastic, and soil amendments, that, when used inappropriately are one reason for the environmental degradation in the chinampas.

Teresa's, Julieta's, and Cecilia's floriculture demonstrate how as producers and economic administrators women are embedded in a web of market demands, urban values, family well-being, and environmental considerations. In this situation, women are aware of the environmental consequences of cultivation, however the economic success of these complex relations reduces their incentives to participate in the conservation plan that expects them to alter their production technologies. This is particularly true if they perceive that their productive status or their families' well-being are threatened. Further conversations with Teresa illustrate this proposition.

I asked her what she thinks about the use of forest litter as the potting medium. She answered, "[The litter] is very useful because we all use it and the plant grows better in this soil." More importantly, Teresa asked, "If we cannot use the litter, what will I give my children to eat tomorrow?"<sup>17</sup>

When I asked her why she thinks the government wants to prohibit the extraction of the litter, she said, "It destroys the forest and the forest is very important, and we are destroying it". She also said, "Those who [extract and sell] the litter should be obliged to plant new trees because gathering the litter is their livelihood".<sup>18</sup> Thus, although she is aware of the environmental problems that the removal of the litter may cause, and she

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<sup>17</sup> ON Febr. 1, 2000.

<sup>18</sup> ON Febr. 1, 2000.

acknowledges that she is an indirect participant in them, she does not consider that she is responsible for preventing or alleviating the problem in the hill lands. Her primary concern is to put food on the table for her family, which her current production practices enable her to do. The environmental responsibility in her opinion relies on the shoulders of those who make a living removing and selling the litter.

Even as she understands the environmental consequences of using the litter, Teresa's perception of the issue compartmentalizes responsibilities along the lines of livelihood. In this sense, her's is the 'user pay -principle' where the 'user' is the person who touches the litter initially and makes a living directly of it. Teresa's responsibilities as a producer and house-keeper, on the other hand, are a few steps removed from the forest, which in her view relieves her from the preoccupation with it. She has to make sure that her family has what it needs materially and, implicitly for this purpose she is entitled to use whatever techniques are available for her. According to this logic, her immediate needs override collective responsibility about the environment.

These discussions and experiences suggest that I cannot assume that chinampera women in San Luis would readily translate their environmental knowledge to environmental protection, or that if they did, their goals would be altruistic. Nor can I assume that they would readily share the knowledge they have, or that they would promote collective goals such as those of the Ordenamiento. Instead, as Teresa, Juliana, and Cecilia's statements demonstrate, they conceive of and treat economy, environment, and cultivation in ways that best further their economic interests and their family's well being. In so doing, women may or may not hold or advocate progressive and activist environmental stance (Reed 2000). In the examples discussed here, women's 'non-

progressive' environmental attitudes and 'non-activist' stance furthers what they have set as their status quo and may counteract the government's efforts to conserve the chinampa environment and the hill lands. For the time being at least, this strategy has brought economic success to numerous families in San Luis, which is intricately linked to community relations and prestige.

#### Chinampa economy, women, and village relations

Together with wage earners and other entrepreneurs in the village, chinampera families obtain prestige from their role in organizing village *fiestas*, which in the late 1990's and early Twenty First Century have become more elaborate and sumptuous than "ever before," and importantly, are on par with those of the neighboring community (farmers in their meeting March 26, 2002). For organizing families, the *fiesta* is a socially important event where they show their generosity and wealth and gain prestige in the community. Indirectly and directly this prestige gives the family power, as when the head or heads of a family are appointed as representatives of the community or are invited to be *compadres* for a young couple or other socially important arrangements.<sup>19</sup>

Numerous collective *fiestas* are organized throughout the year in San Luis, but the ones with most prestige are the *posadas* or the processions that lead into Christmas. They include religious ceremonies, fire works, music, dance, gifts, and food. Groupings of ten to twenty families organize them and the entire population of the village is welcome to

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<sup>19</sup> The *compradrazco* is a kinship system of loyalties between families most often within the same class. They include moral and material support that constitutes a sign of wealth and merits power and respect in the community (Cubitt 1995).

participate. The more elaborate and different the program and 'paraphernalia' compared to a competing *posada*, the more prestige the organizers gain.

In the 1960's, when cultivation in the chinampas was suffering from poor economic returns and many chinamperos abandoned cultivation, there was one year when not a single *posada* was organized in San Luis. Nobody had money to spend on one. People talk about that year with sadness: in San Luis it marks collective poverty and an inferiority compared to the neighboring village. For instance, Margarita, who now is in her forties, grew up with a "hunger of which you [Maija Heimo] have no idea".<sup>20</sup> With the gradual transformation and economic improvement of cultivation, today extreme poverty is rare<sup>21</sup> and Margarita and her husband have a relatively large house with an interior kitchen and a bathroom; their children have more education than the parents, and they are able to take a vacation every year. They are also one of the approximately 200 families who organized the thirteen *posadas* in San Luis in 2000. The organizing families are largely but not entirely floriculturalists, and there were more families willing to organize *fiestas* than could be facilitated.<sup>22</sup> New groups have sprung up, most recently one initiated by young adult sons of families successful in the cultivation of poinsettia, while the parents of some of them belong to an already established group of organizers. Some of these young families are total 'newcomers' to organizing a *posada* while others are second or third generation organizers. This growth and elaboration of the *posadas* shows that floriculture has not only helped some families to lift themselves to a new

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<sup>20</sup> YOE Febr. 7, 2001

<sup>21</sup> The terms "extreme poverty" and "rare" are relative, of course and should not be measured with Canadian standards. In Mexican statistics poverty overall in San Luis is "medium high" (Alejandro Sanchez Gamacho, member of legislative assembly, meeting with San Luiseños Sept. 8, 2000).

<sup>22</sup> The number of *posadas* has since increased to sixteen (OCOP, personal communication 2003).



economic level but it has also created generational wealth and prosperity that is redistributed in the community.<sup>23</sup>

While the *posadas* are the *fiestas* that people consider the most extravagant, I also want to mention other important *fiestas*. For instance, the owners of the chinampa organize a fiesta to commemorate the Saint of the chinampa. The guests are extended family and the surrounding neighbors at large: the number of guests easily exceeds one hundred and can go up to a few hundred. The expenditures comprise the religious services, food, decorations, and entertainment. Other very important fiestas are weddings, where the family of both the bride and the groom organize separate ceremonies, parties, and meals in their homes, which, depending on the families' means, can last for several days. A daughters' 15<sup>th</sup> birthday is celebrated with ceremonies, meals, music, and dance.

One woman told me that the party they organized cost them 5,000 pesos, which equals her husband's two months' gross salary.<sup>24</sup> No one told me openly how much money they had invested in a *posada*, but some gave me figures that indicate the 'ball park'. One relatively poor farmer indicated that his share was approximately 2,000 pesos, which equals almost three months' gross salary with the official minimum pay at the time. Another person said that some families contribute with up to 20,000 or more in cash and others donate pigs or cattle to be slaughtered. To make such donations beyond a family's other needs, an economically highly profitable floriculture would be necessary.<sup>25</sup> The fiestas and the floriculture thus constitute an intricate 'symbiosis', expressed by one

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<sup>23</sup> Some people explained to me that they participate in the fiestas because it is an opportunity to eat well and get gifts. This reasoning indicates that while the *fiestas* precipitate power and prestige they are also an important collective strategy to alleviate relative poverty.

<sup>24</sup> VLU personal communication 2001.

<sup>25</sup> It is common knowledge in Latin America that the privilege and obligation to organize a fiesta may take priority over the family's other needs and one hears accounts of personal bankruptcy due to spending on fiestas. For instance Collier [1990] discusses extensively these responsibilities.

young producer like this, "To me the *fiesta* is what I work for" (FJO personal communication Oct. 28, 2000).

Although in public men seem to be the ones that bear the responsibility for organizing the *fiestas* and collect the prestige that they yield, women's input is crucial. Whether *posadas* or other *fiestas*, relatives, friends, and families participate in the preparation. Women are in charge of the food. Planning starts months before the event, when women gather to discuss what food items will be prepared and how much money will be spent on them. Responsibilities are dealt to individuals for acquiring the ingredients, and during the weeks preceding the *fiesta* women buy them little by little and store them in the house. A few days before the event, men go out to buy pigs and contract a butcher, while women head to the fresh food markets, sometimes to other villages where the prices are better. A day or two prior to the *fiesta*, after men have collected fire wood and prepared the stoves, women gather to prepare sandwiches, salads, rice, chicken, pork, sausages, tortillas, drinks, salsas, and cakes. Men decorate the house and the street outside of it, purchase fire works, set up the tables and chairs, prepare the gift bags, and keep the fire going under the stove. Information, jokes, gossip, commands, laughter, and tears pass around in these groups of men and women busily preparing the highlight of the year, while a count is kept on how many portions of food are prepared.

On the day of the *fiesta* men transport dignitaries and continue their responsibilities with fire and fireworks. They also spread out the rented tables and distribute drinks while women serve the food.<sup>26</sup> Sometimes a live orchestra appears after

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<sup>26</sup> I saw also men serving food and drinks.

the meal and people start to dance. If it is a religious *fiesta*, which most fiestas are, a mass, prayers and songs are part of the program.<sup>27</sup>

When the party is over, guests get a bundle with food and gifts to take home. The following day neighbors and extended family come over for breakfast or lunch, and if there is food left on the third day, they come again. In the village, people share their experiences: they wonder how many guests might have attended the fiesta; they assess the band and the dance and relate what food was served and what they liked; they identify who was there and who was not and they wonder how much liquor and what kind was offered (and to whom) etc.

The substantial monetary and time commitments that families make for the *fiestas* testify to their importance, and the villagers' evaluations afterwards show in which way and in what respects prestige is attached to these events. Together, women and men strive for months in order to set up a respectable and fancy *fiesta*, perhaps several of them during the year. The money for all this comes to a large extent from the *chinampas*. With such pressure from the community and themselves, farmers seek cultivation practices that generate maximum profit.

To summarize, the environment is tied in many ways with the prestige and power in the village, and the economic success of modern cultivation. In this configuration, women's decisions are paramount through their role in the family economy, their knowledge of the markets, and their prestige in the village. While they may be against a progressive conservation plan and stay away from activism and participation, they have and use knowledge and agency, and wield power in the intersecting processes of village

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<sup>27</sup> The priest or the leader of the prayer is paid separately according to their set prices. The payment often includes food and wine in addition to money (VLU, personal communication 2000).

relations, family well-being, and the environment. This web further intersects with feminine identity.

#### Women's voice and feminine identities

Woman, if you have got ideas,  
they'll say ugly things about you.  
Like you are not good,  
and this:  
when you are silent,  
you appear much more beautiful.

*Mujer, si te han crecido las ideas  
de tí van a decir cosas muy feas,  
que, que no eres buena  
que, que si tal cosa  
que cuando callas,  
te ves mucho más hermosa.*

M. Gloria Martín /Amparo Ochóa,  
Discos Pueblo (my translation)

Gloria Martín's words in her song "*Mujer*" (Woman) show one way in which women's feminine identity is defined in Mexico, silence is equated with beauty and attractiveness. In this section, I look at how women negotiate these and other 'silencing' strategies that can constrain their participation in the negotiations of the conservation plan or other public activism. In this examination the meaning of silence expands from indicating oppression to indicating that silence may be a manifestation of power. Women have the capacity to wield power with or within silence and they have the capacity to silence men, too.

"Meaningless silence does not exist", claims Hannele Koivunen in her book Hiljainen Tieto [Silent Knowledge] (1997:226). Much feminist scholarship has focused on how women's silence is disabling and consequently, how women can gain their voice and become empowered to challenge and change patriarchal structures and assumptions (Parpart 2000). This research has stemmed from the understanding that silence is "a result

and a symbol of passivity and powerlessness: those who are denied speech cannot make their experience known and thus cannot influence the course of their lives or of history” (Gal 1991: 175). Less work has appeared on the power of silence. Speaking to this void in feminist psychology, Jane Parpart (2000) suggests that participatory and empowerment studies need to pay more attention to how marginalized groups can control their knowledge with silence, for example. Other ways of using silence as power include “silence in American households [where it operates] as a weapon of masculine power” (Sattel 1983 cited in Gal 1991: 175) and the silence employed by censorship during war or by totalitarian administrations aims at maintaining the status quo (Koivunen 1997: 181).

Silence as resistance is another form of power. Examples include indigenous groups who use silence as a protection against ‘invasion’ by outsiders be they government representatives, academics, or travelers (Basso 1972) and the Zapatistas in Mexico who recently imposed a 10-minute long silence in a meeting with foreign media and scholars to demonstrate the centuries long silencing of the indigenous people (Saldaña-Portillo 2002).

In exploring women’s silence and their feminine identities in San Luis, I follow Maureen Mahoney’s suggestion that “[t]he simple equation of voice with authority, and silence with victimization, needs to be reexamined” (1996: 603). I start off with Yoli’s experience.

Yoli is from a suburban middle-class family where both parents worked outside of home. She works as a secretary in the city and married Carlos, a chinampero in San Luis. She says, “In our marriage, the most difficult thing has been the cultural difference. In the

beginning [Carlos] did not let me work [outside of the home] and when I started, it had to be night shift so that nobody would see me on the streets.”<sup>28</sup> Carlos’ idea of a woman’s place exemplifies one way in which feminine identity is constituted in San Luis. Home is associated with ‘purity’ and, if a married woman is seen alone on the street in any capacity beyond a family matter, she risks being considered a disgrace to herself and her husband (Townsend 1999). Historically, a woman’s honor has been a public virtue but she has had no public persona; instead, “her existence was acknowledged only through the words of [her] husband” (Dore 2000:154). Yoli’s experience seems to stem from these patriarchal ideas of keeping a woman silent by restricting her to the home.

However, Yoli has challenged this image and after negotiating with Carlos, she now works day shifts. She also grew interested in the conservation plan and at one point said that she would attend the next meeting; but she never showed up. When I asked her why, she answered, “Because when it was time to go and I said to [Carlos] let’s go, he said: ‘That’s for men only’”.<sup>29</sup> Yet, in separate interviews with Carlos, he said to me that if women are not allowed to go to meetings, “it is bad, it is wrong, because their right to express themselves and to develop their personality is limited and they are being guarded.”<sup>30</sup> However, he did not seem able to encourage his own wife to participate publicly although the fact that he had listened to her and adopted ideas indicated his willingness to allow her to have her own voice.

This dynamic between Yoli and Carlos illustrates how gender identity, expectations, and practices have multiple and shifting positions: on some occasions patriarchal relations are more constraining than in others. Yoli refused to be ‘victimized’

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<sup>28</sup> Yoli is the wife of LHEO; we met on Sept. 13, 2000.

<sup>29</sup> Yoli Febr. 13, 2001.

<sup>30</sup> LHEO Febr. 8, 2001.

by the idea that women cannot work outside of home; yet, with respect to representing herself in the farming community and towards the authorities, she had not yet challenged Carlos.

One woman who does attend meetings when possible is Juliana. She is in her late 50's and has two daughters who both have post-secondary education. In the market, she is one of the women who make themselves heard in meetings: in one general meeting she demanded that an investigation be launched about how the previous board had used some funds. At the time of my visit to San Luis, some board members, who customarily were all men, had started to pay attention to the lack of women on the board. Although most of the vendors at the market are women, formally they do not have a vote in the decisions about the market.<sup>31</sup> However, Juliana thought that together men and women make the decisions because "sometimes women also participate in the board, not as a member but to help, because sometimes the men suggest [*disponen*] one thing and we women can also suggest [*disponer*] something else, better than [what the men suggest]. Therefore sometimes the women also participate, or the decision of the women [is included]."<sup>32</sup>

I asked Juliana and Teresa if they think a woman should be elected to the board.

Teresa replied:

[A woman] should volunteer herself when she thinks that a man is not doing his job. Well, [in that case the men] talk amongst themselves and [women] enter and agree upon a meeting [*hechamos el compromiso*], two or three of them and a woman [together]. [In that way] a woman also has a little bit more say.

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<sup>31</sup> Voting right is with the person in whose name the stall is and that is the person who owns the land in the individual family occupying the stall. In most cases the landowner is a man.

<sup>32</sup> Febr. 1, 2001

This reply illustrates a subtle way in which women can wield power over their husbands and other men in the community - the fact that they do not have formal representation does not mean that women do not have power or that they are exhaustively victimized or oppressed by men's patriarchal, macho, or high-handed will.

On the other hand, Teresa's further elaboration on the issue shows that respect towards men must be maintained:

Having a husband.... my husband gives me permission; the husband cannot ask for permission because he is the one who decides, and because [the woman] has more work to do [she cannot always go]... or how should I say - one has to [earn] the husband's respect [*no más que todo que tiene [la mujer], así como le digo, el respeto de su esposo*] because he is the man and the one from whom one is going to ask permission.

Teresa's explanation further shows how submission, respect, and independence intertwine in subtle and strategic ways.

Juliana's experience shows one way of negotiating such dynamics. She did not participate in the negotiations about the conservation plan, but she attended a farmers' regional meeting and the general meetings of the central marketplace where she expressed her opinions and was assertive about them. "I like going to meetings and hearing what other people think and say. I always try to go if I can", she explained. Then she added: "When I go to meetings, my husband calls me a clown".<sup>33</sup> While Juliana's experience further exemplifies how feminine identity of *chinampera* women is reproduced in San Luis, i.e. by calling women names, she continues to challenge such silencing strategy and goes to meetings when ever she can.

Despite these subtle and more explicit ways of challenging or negotiating patriarchal control, in some instances, - extreme control by violent men constrains the

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<sup>33</sup> Febr. 1, 2001.



wife and children into the house to be his servants. Numerous women told me about men abusing them for leaving the house. For instance, Susanna's husband would not give her money, and thereby tried to prevent her from going out to buy food and clothes for their children. While he was away, she would sneak out of the house anyway to sell something in the market to get money. But when he found out, he would beat her up and threaten to beat up the children, too, if she went out again. In another case, 11-year old Sofia, who was responsible for cooking and cleaning, had gone out on the street to play with other girls. When her father found out, he beat her with a heavy stick on the back of her legs for three days, shouting at her, "I will teach you how to be woman."<sup>34</sup>

In fact, in 1998-1999, of all the city's precincts Xochimilco (where San Luis is) had the highest percentage of its population visit the Centre for Attention to Family Violence (UAVIF; Consejo Para la Asistencia y Prevención de la Violencia Familiar n.d., page: 80) and the majority of all the city's UAVIF-clients were women between 18 and 29 years of age (CIMAC Agencia de Noticias n.d.). Therefore, although Yoli, Teresa and Juliana have to some extent challenged patriarchal silencing mechanisms and are reconfiguring feminine identity, family violence and violence against women no doubt prevents many women from participation of any kind. To what extent women can be considered victims or victimized, however, seems more difficult to establish. Perhaps, in addition to researching family violence and establishing mechanisms to reduce violence against women, it would be helpful to look at how women cope with or challenge

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<sup>34</sup> OT Oct. 2, 2000.

oppressive situations, in order to acknowledge the agency and power with which women negotiate violence.<sup>35</sup> Fransisca illustrates this proposition.

She married a man who has problems with alcohol and who abuses her verbally and emotionally. For instance, he does not want her to leave the house and he becomes jealous if she speaks with other women in the market. Unable to rely on her husband's income, Fransisca grows plants in their garden and has developed other commercial endeavors. Her daughter-in-law and her siblings have encouraged her to sort out her marital difficulties, to the point where they have blamed her for inaction, "You talk and talk just like the PRI [the ruling party] but nothing happens," they have told her<sup>36</sup>.

When I interviewed Fransisca for the second time, she said that only in our previous discussion had she come to know about the UAVIF (Centre for Attention to Family Violence) when I mentioned it to her during our first interview. She had decided to go there in order to get help and she had found other women in similar situations: "I saw that I am not alone and UAVIF arranged a lawyer to help with the divorce. I also realized that some women are in a much worse situation still; I at least have some land [where to cultivate] plants."<sup>37</sup> She also negotiated with her father, who then sold her additional land, where she intends to expand her production.

She explains how she changed the relationship with her husband:

I have started to talk back to my husband and I refuse to be his servant. He has taught me many rude ways of talking... and now I use them back on him. [Now] when he comes home and asks me to take off his shoes, I just say that I do not have time... and when he says to me that I have become a 'big-

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<sup>35</sup> This is not to say that knowing numbers, forms, and consequences of family violence are unimportant in many respects not least to set up mechanisms to cease the violence and to establish equality.

<sup>36</sup> GEL Oct. 18, 2000.

<sup>37</sup> GEL Dec. 7, 2000.

mouth' I tell him that I learned it from him... When I talk back to him like that, I feel strong, stronger than him!<sup>38</sup>

Fransisca has not attended the meetings about the conservation plan although she has relevant knowledge. She knows that "the forest litter is fertilizer in the forest and prevents erosion."<sup>39</sup> She also knows how to use the *chinampa* soil traditionally and, unlike other women I interviewed, she is familiar with the different qualities of the canal muck. These are pieces of information that would be relevant and help the conservation negotiations when determining to what extent and how 'traditional' methods could be reintroduced. In her family, there is also a wealth of knowledge about medicinal use of plants and herbs, which can be cultivated without the forest litter, making them a good candidate for production with compost, and they could be developed as a new 'organic' product for the health-conscious middle class urban clientele.

Although Fransisca has not been able to participate in the negotiations, her actions demonstrate how a woman's agency change the expected feminine behaviors and make her roles shift: out of an hour's long discussion with a stranger, she formed the idea of going to the Family Violence Center where she arranged herself support systems and additionally made the initiative to acquire more land. These strategies combine silence and voice – once listening to another person, once speaking up and challenging her husband.

Notable here, too, is that while Fransisca's role has shifted, men's positions in relation to her are multiple. While Fransisca's husband is abusive towards her, her father

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<sup>38</sup> GEL Dec. 7, 2000.

<sup>39</sup> GEL Oct. 18, 2000.

is supportive, and her son, according to Fransisca, sends her money when he can. Her participation in the negotiations of the conservation plan or other political activities outside of her livelihood occupations is still constrained but less so by a lack of knowledge or due to being victimized by her patriarchal husband than by the time required to improve her economic situation.

Yoli's and Juliana's situations and the frequent violence against women suggest that in San Luis, farming women's feminine identity can be constituted in ways that restrict them to the realm of home or if in the public, to strictly family matters, such as, selling plants on the public market. If women do otherwise they may suffer emotional, social, and physical humiliations. However, some women do otherwise and challenge these control mechanisms and gradually change their feminine identities by subtly or more explicitly using their voice, and tapping into support mechanisms, which include some men. Because of these variable strategies it is difficult to posit women (and men) as a homogeneous group with static roles or within a singular identity. Cecilia, whom I introduced earlier, illustrates this fluidity and complexity with how her feminine identity, productive roles, and agency obtain and intersect in multiple positions.

Earlier I described Cecilia's important roles in the family economy: she is the vendor, knows the market, and partly determines what is produced. Her feminine identity intersects with these roles and, at the same time, is positioned in ways that do not warrant singular labels. She talks about marriage:

The time is different now. We no longer live the time when the father or husband tells the woman what to do. [When my sister tells me] "get married; at your age your mother had already many children," I tell her that I am not in a hurry. Mom married when she was fourteen and did not

know how to do anything. [Having children] is a tremendous responsibility. Perhaps I will marry but I am not in a hurry.<sup>40</sup>

Cecilia's thoughts about marriage reflect those of a 'modern' woman who is in charge of her life. This is also reflected in what she has told a friend who has an alcoholic and abusive husband, "[get a divorce because] why support a husband who does not do his share? It does not matter what others may say [if you divorce]; what matters is what you need and that you are well. When I worked in the city, I saw so many different women that I know things can be done differently".

Cecilia is in her thirties, which is considered late in terms of getting married. Instead of marrying, she has studied through high school, worked in the city, and would like to further educate herself. However, she said, "I do not have time to take courses because I am needed on the market. My brothers take courses or work during the weekends, and Sunday is the day when the market is at its busiest. My mom and I work the household, and my sisters work outside of home. Nobody can replace me at the market"<sup>41</sup>.

She is not able to go to the meetings either, because "my dad will go to the meetings and my brothers go to the courses of floriculture and organic agriculture."<sup>42</sup> Besides the market, Cecilia has responsibilities at home: together with the other women in the family she washes the dishes, does the laundry, and cleans the house. She and her mother administer the money. She also finds time to relax watching the TV or knitting.

Cecilia's feminine identities and roles combine and intersect in many ways, which makes it difficult to posit her singularly or 'typically' to 'domestic', 'modern', 'silenced',

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<sup>40</sup> OO Aug. 11, 2000.

<sup>41</sup> OO Aug. 11, 2000.

<sup>42</sup> OO Aug. 11, 2000.

or 'victimized' roles. Instead, she constructs her roles and identities in a web of multiple forces. She is proud of her role as the vendor and she voices the power that comes with it. At the same time, without protesting, she performs domestic roles while her brothers and father represent the family in the public. Yet, she is not the exhausted and victimized woman who sacrifices her own needs but she gives herself permission to 'enjoy' life, too, and she encourages other women to be 'selfish' as well. She uses silence and voice strategically towards her own needs and her family's well being.

#### Values and class

Class relations and individual values also affect women's ability to participate in local organizing. Mirna is illustrative of a 'modern' middle-class woman, who has more economic flexibility and cultural mobility than the women I have introduced so far. She is in her thirties and for the last 10 years had worked in a mid-management position in human resources in the city with a salaried nanny and housekeeper at home. When I met her the first time, she said that she would never leave the job because it gives her and her family a secure economic base. However, five months later Mirna had quit her job; her reasons were two fold: her unhappiness with rearrangements at her workplace and her desire to be able to spend more time with her children.

She described her new situation, "I am fine now although we do not have enough money... But the children are responding very well to me being at home,"<sup>43</sup> she explained. She planned to do more work in their greenhouse and also to take over the administration of her husband's businesses. She thought that she had little knowledge about the

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<sup>43</sup> TB Oct. 18, 2000.

production technologies in the greenhouse but she believed that they could increase their productivity by using "modern methods," and that if they did so, they would not need to build another greenhouse. She talked about her own role in the greenhouse as "helping" and "working as a team" with her husband. "We have negotiated this arrangement and for now I want to do this,"<sup>44</sup> she assured me.

The new arrangement illustrates again, how women's roles shift and when they do so, the change does not necessarily follow a linear progression from 'traditional', patriarchal' and oppressed' towards 'liberated' and 'independent'. Instead, the direction is chosen according to personal and family interests. Therefore, although Mirna has made choices that one can associate with the 'traditional' i.e. with the home and the reproductive work there, it is difficult to see her as constrained by patriarchal relations because she and her husband have negotiated these choices.

Their choices can also be considered from their class position. Mirna and her husband have more education than most other farmers in San Luis; both of them have worked in business or industry, and they lived in the city center for many years before moving to San Luis. They are used to and still engage in a more urban-oriented life style: they go to movies, eat out, and seek out entertainment in the city. However, now that Mirna is able to spend more time in the community she would like to initiate or participate in an educational project in San Luis, where she sees important environmental and health concerns. She is worried about the environment, "[We use] strong chemicals, nothing natural. There is garbage all over the place and people burn the garbage from the greenhouses – they need to be educated."<sup>45</sup> She believes that she has "leadership skills

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<sup>44</sup> TB Oct. 18, 2000.

<sup>45</sup> TB Oct. 18, 2000.

[that she learned in her] previous work [where she] taught many [workshops] in personal growth and marketing”.<sup>46</sup>

With her background and a supportive husband, one might think that community involvement would be relatively easy for her. As she explains, however, she has one problem, “I’m not from San Luis and although I have lived here for [many] years now, I do not know many people because I have always worked [in the city].”<sup>47</sup> At the same time, her city background is reflected in how she views ‘peasants’ in San Luis, “They are so closed-minded that sometimes I feel that I would like to move away from here.”<sup>48</sup> For instance she does not understand why people do not go to movies or to eat out; instead “when they leave [for outings], they take along their barbecues and baskets [full of food ingredients to prepare the food themselves]”.<sup>49</sup> I suggested that perhaps they do not want to pay restaurant prices and Mirna replied, “Why do they work then? They work [all week] and on Saturdays they do the chores at home and on Sundays they eat with the family. Yes, it is fine to eat with the family but why always?”<sup>50</sup>

Mirna’s perceptions of the ideas and values of the local people of San Luis reflect differences in ideas about women and class. She is from the city and represents modern, liberal, and urban values, including condescending notions about rural life and peasant values. If she were to work with the community and other women, their value differences would likely become an issue. Her situation therefore suggests that even when patriarchal relations might permit a woman’s independent participation publicly, in fact in a

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<sup>46</sup> TB Oct. 18, 2000.

<sup>47</sup> TB Oct. 18, 2000.

<sup>48</sup> TB Oct. 18, 2000.

<sup>49</sup> TB Oct. 18, 2000.

<sup>50</sup> TB Oct. 18, 2000.



leadership role, the very history of acquiring such skills, i.e. class differences may constrain her.

Class intersects with geography: San Luis is only fifteen kilometers further into the rural area than is Xochimilco's administrative center (Centre of Xochimilco in Figure 5 on page 48). Although highly urbanized, chinamperos there practice production similar to that in San Luis with some differences in marketing strategies. In greenhouses hired labor is, in some cases the principal workforce while the owners have other occupations that limit their time in the production to administration. Historically the Centre of Xochimilco has produced several public women figures and chinampera women have had a salaried occupation more often than in San Luis. The recent publication of the book "*Mujeres de Xochimilco*" [Women of Xochimilco] (Chávez Barragán and de Swaan, 2000) testifies of this difference. Although the book can be considered a political and populist discourse on the part of the governing party<sup>51</sup> and it is meant to be a tribute to all women in Xochimilco, its focus is not on the villages on the margins of the precinct but in its center.

The chinampera women that I observed and talked with in Center of Xochimilco indeed saw their roles differently from those women I interviewed in San Luis: their initiative and particularly their collaboration in terms of getting more information about new aspects of the production was different from those that farmers in San Luis

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<sup>51</sup> The introduction applauds the ways in which the mayor and the city government has paid attention to the "feminine sector" by initiating several programs for women (Chávez Barragán and de Swaan, 2000 p. 11). The book is published by the City Government and the government of the Precinct of Xochimilco. Of the editors Estefanía Chávez Barragán was at the time the elected political leader of Xochimilco (*delegada*) and Carol de Swaan was the head of the Xochimilcan branch of the Centre of Integrated Assistance to Women (CIAM), which in turn is a subsidiary of the National Institute of Women (Instituto Nacional de la Mujer, INMUJER).

employed. I illustrate this difference with a discussion about Elena, who is one of the leaders and activists among the chinamperos in the Center.

I first met Elena in a *fiesta*<sup>52</sup> in one of the bigger greenhouses in the Centre of Xochimilco. Because I was first introduced to a man, Andrés, said to be "*el dueño del invernadero*" [the owner of the greenhouse], I took it for granted that he was the 'master' of the house and the ceremonies and I expected that he would act as the host. But when the party started it was a woman who wished everybody welcome and gave a speech. I did not know at the moment that she was Andrés' wife. Later I learned that she was also the coordinator of the group who had organized the party.

The party was a thank-you to the guests of honor, who during that past year in one or another way had provided expertise and assistance to the group of farmers gathering in the party on that day. They were more than ten farmers or families and they had a formally registered self-organizing association to facilitate their further education about the production. They met regularly in Elena and Andrés' facilities, often with a specialist from one or another of the extension organizations presenting a lecture or a series of lectures and workshops. They explored both theoretical and practical aspects of production and undertook some experimentation. Because their organization is formally registered they qualify for public funding, which they had utilized in building and operating a non-chemical alternative to sterilizing forest litter.<sup>53</sup> They had also

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<sup>52</sup> June 29, 2000.

<sup>53</sup> The forest litter contains fungi and bacteria that cause diseases to sensitive plants like poinsettia which is why the majority of farmers use a highly toxic chemical to sterilize the litter. In the process, human contact with the chemical occurs easily and any vapor released to the environment is harmful. The manufacture, importation, and sale and use of the chemical is prohibited but as long as companies have it in their storage, they can sell it. Having to find an alternative is thus inevitable sooner or later - now required also by the Ordenamiento.

experimented with composting and hydroponic (soil-less) cultivation to replace the forest litter.

When it was time to apply funds from CORENA's rural development program for individual or community projects, Elena headed a group of three women and one man and visited the head of the CORENA's extension services several times while they were preparing the application. Once<sup>54</sup> I had arranged for an interview with the head, and while awaiting my turn, I overheard her conversation with the group led by Elena. At that time they were given hands-on and very specific advice about how to perform a cost-benefit analysis of their project, something required in the application.

In contrast, in San Luis the application process was entirely in the hands of the men. In small groups of neighbors or family members, men prepared their applications, mostly without further assistance from CORENA. Competition was fierce, as expressed in people's explanations to me about why they thought the group they belonged to deserved the assistance while others did not. Individuals were also accused of corruption. I did not hear of any application filed by a woman but I was not aware of all applications. However, in what I could observe women were not as involved as in Xochimilco.

What makes Elena such a leader compared to the chinamperas in San Luis?

"When I see that something needs to be done, I go and try to do it", she said when I asked about her leadership role. When we tried to understand the differences between her and the women in San Luis a few things seemed important. Elena had higher education than most women of her age in San Luis: she is a teacher and works in the city. In this respect she is reminiscent of Mirna, but Elena's children are already teenagers and require less of her attention and they help out in the greenhouse.

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<sup>54</sup> Febr. 22, 2001.

Common to other parts in the center of Xochimilco, Elena's greenhouses are surrounded by urban development and urban life-style. In this area tourism is vivid: well-to-do residents of the city and international tourists come to the chinampa-region particularly on the week ends, and local *chinampero* families have engaged in tourism activities where they can earn additional income. This is true also of Elena and Andrés' operation.

Elena's background and current activities show that her class-situation is different from many women in San Luis, where the women interviewed generally have less education than Elena, many have small children, and tourism is not practiced. In San Luis the producers talk about themselves as 'peasants' but Elena's lifestyle indicates more middle-class and urban values: she and her husband have a car, she uses make up and wears jewelry, and she is proactive towards the government where her needs are concerned.

Despite the commonality of cultivating similar plants in green houses, Elena's situation differs from that of *chinampera* women in San Luis. The main difference seems to rise from class and geography. Elena's level of education, her waged occupation, and her proximity to the city where women historically have had more prominent social and political roles than in San Luis are attributes that for her create a difference in the discursive and practical modes and spaces of participation. Education has given her a framework and tools with which she can confront and utilize the authorities. Despite Elena's proximity to San Luis she is significantly closer to the city center than the San Luisenos, where she has easier access to central government offices,<sup>55</sup> further education,

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<sup>55</sup> Several government offices, including the headquarters of the precinct are within a couple of kilometers from Elena's home. The only offices that are close to the farmers in San Luis, are those of CORENA, but

and additional income, attributes that she has learned to take advantage of. Thus not only has she gained knowledge differently from women in San Luis, but she is also able to engage it differently to benefit herself, the community, and eventually the environment.

#### Institutional culture of policies for women and citizen participation

After the elections in 1997, the city government intensified its gender policies. It increased collaboration with the Instituto Nacional de la Mujer (INMUJER, National Institute of Women) and established local women's educational and support centers in the precincts (CIAM, Centro Integral del Apoyo a la Mujer). I was interested in what role such organizations may play in the lives of chinampera women and how they organized on village-level. Since women in San Luis were heading the neighborhood committees, I wanted to know how these urban organizations collaborate with local chinampero groups and the specific women's institutions of the city. I had the opportunity to interview leaders of the six neighborhood committees in San Luis. They had invited me to listen to their "*punto de vista*", or how they "see things". Four of their six members attended the meeting. Of the four, the chair and two others were women. The chair had just taken over from the previous chair, also a woman.

"The law of citizen participation regulates that at least 20 % of the members of the coordinating committees have to be women – in San Luis it turned out that we have two

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they moved there only in 2000 and their activities have not been commonly used by the farmers. The offices and their services in the Center of Xochimilco are the ones that farmer in San Luis have had to go to. The oppositional sentiments that CORENA's first appearance with the Ordenamiento Ecológico in San Luis created and the historically contentious relations between the 'peasants' and the government do not help in getting the farmers to utilize their services (Mosse 1995:505 in Parpart 2000: 228).

men and four women”, the chair, Rosa, explained.<sup>56</sup> The women are all homemakers and/or run a home-based economic activity, too. One of the two men is a university student; I did not learn the occupation of the other.

Rosa outlined how they operate, “We call each other and agree upon where and when to meet – for example today we already met for breakfast and we discussed who is going to come and meet with you. Sometimes people can’t go because they may have to do something with their children and in that case we try to figure out who else would be available and if one of us has the time, she will say: I will go.”<sup>57</sup>

These sketches are in contrast to what I observed among the chinampera women and men. First, chinampera women are tied to the market every day except Saturday; in addition, after and before market hours, they carry out duties at home and in the fields or green houses. They have very little flexibility or spare time. While in the market, women often discuss and have lunch together, but attention to the plants and clients always comes first making it difficult to carry out planning or other activities that require majority attendance and consistency. Second, although the environmental problems affect all chinamperos, in the economic aspect they are competitors, making close collaboration difficult as described earlier. Third, the chinamperos’ collaboration often is restricted to groupings around neighbors or extended family, protecting the advantages of that particular grouping instead of working for the benefit of the entire farming community.<sup>58</sup>

In contrast, the neighborhood committees, which also compete for scarce resources come together in an umbrella committee, which represents all of them all to the

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<sup>56</sup> Interview with the neighborhood committees Febr. 28, 2001.

<sup>57</sup> Interview with the neighborhood committees Febr. 28, 2001.

<sup>58</sup> The latter occurs also but the representation is not across the community, as described in the previous chapter.

city government. But perhaps more importantly, significant legislative differences prevail between the neighborhood committees and the farmers' organizations. The former is a legislated institution (Asamblea Legislativa de la Ciudad de México 1998) with a mandate from the city government to facilitate the agency of and to provide funds and representational opportunities for the committees. The farmers, in turn, do not have a formally registered representational body, which weakens their political influence because the governmental bodies do not acknowledge or take seriously informal organizations.<sup>59</sup>

Additionally a fundamental conflict seems to exist between two sectors of the society: Many of the leaders of the neighborhood committees are 'original' people from San Luis, in some cases are close relatives of chinamperos, and live in the same quarters as chinamperos in the core area of San Luis. They also try to improve the planning and infrastructure in the areas of the village that in the last fifteen years have been legally subdivided or illegally occupied with housing. Illegal housing poses many of the problems because there is no infrastructure to properly manage sewage and bring in electricity and water, leading to theft, overloading, and pollution. Among other things, the neighborhood committees, an urban idea to begin with, try to facilitate the rectification of these problems, while the chinamperos are hostile towards the in-migrants. *"No son de aqui, ni conocen nuestra cultura. Con ellos vienen drogas y violencia y se nos roban la luz y contaminan el agua"* [They are not from here and they do not know our culture. With them come drugs and violence and they steal our electricity and they pollute the

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<sup>59</sup> The Asociación de Productores de Plantas de Ornato in San Luis (APPO) described as the leading opponent to the Ordenamiento in the previous chapter, was not formally registered at the time the negotiations took place in San Luis. CORENA repeatedly insisted that unless they formally register, its ability to consider them as representing the entire chinampero community is compromised.

water], is a statement that I often heard among the *chinamperos*, who themselves lack water, space, and electricity and who sometimes wake up only to realize that on their *chinampa* a shelter with people inside has appeared overnight.

Perhaps the fact that the leaders of the neighborhood committees are women does not make it easier to establish collaboration with the *chinamperos*, whose leadership, at least visibly and in official transactions, invariably consists of men. I suspect but do not have supporting evidence to argue that regardless of how much women wield power in the 'background', it is not easy for men to collaborate publicly with an organization that so clearly is lead by women. The statement made by a young and upcoming *chinampero* in an unrelated conversation, illustrates this point: "Generally, it is the men who make the decisions here".<sup>60</sup>

In this dynamic, then, a host of cultural, institutional, gendered, and resource issues coincide in a way that makes it understandable that collaboration may become difficult. While the *chinamperos* identify themselves as 'peasants' and 'rural' without legislated systems that they easily could consider to be 'on their side'<sup>61</sup>, the neighborhood committees operate in the most recently urbanized areas of San Luis through a formally legislated support institution and, albeit perhaps only seemingly, for the benefit of the in-migrants.<sup>62</sup> In terms of mounting community collaboration and focusing on common interests, this political discrepancy between the *chinamperos* and the neighborhood committees seems to be a major obstacle.

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<sup>60</sup> FJO Oct. 28, 2001.

<sup>61</sup> There is a sense that CORENA and other extension services do not understand 'peasant' culture and rural needs, and the interactions often have an element of cultural and political 'conflict' as Joaquín's ideas of how to develop extension illustrate (in previous chapter).

<sup>62</sup> This is not to say that the neighborhood committees invariably support urbanization or in-migration. However, they try to make the best out of the situation that already exists, and at the same time, they exert pressure towards the municipality to prevent further zoning for housing.



The second area of cultural difference is between the chinampera women and women's institutions. In particular, I found that chinampera women in San Luis face ideological and practical obstacles to use the services offered by INMUJER, and its operative arm, the CIAM. Here, I draw first on my interview with the director of the CIAM in Xochimilco and then look at the feminist ideology of INMUJER.

I contacted the director of the CIAM in Xochimilco in order to learn more about the organization's activities and focus. As soon as I arrived for the interview, she invited me to join her at the *plaza* of one of the churches, where a group of women were gathering to celebrate the completion of a beautification and clean-up project of the *plaza*.<sup>63</sup> She suggested that we walk and talk along the way.

After a ten-minute walk avoiding traffic, people, and dog excrement more than talking, we arrived at the *plazuela*, where several other white and *mestiza* women in elegant dresses, make-up, jewelry, and hair-dos already had gathered. From my host's introductions I understood that they were political leaders and leaders of other organizations that work with women in Xochimilco. The occasion was the inauguration of a bench and two garbage cans, which the *delegada*, or the political leader of the precinct, a woman at the time, had donated to this picturesque colonial *plazuela*. On the side opposite to where the guests had gathered, a group of indigenous women prepared a table with food.

The *delegada* gave a short speech, and after a thank you by the church's minister, the attendants proceeded to the table to serve themselves food and drink. Folding chairs were arranged for the guests; some sat on the brand new bench. The indigenous women served seconds to the sitting audience and then helped themselves to the food, having to

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<sup>63</sup> September 29, 2000.

eat it standing amongst their make-shift kitchen or leaning against the table or a tree because there were not enough chairs for everybody. During the meal, I tried to make sense of the conversations bubbling all around me. Somebody wondered how long it would take before the newly donated items would be stolen or vandalized; the streets around the church looked impoverished. While birds sang in the big tree on the *plazuela*, the church bells rang to indicate the termination of the gathering.

After the party my host invited me to walk with her to the public market where she had to pick up mushrooms. We strolled through the market where, as she described it, “the fruits of women’s work and the *true* women of Xochimilco come into their own (my emphasis)”. She urged me to wander around by myself and look at “how many different products and how many women are out there. The majority of the vendors are women, really, and they have grown on their chinampas what they sell. Women are the grey eminences but the recognition goes to their husbands”<sup>64</sup>. She bought two bags of mushrooms, gave one to me, wrote down the names of two social workers that she thought I should interview in CIAM, and hugged me goodbye.

As CIAM is the operative arm of INMUJER the symbolic and political meaning of the events that took place during the few hours I had the opportunity to observe the activities of CIAM’s chair, can be explained by looking at INMUJER’s feminist ideologies. Founded in various steps since 1998, INMUJER’s current mission statement is as follows:

*Diseñar e instrumentar políticas públicas desde la perspectiva de equidad de género que garanticen el pleno ejercicio de los derechos de las mujeres, a través de la*

By coordinating governance and social actions, to design and implement public policies for gender equity in order to guarantee full exercise of women’s rights.

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<sup>64</sup> Sept. 29, 2000.

*coordinación de acciones gubernamentales y sociales.*

*El empoderamiento de las Mujeres para su desarrollo en el ámbito privado y público, fomentando su poder de decisión y liderazgo; así como su capacidad para ubicar y resolver problemas.*

Women's empowerment in their private and public development, to foment their decision making power and leadership as well as their capacity to locate and resolve problems.

GDF n.d.2

These goals would be met by "incorporating women in productive activities by creating self-directed groups, [and enabling] access to credit, workforce, and saving plans; as well as to stable and dignified labor, while fighting sexual harassment, dismissals due to pregnancy, labor violence and discrimination" [*La incorporación de las Mujeres en actividades productivas, a través de la creación de grupos autogestivos, el acceso a créditos, bolsa de trabajo y cajas de ahorro; así como a empleos estables y dignos, combatiendo el hostigamiento sexual, los despidos por embarazo, la violencia laboral y la discriminación*] (GDF n.d. 2).

I argue that together with the events I observed at CIAM and the picture on INMUJER's web page (Figure 36) these statements reveal that INMUJER's policies are ethnocentric, more specifically Eurocentric (Marchand 1996, Mohanty 1991) and, while they can create opportunities for some women, at the same time they may restrict other women from accessing them. (Mohanty 1991).

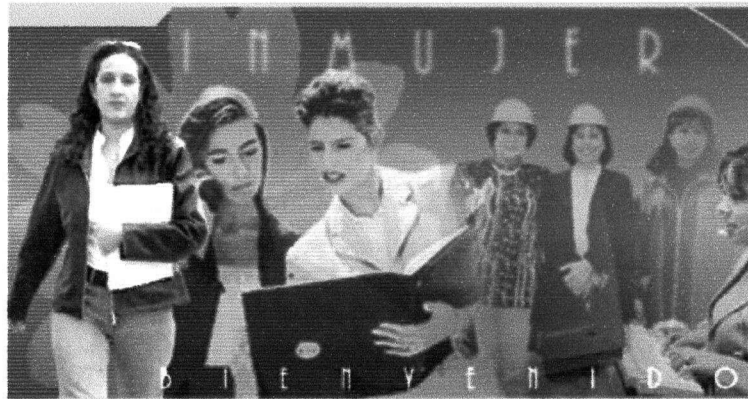


Figure 36. The image on INMUJER's web page.

First, INMUJER's statements implicitly assume that all women will become equal if they are incorporated into productive activities. However, the dynamic between the elite women leaders and the indigenous cooks and servants on the *plazuela* suggests that the latter's employment opportunity does not eradicate the class and race difference: economically, the cooks remain well behind the women they serve, and socially they remain in a situation where their possible need to rest and eat seated is of secondary importance.

Second, CIAM's director's description of the women selling their produce in the market romanticizes them and thereby limits them to inferior social and economic roles. In line with the feminist development discourse that emphasizes women's productive activities, their production and their role as independent producers is valued but the label of 'true women of Xochimilco' limits their opportunities to what they are; just imagine if a producer of vegetables and flowers is already a 'true' woman, there are no other economic and social roles to which she can aspire. Ironically labeling farmer women as 'true' women, suggests that CIAM's director and the class she represents are not a

'true'.<sup>65</sup> Having already reached the upper eschalons of the society, these women may no longer need such an affirmation. Instead, by romanticizing the producer with the 'profusion' of produce and hard work, her description recreates the class difference between herself and the 'true' woman. Therefore rural women's incorporation in economic activities does not guarantee them equality because the romanticization of market women sets them apart as Other, as different.

Finally, the picture on INMUJER's web site also indicates that despite explicit statements about equality between men and women, the institution implicitly recreates class and racial differences between women: in the picture white 'white-collar' women who are huskily walking ahead and attentively studying books and communicating dominate over the 'blue-collar' mestizo women who passively create the backdrop for their more 'fortunate' sisters. Most significantly to the topic at hand, 'true' Xochimilcans in their customary plaits, aprons, and sandals, and with the 'fruits of their labor' are nowhere in sight!

These descriptions of women assume 'women' to be a homogeneous group, over-emphasize productive activities, and hold Western educated and liberated woman as the "norm or referent" (Mohanty 1991: 56). Chandra Mohanty (1991) and Marianne Marchand (1996) among others have pointed out that this Eurocentric discourse produces an "ethnocentric universalism" (Mohanty 191: 55) that ignores the ways in which class and race create differences between women even when women start to have a salary, which might win them equality at home. Furthermore, they colonize those Third World

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<sup>65</sup> Many of the women leaders in government organizations in Xochimilco are not Xochimilcans. For instance, the director of CIAM in 2000 is from Coyoacán, which is a prestigious part of the city with the museum and home of Frida Kahlo and other international tourist attractions. She told me that if she is not going to be reappointed in her position in 2001, she will move back to Coyoacán.

women who cherish with pride their reproductive work and responsibilities alongside their productive activities or over their social activism. For instance, when I asked Magdalena in San Luis if she was going to attend a meeting about the Ordenamiento, she said this, "I am not going because if I am away, my children will run around the streets alone".<sup>66</sup>

## Conclusions

In this chapter I have complicated ideas of how power should be viewed in political ecology by examining the relationship between women's silence and knowledge. On the one hand, I have contested Seager's (1996) assumption that women's knowledge of their environments, gained in their everyday activities, will make them reliable narrators about the environment. On the other hand, agreeing with Marchand (1996) and Parpart (2000) I have challenged the idea (Chambers 1994) that women's absence from participation indicates their victimization and subordination. Showing how knowledge and silence intersect with women's economic responsibilities, feminine roles, class, and community prestige enables me to see multiple circumstances that inform how women engage their knowledge or negotiate their silence in order to guard their interests.

First, knowledge about the environment cannot be taken for granted as leading to environmental agency or 'truthful' accounts about the environment. Rather, chinampera women's knowledge about the forest litter suggests that they utilize environmental knowledge with strategies that best further their immediate needs in the family economy. Consequently, they may belittle the consequences of forest litter use or they may avoid

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<sup>66</sup> MM Sept 28, 2000.

indirect or direct stewardship of the forests and the eroding hills. Their specific knowledge about the markets supports this strategy to secure family well being or their interests within the community by allowing them to cater to the market's wishes despite the fact that those wishes imply environmentally questionable production methods. Additionally, the extravagance of the fiestas suggests that even in relatively poor circumstances the environment may suffer from over consumption when women's environmental consciousness and actions protect a family's interests in the community rather than the environment.

Second, class affects how women are capable of engaging in public processes (Agarwal 1992). Therefore, one could expect that educated women who have had more exposure to urban institutions than women with less education living in more rural settings know how to and may find it easier to approach civil servants, write reports or applications, and be assertive in ways that get the attention of bureaucrats and politicians. However, as the activities of the women green house growers in the centre of Xochimilco illustrate, their better understanding of the 'system' does not translate to environmental activism. On the contrary, the green house cultivation by the women who have skills and knowledge about how to navigate the 'system' and draw benefits from it is informed by capitalist economic ideas that expect mass production which, in turn, requires mass consumption of the forest litter, the cheapest potting medium that they know how to use. They are interested in maintaining the status quo as they define it (Reed 2000), rather than contributing to conservation efforts that they perceive would constrain their production.

But when a woman moves between classes a higher class position can also be a hindrance to agency. Mirna, a knowledgeable woman with an urban background,

experience in organizing people, and with a keen interest in her immediate environment and community well-being, finds it difficult to integrate into her new surroundings, where her class is an exception among chinampera women. Mirna's experiences show, again, that before knowledge can be converted to action, hurdles like family responsibilities and feminine roles have to be negotiated. Similarly, rural women who might benefit from women's institutions, suffer from the institutions' middle class portrayal of 'women' and how they neglect or re-enforce the ways in which class differences create inequalities between women's opportunities (Mohanty 1991, Marchant 1996).

Third, silence is constituted through a complex set of relationships, which intersect in unpredictable ways that may or may not promote activism, let alone environmental activism. While some women in San Luis are victims of patriarchal family rules, others confront them, finding strength in themselves and in their relatives or friends, and even in an unplanned meeting with a foreigner. Their 'silence' within the family is broken but their ability to enter formal processes of activism may still be constrained due to the ways in which society segregates different classes or racializes people so that indigenous people, or people so dubbed, find it difficult to access public forum even when they may possess relevant and unique knowledge (Parpart 2000).

On the other hand, when women are able to overcome such difficulties, like the women leaders in the center of Xochimilco have done, they are still guided by their economic pursuits that benefit, at least at the moment, from remaining silent about environmental issues and concentrating on production. These absences from the conservation negotiations by chinampera women point to what Mahoney suggests, i.e. that silence can acquire "a range of meanings anchored in different social roles and



shifting subject positions” (Mahoney 1996: 604). Therefore, we should not consider women’s silence just a lack of their input to or an exclusion from the process but we need to think of silence as power that directs environmental decisions, which in turn entrains ecological consequences. Because “Meaningless silence does not exist” (Koivunen 1997: 226), we need to approach the meanings or dynamics of silence and the knowledge it operates in their complex and multi-faceted relationships with economy, women’s roles, class, and race.

## CHAPTER 6. SUMMARY AND CONCLUSIONS

In order to understand processes that inform environmental conservation, this dissertation examines the micropolitics of conservation efforts on different scales. On the scale of the state, I outline a discursive analysis of the Ordenamiento, a comprehensive conservation plan for Mexico City's rural areas, to explore the document's underlying assumptions about the city's rural communities and their land use practices. Specifically, I examine how colonially-based ideas inform conservation. I conclude that the Ordenamiento's assumptions racialize farmers and thereby perpetuate inequalities between social groups: while seeking to conserve 'nature', the Ordenamiento intends to 'conserve' the 'traditional' indigenous communities and their perceived land use practices, but in so doing it constrains their economic opportunities, social development, and political agency. Given these underlying agendas, the negotiations for the conservation plan are infused with the "coloniality of power" (Mignolo 1999, Quijano 2000). These 'hidden' agendas do not go unnoticed in San Luis Tlaxiatalmalco, where they represent a "colonial present" (Gregory 2004) and charge the negotiations of the conservation plan with a political struggle that shapes the knowledge and skills that influence the decisions taken regarding the Ordenamiento and ultimately, the ecology. At the same time, ecological changes have necessitated the Ordenamiento and thereby shape the society through its reorganization during the negotiations. Thus, documenting the micro-politics of conservation allows me to illustrate how 'nature' and 'culture' mutually constitute each other through cycles of land use practices, environmental change, conservation, social change, and land use decisions.

The second scale of the analysis focuses on the community of San Luis Tlaxiataltemalco in the city's precinct of Xochimilco. I outline the negotiations between the chinamperos themselves as well as those between the chinamperos and the city's Commission of Natural Resources (CORENA), the government body responsible for implementing the Ordenamiento. By looking at how local power was negotiated, I explore ideas of 'community' in terms of how reactions to the Ordenamiento were framed and how community representation was organized. I also analyze the community's resistance to the Ordenamiento and what knowledge and skills enter the negotiations as a result of the rearrangement of community representation.

I conclude that the resistance to the Ordenamiento by the farmers frequently challenged its underlying and colonially based assumptions about the farming communities, and thereby illustrates how political struggle is embedded in environmental issues and vice versa (Bryant 1998, Paulson et al. 2003, Peet and Watts 1996b). Additionally, the fluid and shifting alliances and forced or involuntary exclusions as well as negotiated inclusions within the community of chinamperos illustrate that 'community' in this context is a charged entity in flux. It is driven by individual and group interests that are continually contested and lead to new power configurations and overlapping or separate groups that seek to further their respective interests within or outside the formal political process. While these interests sometimes reflect class relations (Watts 2000), divisions also occur within classes. They may reflect environmental preferences and knowledge but they also emanate from cultural values (Moore 1998, Zimmerer 1996). From the environmental perspective, such divisions in the community affect the knowledge and skills that enter into conservation efforts, channelling them, not

necessarily towards a broad-based consultation but one that is embedded in local power hierarchies. Thus, as Mosse (1994) also concludes, homogenizing ideas of 'community' undermine participatory conservation efforts and need to be complicated with an ethnographic study of local power and knowledge.

The third scale of analysis concerns chinampera women, specifically complicating assumptions of how women's environmental knowledge becomes translated into environmental activism (Rocheleau et al. 1996b). My ethnographic research of chinampera women's knowledge of the environmental consequences of floriculture reveals how such knowledge is gathered in women's specific activities and how women's use of their knowledge is strategic and intersects with cultural expectations of being a 'woman', women's economic responsibilities, class, and prestige in the community. Most importantly, women's immediate responsibilities as the managers of household economy and their family's well being can override the long-term interests of the environment regardless of how knowledgeable women may be about the environmental consequences of their productive activities. This finding suggests that relevant environmental knowledge does not automatically translate into conservation or reliable narratives of the environment but, as Reed (2000) has also shown, women's actions are embedded in their specific contexts, and their knowledge is engaged strategically.

My research also illustrates that relevant environmental knowledge does not necessarily facilitate participation in a public process, even when a woman would like to participate; some women's participation is constrained by patriarchal family relations and social expectations. However, other women who have gained economic independence and are less constrained by such patriarchal relations may still not be able to cross the class

are less constrained by such patriarchal relations may still not be able to cross the class division they experience. Finally, as Mohanty has criticized earlier (1991) the assumptions underlying women's institutions' ideas about 'women' and women's equality tend to be based on Eurocentric liberal feminist ideologies and colonially-based ideas of indigenous people. These neither favor rural women who value their reproductive responsibilities at home nor do they eradicate class and racial differences between middle class and elite urban women and rural peasants thereby constraining rather than increasing women's economic, familial, and civic opportunities and choices.

### Contributions

The dissertation makes five contributions. First, it complicates homogenizing and generalizing descriptions about the chinampas and the politics in and about them. Second, responding to political ecology's contemporary intellectual currents the dissertation's focus on power at different scales (Paulson et al. 2003,) and on the 'microdynamics' of power, the thesis elaborates the idea of politics as power and demystifies notions about 'community'. Third, my research complicates ideas about gendered knowledge and the relationship between knowledge and agency. Fourth, the dissertation sheds new light on silence as power, and last, it makes suggestions to conservation efforts.

First, the dissertation 'demystifies' homogeneous descriptions about the chinampas and chinampero communities in exposing the diversity of production technologies that the chinamperos use, the economic resources that are available for them, and the political strategies and cultural values that they follow. Most importantly, even if

many chinamperos opposed the conservation plan, not everybody did so. Also, their goals in terms of how to maintain 'tradition' varied greatly: some tried to conserve and reinvent 'traditional' chinampa techniques but others openly promoted agricultural 'modernization' in order to conserve other traditions, notably the *fiestas*. This desire to 'conserve by modernizing' challenges the belief that 'culture' can be conserved by conserving a traditional technology or vice versa, which is the Ordenamiento's suggestion. In this respect my reading of the chinamperos' responses to the conservation law is different also from Canabal-Cristiani's (1997) account, which tends to portray the chinampas and the political opposition as uniform and non-gendered.

Second, Paulson and others (2003) define politics as "power relations that pervade all human interactions, characterized by challenge and negotiation" or the "practices and processes through which power, in its multiple forms, is wielded and negotiated" (Ibid.: 209). Responding to political ecology's call to attention to scale (Zimmerer and Basset 2003b) and to analyze "relations of difference and power within and among... myriad locales and diverse social actors" (Paulson et al. 2003: 210) this dissertation shows on different scales that power is persistent, fluid, multidirectional, unpredictable and, sometimes, silent. My analysis of the colonality of power shows the persistence of power in how it continues to reproduce social inequalities in a contemporary context. The fluidity and unpredictability of power is evident in how the farmers realign themselves and in relation to the state. Silence becomes an important tool for both some male farmers and some women in that outside of the negotiations, they are better able to pursue their interests.

micropolitics (e.g. Moore 1998, Nightingale 2003, Zimmerer 1996, Bebbington 1996) and exemplifies how taking that idea from stakeholder analysis to the politics within one stakeholder group can shed new light on ideas of community. This method allows us to understand 'community' beyond relations of class to consider values, knowledge, and local power. This approach also shows the heterogeneity and fluidity of a stakeholder groups's internal relations.

Third, by complicating the analysis of how feminine identities and roles are negotiated and how these negotiations influence how specific environmental knowledge is engaged in decision making, the research clarifies how and why certain forms of knowledge become predominant and affect biophysical and social outcomes. The important finding here corroborates Maureen Reed's work (2000) about knowledge and activism in suggesting that we should not assume that relevant knowledge leads to 'appropriate' action. Instead, chinampero families use knowledge strategically: as people whose options and resources are limited by state interests, history, and local power differences they use their knowledge in ways that further their interests and secure their immediate economic and cultural needs. At the same time, they use knowledge to resist normative and unilateral policies, and some farmers also use knowledge to further collective environmental and community interests either within or outside the formal process of conservation. Therefore, the social relations in which people make their decisions regarding the environment are very important to consider alongside with technical solutions of conservation.

Fourth, Mahoney's suggestion to pay attention to silence (1997) proved particularly important in my work. Instead of perceiving chinampera women's absence

from the negotiations with CORENA as silenced, their 'silence' suggests a form of power that enables them to pursue their familial responsibilities and their interests in the community. The men who withdrew from the negotiations chose silence as a strategy to pursue their interests on many levels: some focused on immediate and family interests, while others chose to initiate collective projects and advance community needs. These choices indicate that we need to focus more generally on the idea of silence as power and, as Koivunen suggests (1997) understand how people give meaning to silence.

Finally, the dissertation's implications for conservation efforts in the chinampas stem from this need to focus on biophysical, technological, and social parameters. I suggest that conservation efforts should have multiple goals, explore multiple technologies, and negotiate with several different groups within 'local farmers'. Instead of prioritizing one or another kind of cultivation or land use (e.g. 'traditional' or 'organic') and discriminating some other practices (e.g. 'modern' production methods) conservation in the chinampas should actively seek to include and experiment with the different knowledges that the community holds. Rejecting the farmers who have moved from 'traditional' chinampería to 'modern' cultivation in green houses excludes their significant capacity to research, invent, and experiment in order to find alternatives. Furthermore, women's intricate knowledge about the markets and their economic responsibilities in production and in the family are vital in understanding how women's knowledge, goals, and decisions can contribute towards creating more sustainable ecological and social relations. The big challenge for any kind of policies in the chinampas is to involve women in formal processes that affect their lives.



ecological and social relations. The big challenge for any kind of policies in the chinampas is to involve women in formal processes that affect their lives.

#### Future research directions

While remaining 'political', political ecology is engaged in finding research approaches and methods in three areas: The first one seeks to engage better both the social and the ecological analysis; the second attempts to understand power; and the third tries to link the first two across scales (Paulson et al. 2003). While this dissertation has contributed to the analyses of power and scale, in future research in the chinampas more emphasis needs to be paid to empirically verifying ecological changes and how they alter land use practices, and to expanding the scale beyond San Luis and the city.

While the present degraded state of the environment in the chinampas and the surrounding hill lands is easily recognizable, and most people whom I interviewed expressed great concern about how it might affect the people directly or indirectly, the spatially varying causality between individual land use actions and ecological changes are not clear. There is no doubt in my mind that one of the root causes for the ecological changes in the chinampas is the city's withdrawal of water from the wetlands.

Furthermore, the subsequent desiccation of the canals and the introduction of poorly treated sewage are important reasons for new cultivation practices that might further damage the environment. However, there are no studies that have documented in detail for instance, how the farmers apply chemicals: are the chemical amounts excessive; how does the 'leakage' into the water occur; and what chemicals are particularly rampantly

used? Are there differences in this respect between methods of irrigation, drainage, farmer's education, or plants grown? Additionally, how is the water pollution in the chinampas related to urban planning? What are the point sources of household waste and how does the overload of drainage system from the urban area contribute to the water contamination? How much and what contaminants do industries let into the canals? Do these effects vary between different areas of the chinampas? Such information would give a more nuanced understanding of the spatial distribution of environmental problems and their human causes than what is presently available.

If I continued ethnographic work, I would observe and document how farmers apply chemicals and complement ethnographic work with quantitative data of how much and what kinds of chemicals they use. The compilation of such statistics is not easy because farmers are reluctant to give out details that might reveal aspects of the profitability of their operation or expose reasons for their success or failure. But by compiling information from different sources, like the farmers themselves and the businesses that sell the chemicals, and coordinating that information with the directions of use that the products recommend, one would get an idea of the stresses that chemical agriculture exerts on the environment.

By mapping quantitatively and qualitatively the industries that let waste waters into the canals and by reviewing their records of waste water quality, it would be possible to get a better grasp of the role of the industry in the chinampas. Finally, qualitative and quantitative mapping of the municipal waste water systems, as well as institutional ethnography (Smith 1999, 2002) in the city's water treatment 'systems' would provide

information about the relative share that non-agricultural practices have in the quality of the water in the chinampas.

To expand the scalar analysis of power, it is necessary to investigate how cultivation in the chinampas is linked to extra-local circuits of capitalist economies. The poinsettia, the product with the single biggest total turn over in the greenhouses, is a case in point. A few major breeders in the United States, Canada, and Germany govern the market for genetic and reproductive material which the growers in the chinampas depend on. These breeders have their operations all over the world, and plant material travels long distances. Other inputs also are imported: the displays in the international flower growers' fair that I visited in Mexico City (Agriflor Internacional) were set up by companies from Japan, Holland, Germany, Norway, the United States, and Belgium, for example. Growers from San Luis go to these exhibitions, take away ideas, and later try to get hold of these products to use in their green houses. These are examples of possible global links to the environmental changes in the chinampas.

The other scalar dimension that needs further exploration is the local. While this dissertation is rich in details about local power dynamics among the San Luiseños, future research needs to incorporate the views, practices, and knowledge of those farmers that I did not have the opportunity to interview in more detail. Renters for instance, from a distinct group among the farmers because most of them do not have green houses but may aspire to have them, they come from other areas with perhaps different ideas about ecology and agriculture, and they are socially, politically, and economically marginalized. How do their agricultural practices affect the environment and what is their role in the politics of environment?

Finally, the focus on actors needs to be broadened from farmers to non-local groups. CORENA's intention was to bring in an NGO to mediate between the government and the farmers to actually work out the details about agricultural practices. By the time I left San Luis, this had not happened but future research should trace the role and discourses, as well as the agricultural and environmental knowledge any NGO operating in the chinampas advocates. Other groups are also involved: extension services by private individuals<sup>1</sup>, research institutions, and the government circulate in the chinampas. What environmental knowledge and agricultural technologies do they promote and how are they linked to business and political ideologies? And last but not least, as the chinamperos' frequent requests to coordinate the policies and acts of the different government agencies that somehow affect the chinampa environment indicate, the internal struggles and multiple visions that the state agencies carry, need to be investigated in order to better understand the competing knowledges about and practices in the chinampas (Moore 1998).

This additional knowledge about the chinampas contributes to conservation efforts in the chinampas in particular but also conservation more generally. These findings provide a better understanding of the mutual causalities between society and environment on different scales with respect to multiple agents with competing knowledges and differing roles in resource politics. Finally, my research points to the need to establish multiple goals and strategies that facilitate spatially varying environmental needs,

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<sup>1</sup> For example, while I was in San Luis, a private non-profit organization gave a course in organic green house cultivation. Additionally a few green house growers also offered consulting to others for a price, and a university researcher came to San Luis frequently to advise on how to use chemicals and implement biological pest control.

consider local power relations, accommodate gendered cultural meanings and economic activities, and undo social inequalities.

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