THE STRUGGLE CONTINUES: A CRITICAL ANALYSIS OF MEXICO’S NEOLIBERAL WATER POLICIES AND THE YAQUI CONFLICT

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Dedication

I dedicate this work to the indigenous water struggles that continue to occur around the world, and to those communities being denied their political and human agency in the right to potable and affordable water. To Detroit, my city, the place where I grew into consciousness. To my mother, the strongest woman I know; who taught me that through God and family all things are possible. To my sister Bianca who taught me not only to believe in my ideas of freedom, but also how to defend those ideas.
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ABSTRACT

Neoliberal policies supporting the commodification of water have increasingly created conflict across Latin America. Although the conflicts are occurring in different geographical landscapes the literature on the subject has steadily focused on the urban narrative. One example of this has been the increasing focus on the successful indigenous water rights campaign in Cochabamba, Bolivia. International development and conflict resolution literature perceives the Bolivian story to be a victory for indigenous water rights. In contrast, the recent indigenous Yaqui conflict in Sanora, Mexico has reawakened the issue of the rural water conflict across Latin America. The Yaqui conflict also brings awareness to the plight of indigenous communities and the method of social resistance to protest unjust neoliberal water policies in impoverished areas. This case of the Yaqui water conflict reaffirms the continued fight against neoliberal water policies in rural Latin America for farmers, peasants, and indigenous communities.
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INTRODUCTION

In the last three decades the world has changed dramatically as a result of the neoliberal economic project. Previously closed market economies began to welcome an outside presence, allowing private sector participation and the overall market reform. While initially such policies were directed at macroeconomic change they eventually affected a mixture of both public and private goods and services, including natural resources. The multiple changes created a pathway for social and political reform throughout society, and it seemed that the most impoverished communities were negatively affected by the changes. Adjustments in land rights, water rights, and agrarian reforms affected peasants, farmers and indigenous communities throughout the developing world (Brysk 2000). Today, the effects of the neoliberal economic agenda can be seen across the globe affecting many sectors of society.

Water has continued to be the most precious resource that local communities lose access to with the implementation of neoliberal policies, inciting a number of social movements and resistance. Mexico’s historic passing of the North American Free Trade Agreement in 1994 received backlash from local communities which marked one of the first substantial movements in opposition to the neoliberalization of policies in the developing world (Vanden Prevost 2009). Recently Bolivia’s water struggle, known as the “Cochabamba water war”, became the most widely recognized social movement in Latin America to specifically combat water privatization and steep price hikes. Impoverished communities continuously use social protests as a tool of retaliation against neoliberal water policies across Latin America.

Bolivia’s water struggle tends to concentrate on the urban context, as does most literature on the topic of neoliberal water polices (Mollinga 2008). Fewer studies examine the enclosure and commodification of water in the rural context. This thesis explores the case of the Yaqui indigenous population in Sonora, Mexico where a social resistance manifested as a result of the
local government’s controversial decision to divert key water resources for industrial and private profit. Being that this community is settled in a rural landscape, and the literature often fails to acknowledge these communities; I respond to a gap in the literature pertaining to indigenous struggles around water in rural Latin America. The rights of these communities are often forgotten in the mainstream media. Detrimental policies and the displacement of populations in rural societies occur constantly and often drastically. In this work I will delve into the literature concerning these communities and type of neoliberal changes that have affected and galvanized them. I argue that this case exemplifies the tensions inherent in prioritizing water as an economic good over a human right. In addition, this work focuses on the problematic and contentious effects of neoliberalism on Mexico as a developing country. Sharing a border with the U.S. has meant that Mexico has often been a playground for U.S. models of development and border industrialization. This type of framework has led me to question and research the ongoing political and economic struggle between the U.S. and Mexico. The case of the Yaqui water conflict in Mexico allows for the further investigations of how power operates in a globalized society.

Who are the Yaqui?

In the 1800s the Yaqui indigenous group settled in the northern town of Sonora, Mexico. Today the Yaqui is dispersed throughout the country in small settlements. As an agricultural community, threats to this population came in the form of compromised access to land and availability of natural resources. In the 21st century the Yaqui still find themselves dependent on the ability to grow and sell corn, which affects these groups both economically and culturally. The neoliberal framework created a system of commodifying materials that were once free. In the case of Sonora, the different laws and policies regarding natural resources and users in the
rural context created a space for conflict. Tracing how neoliberalism affected water in the country helps to explain the nature of the water conflict as it stands today.

The phrase ’The struggle continues’ reappeared consistently throughout my research. Documentaries and personal blogs of the Yaqui’s involvement in the struggle indicated that the Yaqui population has struggled with the local government on multiple issues. The recent concern regarding the building of an aqueduct around their main water source was only an added stress, but was not the sole source of contention. The premise of the recent conflict concerns the idea that the Sonora governor has been masking the extraction of water as a “need” for the nearby city of Hermosillo and the citizens. The Yaqui accused the governor of harming the indigenous group by siphoning off their water for economic and industrial uses. Unfortunately, the government never sought Yaqui inclusion in the decision making process nor was Yaqui counsel sought for the best way to create equitable access to water for all. The Yaqui went through various channels in order to create attention to the social conflict, including local court support to suspend construction and publishing an open letter as a call for international support and media attention.

**Why Does This Conflict Matter?**

In the Huffington Post Dr. Andrew Offenburger wrote an article titled, “Water in Sonora, A western dilemma?” this article highlighted the water conflict between the Yaqui and the Mexican government as transcendent beyond the border area. In his article he argues that this conflict directly affects Americans and the U.S. government. Why? He suggests that the west was the catalyst for global and neoliberal economic policies in Mexico. These policies affected not only areas of trade; but also have affected the commodification and extraction of natural resources. Latin America was the first site for all of these policies, and Mexico being a neighbor to the U.S. has suffered, survived, and thrived off the industrialization of its border area and the
implementation of economic liberalization. There is a deeply rich history of U.S. intervention and involvement in the country of Mexico and the Yaqui water conflict is only one side effect to a long list of causal links and implications. There has been a historical cycle of oppression and repression from both local and foreign governments from the indigenous nations of Mexico. The Yaquis have endured throughout these cycles and the latest conflict is only a testament to the ongoing marginalization as well as resilience of this group. In the Bolivia context, many academics turned a blind eye to the indigenous water struggles, and the perceived win of the water war seemingly brought an end to the debate on the subject. This work seeks to reawaken the conversation on the indigenous water struggles broadly, with a focus on the Mexico context.

Scope of the Thesis

This paper will explore the literature that traces the variables that affected the social water conflict in Sonora, Mexico. In addition, this paper will also highlight the ways in which water is reformed through other channels such as a land reform, or trade liberalization agreements. I provide an in-depth analysis of the political-economic and social structures in Mexico, emphasizing the transition into a democratic government regime promoting neoliberal policies as they relate to the environment. I also investigate literature focusing on the variables that affect the commodification of resources in both rural and urban regions. Each chapter in this thesis seeks to inform the case study chapter by expanding upon the social and political underpinnings that created the framework for the recent Yaqui social resistance towards the local government in Sanora, Mexico. Chapter one outlines the political and structural adjustments that occurred in Latin America during the late 1980s until the present day. It also captures the beginning stages of neoliberal environmentalism and how these policies affected access and distribution of resources. Chapter two is an overview of the literature that explains the ways in
which rural and urban water structures are commodified and how that affects the surrounding communities. Chapter three is the case study section which focuses in the Yaqui social movement against the local government over water rights and access, this resistance highlights the issues with neoliberal water policies in rural Latin America. Chapter three will outline the Sonora terrain and agricultural sector, the indigenous motivations for protest, the ongoing case and where it stands now, and government intervention. To conclude I will discuss my questions for the literature and the case study, as well as future research on the subject.
METHODOLOGY AND RESEARCH QUESTIONS

The primary goal of this thesis is to trace the effects of neoliberal policies in the rural water sector of Mexico, as well as the United States’ influence on Mexico’s push towards a global market economy. This work will highlight the processes that led to the commodification of nature, with a special focus on the impacts on indigenous groups. This work seeks to answer the following question in the individual chapters:

- What was the impact of neoliberal policies on the political and economic context in Mexico?
- What was the role of the U.S. in influencing these policies, and how did they affect the environmental sectors of Mexico?
- How does the literature explain rural vs. urban water reforms in developing countries?
- The above questions culminate in the overarching question: How are neoliberal environmental policies affecting indigenous groups? As a form of neoliberal environmentalism, how is rural water privatization affecting the socio-economic and cultural wellbeing of indigenous groups in Mexico, and how are such groups responding and mobilizing politically around the right to water?

Methods

This work involves a qualitative research design in which I deploy two main methods. The first involves an in-depth review of the existing secondary literature on the recent economic history and politics of Mexico, particularly with respect to shifts in the management of natural resources and water. Such literature includes both peer-reviewed academic journal articles and books. I also review project documents and data reports published by international agencies such international water organizations and agencies. The second is archival review and content analysis of news media and primary documents pertaining to my case study in Sonora, Mexico. Examples of primary documents include personal blogs such as Indigenous Voices and America’s Program with grassroots members, original video footage taken by the Yaqui tribe regarding their social movement around the building of the aqueduct, and transcripts of
interviews done by grassroots organizers belonging Human Rights Watch. My review includes newspaper reports done by Mexican owned publications such as ‘La Prensa’ and ‘El Sol de Mexico’ as well as online indigenous websites such as the Indigenous Congress. Secondary data will include policy documents and quantitative data on other development statistics though International Organization databases.

Key Literature and Theoretical Framing

In order to create a framework for the Sonora case study, and to explain the nature and arguments of the case study, this work relies heavily on qualitative analysis. Also, for the case study chapter little information was accessible on the subject matter, and therefore this work relied heavily on secondary literature.

The following texts aided in the development of the thesis question, and an analysis of some of this work can be found within the chapters. Author Allison Brysk (2000) in her book ‘From Tribal Village to Global Village: Indian Rights and International Relations in Latin America’ Brysk explores the concepts of globalization and privatization while also focusing on the perspective of indigenous rights. Brysk emphasizes the market system and how this system both constructs and deconstructs identities of indigenous communities. This book calls attention to the ideas of identity politics, displacement, disempowerment and marginal societies. In relation to my research this book highlights how Indigenous movements have ignited as a response to the impact of neoliberal policies. Also focusing on the political aspects of Latin American policies, authors Terhorst, Olivera, and Dwinell, and Alexander (2013), review the links between left governments in Latin America and social movements. Ideas of political incompetence, fragile political structure were explored in this article. The left reforms of government are not indicative of creating a new platform that automatically distributes reforms
of equality. This article offers an outline of water sector reforms in three Latin American countries. Through this perspective I developed my analysis of social movements in Latin America as well as the sensitive politics of these countries. Karen Bakker (2007) explores the anti-privatization movements as an activist strategy. She explores market driven environmental reforms, and explores this connection to the neoliberalization of nature. She points to the need for clarity in the debate between the human right to water, and anti-privatization campaign. This article shaped my perspective on identifying the right to water versus the impact of privatization. Can neoliberal models still allow for the UN sanction of the right to water? In her work, Susan Spronk (2013), maintains a focus on the case of Bolivia, and the past Cochabamba water war. Spronk puts into context privatization as a neoliberal policy and how that created conflict in Bolivia. She traces the ‘roots of resistance’ in the formation of a new working class, issues of territory and rural vs. urban resistance. This case aided in the development of my understanding in the difference between the rural and urban resistance to water privatization. It points to economic and neoliberal reforms.

The above pieces of literature shaped my research by emphasizing a few main theoretical concepts. The concepts which most interest me are: the effects of globalization on indigenous communities; how government corruption and tradition affect the sustainability of reform; the politicization of Indigenous communities; and the creation of a political indigenous movement to combat water reforms. The Yaqui indigenous tribe of the area faced the threat of their government building an aqueduct to extract water into the bigger (urban) city and directly into corporate companies such as Coca-Cola and Ford Motor Company. Although this case was brought before the Supreme Court and ultimately ruled illegal, especially in relation to earlier agreements regarding the stream and community rights, the Mexican government began to
extract water from the streams in June 2013. Through mobilization protests and tactics the Yaqui have created human roadblocks on main highways throughout Sonora for four hours at a time. If this fight is not won, the Yaqui will need to relocate because they will no longer be able to grow the corn which provides them with the means to sustain themselves. With the looming displacement of a people and the government ignoring the cultural repercussions for this community there is a need to disentangle the neoliberal models that have trickled throughout the country. In my research I will dispel the political motivations, cultural dimensions, and social relations that are interfacing within this issue.

In chapter one I will discuss political history of Latin American and neoliberal policies in Mexico. This includes a discussion on the political and economic transitions throughout Latin America from the 1980s all the way through the present day. In this chapter I will also discuss era of neoliberal environmentalism and explain this relation to the concepts of governance and political motives. In chapter two I will discuss water commodification in both rural and urban areas of Latin America with particular interest in cause and effect. I will draw on the most important factors surrounding commodification in each setting and discuss how they relate and differ. In this chapter I will also be sure to hone in on the relationship between rural water policies and indigenous populations. Lastly in this chapter I discuss the most current state of affairs for indigenous populations in Mexico both politically and economically. Chapter three is my case study chapter, where I focus on water conflict in Sonora, Mexico that is currently on going between the government and the local Yaqui tribe. The case study includes the analysis of neoliberal environmental policies in Latin America, and how that affected the political fabric and created roots of resistance. I draw upon literature discussed in chapters one through three in order to create an understanding of the case. In chapter four I sum up and review the findings in my
literature review analysis as well as that of my case study analysis, and create a framework for further questions or concerns within the realm of water commodification and indigenous voice.
CHAPTER 1
NEOLIBERAL ENVIRONMENTALISM IN LATIN AMERICA

Latin American countries were the testing sites for the implementation of neoliberal policies, experiencing the first waves of a globalized market economy. An initiation of policies meant to enhance the economy and development of a global market, the overall trajectory of political and economic frames changed the political structure drastically. As a result, Latin American countries became a testing ground for policy prescriptions for a market oriented economy. Across Latin America neoliberalism is a word used to define various policies that affect a variety of facets such as economy, politics, and the environment. Because neoliberalism is such a broad for the purpose of this work I will use the broad definition given by authors Liverman and Vilas (2006):

Generally associated with free trade and reduced government and with a belief in market-rather than state-led solutions to social and environmental problems. In terms of environment, neoliberalism has been linked to the privatization and commodification of unowned, state-owned, or common property resources such as forests, water and biodiversity; payments for environmental services; deregulation and cuts in public expenditure for environmental management; the opening up of trade and investment… (p. 328).

This definition gives an account for the multiple aspects of neoliberalism, and informs the push for neoliberal environmentalism in Latin America. According to these authors “neo” refers to a revival and institutionalization of an earlier period of political and economic liberalism that centered on individual and private property rights. Authors Liverman and Vilas also cite some reasons countries adopt certain neoliberal policies, these authors acknowledge that the mainstream reasoning for neoliberalism is grounded in the idea of market efficiency which contrasts the inefficiencies of government interventions (Liverman Vilas 2006). This argument centers on the ideas of de-regulation and de-centralization of the government’s grasp on different sectors of society. There is literature that supports this notion, while there is also literature that
opposes this argument and discuss the underpinning reasons for the neoliberal convergence. In the following sections I will review the political history of Latin America in order to better understand the process of the neoliberalization which I follow with a review of literature that focuses on the case of Mexico’s economic policies and modes of neoliberal reform. I will conclude with a focus on policies in Mexico that directly affect access and use of water resources. These policies include the analysis of NAFTA and the Payment for Ecosystems services. This chapter will inform the next chapter which focuses on the commodification of water, and the case study chapter which focuses on the recent water conflict in Mexico between the government and the Yaqui indigenous population of Sonora.

**History of the political economy in Latin America: 1980s-present**

Historically the 1980s is regarded as the end of the Cold War, and this event signified the end of socialism and the beginning of a bipolar political power system. According to Vanden and Prevost (2009) in the 1980s Western capitalism and the United States dominated this strong political bipolar system which supported free trade and free market ideas. This change created a ripple effect throughout the world and within the political sphere and affected not only politics and the economy, but institutions that played crucial roles in previous development initiatives. During the same time, beginning in the late 1970s many Latin American countries were transitioning out of authoritarian regimes and into democratic governments. Institutions such as the International Monetary Fund, the World Bank, and the Inter-American Development Bank, were aiding in the structural readjustments of these countries as they made these transitions (Vanden Prevost 2009). This new line of vision, which became known as neoliberalism created a new framework of policies. According to these authors, during the same time that neoliberal policies were reaching across Latin America there were also other factors at work as well.
Multinational Corporations (MNCs) were successfully moving production plants to different areas of Latin America and the Caribbean. The push for free trade and free markets along with the growing number of MNCs in Latin America became known as neoliberal globalization, and the process was done fast as it was argued it would be beneficial for all (Vanden Prevost 2009). There array policies and political changes that were occurring affected the economic stability and social revolution of the countries.

Along with the globalization, privatization came to be a preferred strategy for ruling governments in Latin America in the late 1980s through the 90s. According to Vanden and Prevost (2009) this process of privatizing different public entities was really a product of cronyism and corruption within the political sphere. Also occurring during the privatization process was the recurring role of international lending agencies that would distribute loans to Latin American countries on a neoliberal conditionality, which included privatizing major public enterprises such as mining, and telecommunications programs. Payment from these entities being sold or auctioned would aid in the repayment of the debt to the banks. There were various contentions around this move to privatize, including concerns over the increase in utility bills as well as a decrease in job availability. Many local political parties, activities, and citizens protested the privatization of sectors that were formerly public resources. The lingering question of many groups was in regards to the perceived continuation of foreign influence on local autonomy, as well as the benefit of foreign corporations instead of the national populace (Vanden Prevost 2009). Eventually, Latin America was the epicenter for reduced production costs for all MNCs and leading into the 21st century most manufacturing jobs would move to these countries from the U.S. in search of cheap labor.
The effects of each process seemed to create more disparity within an already fragile economic system. Neoliberalism increased the informal markets of Latin America and with the shortage of available work, people often sought jobs in the MNCs that were offering ridiculously low wages (Vanden Prevost 2009). In many cases those seeking employment with these companies could not afford utility prices or even supermarket competitive prices. Authors indicate that the disparity in Latin America would eventually create a social landscape where poor citizens would buy their groceries in street markets where prices are cheaper, and wealthier populations would be able to shop in supermarkets and specialty shops. There was an increased divide between the wealthy and the poor with an increasing disappearance of the middle class. Some of the countries with the largest amount of poverty include Brazil and Mexico, however Brazil has had one of the largest economies due to trade and products on the world market and Mexico has produced a large number of Millionaires with some ranging as the wealthiest in the world (Vanden Prevost 2009). However, countries that do not have products that are as popular or in demand on the world market struggle to keep up with the globalized economy and their development remains stagnant. Privatization has only enhanced these realities causing questions in the grand scheme of neoliberal policies and globalization.

A landmark case capturing the first practice of neoliberalism in Latin America was the case of Chile, which serves as an important case of urban water reforms. Chile experienced the social bearings of the “water code” which was a product of Chilean economists trained at the University of Chicago, known as the Chicago boys. As Jessic Budds describes it, “The Water Code has also been important in international water policy, having been recommended by some development agencies as a successful model that should be replicated in other countries” (Budds 2009, 41). The reforms were promoted for their economic efficiency. However, this code created
a deep divide within the country, and took over 12 years in order for implementation to actually occur. Through the water code, property rights and agrarian reform were also part of the neoliberal water policies (Budds and McGranahan 2003). What the water code highlights is the potential ways water reform can occur: it can happen through reforming land rights and agricultural sectors is an indirect way. Mexico would soon after follow suit with investing in land and agrarian reform followed by direct water reforms. Also occurring at the time were countries investing in students learning at universities abroad, with the hope that these individuals would return and invest in their home countries economically and academically. In terms of economics, these types of indirect reforms created an avenue for the commercialization of agriculture generally, and in turn expanded economic development across the country (Budds 2004).

Although there are numerous sources that give the account of how these markets hurt citizens when it comes to pricing, there is immense support for these markets and economic models based on components such as government decentralization, when bloated governments cannot afford to pour money into the infrastructure to support the rapidly growing populations.

Babb explains that the policy paradigms in the developing countries in the 20th century have paralleled global trends (Babb 2002). In spite of this parallel noted differences included the following, “First, the particular problems of developing countries simulated different forms of government intervention…Second, international pressures have played a more salient and obvious role in economic policies” (Babb 2002, p. 6). Babb articulates the differences between the adaption of policies in the developing world versus that of the developed world. The three big processes that affected the political economy of Latin America included neoliberalism, structural adjustments of the 1990s, and globalization. Higher commodity costs and room for privatizing former public sectors created a basis for concentrated disparity. Latin America has
experienced a surge of informal markets and although the neoliberal process has aided in realm of disparity it also legitimized these former high-risk markets. Also, in the 1980s many Latin American countries were in a period of financial inflation, and the open market allowed for these countries to overcome this reality which speaks to a positive trait of the process (Vanden Prevost 2009). The Chile case provides an extensive overview of the beginning political and social effects of neoliberal water policies. Therefore, the 1980s through the 1990s marked a time of transition for Latin America which lasted well into the most recent times. Recently, small firms and small farms attempt to keep up with the demand and production costs of goods and services on a global market economy. The recent hardships for Latin American countries can be attributed to the after effects of competing in these new markets as well as the debt owed to development institutions during the structural adjustments period.

Mexico’s Political and Economic Transitions: Pre-NAFTA

Mexico serves as an interesting example for neoliberal reforms based on the impact of the North American Free Trade Agreement, as well as the shifting political framework. Strom Thacker (1999) indicates that there is room to question the political longevity of the neoliberal economic reforms that Mexico has adopted since 1982. Mexico was involved in the neoliberal phenomenon t from a very early stage has experienced an overwhelming amount of policies that align with that type of framework. During the negotiation process for NAFTA there seemed to be hope for potential social and economic peace and stability in the country, but violent uprisings and political struggles challenged this fragile peace. Like most Latin American countries, Mexico was in a weak state before reforms were implemented and this may have been the reason for the adaptation of the reforms in the first place. Thacker addresses the political surprise of Mexico’s turn towards neoliberal policies, especially considering that Mexico has participated in
more than 40 years of import-substituting industrialization (ISI) policies (1999). ISI existed as a protection from outside investment and was used as a business model between the state government and state business sectors: which is why neoliberal economics turned out to be a surprising turn for the country. Neoliberal policies, according to Thacker, shifted the economy from one of the most closed and independent to one of the most open and liberal in the developing world.

In the last 25 years Mexico City has been the epicenter for development within the country. Urbanization led to an increasing number of people in cities:

The concentration of economic, political, and cultural life in Mexico City has been a major factor in its attraction of people from other parts of Mexico and has resulted in the attendant problems of pollution, overcrowding, traffic congestions, and shortages including water and electricity” (Hamilton 1999, p. 326).

During the time of transitions, Mexico was also going through an extensive economic crisis in the 1980s. Trade reform was one prescription or exit strategy to relieve this situation. International banking institutions became the unofficial sponsors of this reform, and once the president adhered to sharp cuts in the trade barrier it then became an open market (Hamilton 1999). However, investor confidence was low and capital flight was a threat to the country’s economic stability. During the 80s the government formulated an Economic Solidarity Pact (PSE) which consisted of supporters for economic liberalization and together with representatives from governments, business, and the labor sector negotiated and created a structural reform package. The PSE formulated the grounds for the future negotiations surrounding NAFTA. Negotiations for NAFTA began in 1990, these negotiations were overly inclusive of private sector participation on behalf of Mexico, but many critics argue that the meetings were held in secret. Many small and medium sized businesses didn’t support NAFTA as the agreement could potentially hurt their business, often times they were excluded from the
negotiation process. Thacker (1999) explains the private sector participation, “The NAFTA negotiations consolidated and formalized a powerful policymaking coalitions between a small number of outward-oriented big business elites and Mexican government technocrats” (p. 72). In the early 90s, investor confidence began to increase as inflation began to fall. However, Mexico was experiencing such extreme inflation due to the peso debt crisis that recovering from that crisis was extremely difficult.

On the night before the official signing of the agreement, Mexico experienced social protests from groups that blamed neoliberalism for their plight. The protests were led by the Zapatista National Liberation Army (EZLN) in Chiapas followed by similar groups in other areas which were violent and led to attacks across the country. In addition to local social movement groups, protests included international advocacy groups, labor unions, and many other U.S. based coalitions (Hamilton 1999). These protests affected aspects of the government, not only social but also economically. Investor confidence began to decrease once again and created a weak string of business coalition investment in the country. All of this occurred in response to the threat of neoliberalizing the country and eliminating tariffs and trade barriers. In Mexico, a prominent factor of globalization included the politically dominant party known as the PRI which was more so economically driven and reliant on the notion of private sector participation. They political party had ties to the business sector and the private sector, with interest in neoliberal capitalism. As described by Morton (2003) the PRI, “moved away from being an inclusive party designed to cover all segments of society to an exclusive one in which only some sectors were represented” (p. 643). The PRI had formerly been considered a hegemonic power, however Morton described their demise as a policing mechanism which solely existed as an executor of policy (2003). The divided interests between the farming and indigenous populations
and that of the government were seen as the underpinning reasons for the social protests that occurred on the eve of the NAFTA agreement being signed. The neoliberal policies, along with the perceived negative dynamics of the dominant political party created motives for social discontent.

Mexico has experienced a fair share of neoliberal reforms, some of them include Maquiladoras (export processing zones that take advantage of cheap labor), privatizing telecommunications, water services, and privatizing the border. Because of the early adaption of neoliberal policies, some of the programs already in progress became larger and grew into different parts of the country. For example, Morton explains that the maquila industry had roots in the border industrialization programme of the late 60s and moved to different parts of the country throughout the 1990s. Aside from the maquilas, and because of the structural adjustment from the international banks, many of the former public sector services were privatized. In addition to this, a lot of the U.S. corporations made their way to the Mexican side of the border in search of cheap labor which created rapid urbanization. This then created a basis for cheap labor, and in turn lower wages, along with high prices on former low cost public sector needs.

Mexico has experienced rapid urbanization. For over 70 year the country was ruled by an autocratic government party; however by the end of the 20th century the country became more democratic (Hamilton 2009). In this analysis it is evident that in the early 21st century globalization and neoliberal policies took on economic, social and cultural forms. A lot of opportunity was offered on the U.S.-Mexico border, and during the same time as neoliberalism there were also outside factors such as drug wars occurring. Because of the open door policy between the countries, especially in 2006 when it was reported that more than 2,000 people were
killed in drug related instances (Hamilton 2009, p. 333). This was just one consequence of opening trade between the countries.

The political and economic changes of Mexico through its transition from an ISI based economy to a neoliberal one sparked immediate changes throughout the country. As the political economy of the country changed, resistance grew and organization sought to overturn the looming neoliberal policies. Regardless of the next steps for the country politically, NAFTA greatly affected a large amount of environmental policies in the country as well as the use of natural resources. The new economic model had the following elements, “export-oriented policies promoting trade liberalization and reduction of tariffs and protective measures, reduction of direct government intervention, demand-driven investment in rural infrastructure, deep changed to property rights, and land market liberalization” (Liverman Vilas 2006, p. 348). Governance was a big area of contention, because private companies and MNCs were seen as no longer accountable to the citizens.

**Neoliberal Environmentalism: Review of NAFTA and PES**

As discussed, the neoliberal modes of development had a profound effect on various aspects of the environment. These included, but were not limited to, governance, infrastructure, and methods of reallocation. In Mexico, two of the overt neoliberal policies used and that altered the environmental aspect of politics were NAFTA and Payment for Ecosystem Services (PES). Although NAFTA is regarded as mostly a case of economic reform there are academics that explain the causal link between economics and the environment. Authors Liverman and Vilas (2006) assert that the environment is inextricably linked to neoliberal policies due to the dependent nature of many economic sectors on the natural environment. In their analysis they detail the nature of this link, as nature and the environment complement the neoliberal market
agenda which creates opportunity for commodification and capital accumulation. Liverman and Vilas also point to the theoretical debate of accumulation by dispossession when it comes to commodifying nature (Liverman Vilas 2006). NAFTA and PES policies have created yet another opportunity dispossession of resources, which in turn has allowed for the commodification of natural resources. Whereas early scholars and government entities viewed the liberalization process as contingent on economic reforms, there this author indicated that causal mechanisms highlight a bigger affect.

Honing in on the particularities of NAFTA, it is important to understand the significance of this agreement in the developmental framework of Latin America as a whole. When the three countries merged together their trade policies, they decidedly took part in regional integration. This agreement was enacted as part of the structural adjustments made in Latin American throughout the neoliberal trend (Liverman Vilas 2006). This type of integration was part of the larger globalization process and played a crucial role in the popularity of these types of agreements. NAFTA was signed in 1994 and known as the first big case of trade liberalization. Later, countries across Latin America would copy this agreement and create a trade policy called MERCOSUR, this agreement would try to create a solid economic frame for Latin American countries.

In terms of agriculture, NAFTA was meant to promote industrialization. The agreement was intended to increase exports, and farmers were encouraged to shift away from producing corn so as not to compete with the U.S. or Canada. Instead, Mexico was meant to start producing goods that were more economically and environmentally efficient and did not require large amounts of irrigation. In terms of production small scale farmers were unable to keep up with the production abilities of larger farms, “Smaller and poorer farmers have found it more difficult to
access the credit, water, and technical expertise to convert to exports and because of low grain prices and difficult economic conditions…” (Liverman Vilas 2006, p. 349). Eventually, many small farmers would move to urbanized cities unable to keep up with the demand in farming communities, many times corporations bought the land titles when this occurred. In terms of environmental degradation, Liverman and Vilas assert that literature argues that Maquiladoras on the U.S-Mexican border that popped up after NAFTA have led to greater impacts of environmental decay and increased health risks. Due to the lack of legislation or government enforcement, along with a weak institutional framework, there have been many instances where companies have been found in violation of labor and environmental laws. Most impacted by these works are farmers and indigenous groups, as they are the communities they live in impoverished areas. In addition to environmental issues smaller farms faced the realities of lack of access to water, or the inability to pay the new pricing.

In support of neoliberal goals it seems that Mexico is one of the first countries to have made the deepest reforms to their environment. Authors explain that Mexico and Chile have implemented the most reforms to environment and resources and serve as important case studies for the commodification of nature (Liverman Vilas 2006). In Mexico water reform came in the form of simultaneous actions, included in this were privatization of land, decentralization, democratization, and free trade. Payment for Ecosystem Services (PES) is most significant in the rural areas of Mexico. This system affects the management of environmental resources. As mentioned by Livermand and Vilas, “The idea of payments for environmental services can also be associated with a neoliberal agenda in that these are closely linked to the granting of property rights to nature so that they can then be used as a basis for sale or compensation” (Liverman Vilas 2006, p. 330). Mexico’s rural PES is considered an area where users don’t have individual
rights to water concessions. The water system is set-up in the following way, “Concessions are for a fixed term, 5 to 50 years, and can be taken away if an association does not fulfil its agreement with the government. More than 90% of the 3.3 million ha of public irrigation land has been transferred” (Liverman Vilas 2006, p. 341). Liverman and Vilas comment that Romero-Lankao aren’t optimistic about the perceived success of this system, he asserts that the payments do not garnish enough revenue in order to recover the costs or create a more efficient pattern of water use. There is also uncertainty regarding the security of available surface water for all user, meaning users may pay for water that is not available. This issue is two-fold for users and includes the issues of pricing and water availability. What is also a big challenge for the agricultural community is the lack of specific geographical agricultural community, and Mexico’s legal system doesn’t specify the rights for irrigated agriculture or how they can be protected (Liverman Vilas 2006). This is suggestive of the inherent conflict of interests and demands between urban, rural, and agriculture water users.

Mexico is a largely rural country, with a large population of farmers, peasants and indigenous populations. In this analysis, the major form of contention is constantly that of water—whether in regards to access or affordability. Important to understand is that when a major city can expropriate the total water supply from an irrigation district that is operating under a legal water concession then the irrigation districts are in a vulnerable position (Liverman Vilas 2006). Reforms are made in terms of production because of neoliberal policies such as NAFTA, in Mexico farmers were left to decide between crops that their families yielded for generations and crops that would stand a chance in the market because they were competing against wealthier bigger countries. In the decision to switch crops authors explain:

They suggest that a shift from bread wheat to durum wheat production in northern Mexico is linked to a 50% decline of water tables in the Yaqui valley and to an increase
of fertilizer use. An increase in fruit and vegetables of 80% is linked to increased use of water and agricultural chemicals. They also suggest that persistent poverty in southern Mexico has driven deforestations over 600,000 ha/year since 1993 and is linked to an 18% increase in maize production in marginal areas” (Liverman Vilas 2006, p. 349).

Along with changing the types of crops that users are growing, keeping up with global demand of products has created a field for chemical enhancements. One area of contention in the Yaqui community of Mexico has been how these chemicals affect the water being used, as they do not have advanced systems and a lot of times the runoff flows into the river. The chemicals also affect the environment, and sometimes the lands are damaged by them (Hamilton 2009). There are also components of cultural viability where market pressures are reducing traditional cultivation displacing farmers and common local produce with hybrid seeds (Liverman Vilas 2006). This is also a factor I will focus on the case study chapter of this work, in relation to the Yaqui’s contention with the Mexican government. As mentioned earlier in this chapter, Mexico was once a largely rural areas and because of this hosts a large number of peasants and indigenous populations. The cultural threat to Mexico has been an overwhelming concern, and has inspired countless social movements in its political history. Many of these groups and populations have cultural ties to the environment, specifically farming which in turn involved the aspect of water.

Conclusion

In this chapter, through an extensive analysis of the political and economic transitions of Latin America, I pinpointed the specific developmental policies being enacted after the 1980s. Latin American went through a variety of developmental processes that directly affected their social and economic landscape. Through processes such as neoliberalism, structural adjustments, and globalization, Latin America was hit with a wave of new policies. These policies shaped the neoliberal practices that were linked to the environmental services across Latin America. What
is also discussed in this chapter are the ways in which neoliberal economic policies have directly affected the environment and the governance of natural resources. Authors indicate that economic policies directly impact the commodification of natural resources and therefore an investigation of these policies and their relationship can aid in the understanding of this process. In Mexico, the regional liberalization agreement of NAFTA created a new tier of policies in that region. It opened up a sector of market environmentalism, and the agreement deeply affected environmental policies. In the following chapter I will discuss the commodification of water in the urban and rural context, and while focusing on the rural areas I will also describe the marginalization of Mexico’s indigenous population.
CHAPTER 2
LITERATURE REVIEW: THE CAUSES AND EFFECTS OF COMMODIFYING NATURE

Through an analysis of existing literature, in this chapter I will first discuss various forms of water commodification. Water commodification refers to the policies that exist under the umbrella of neoliberalism which seeks to enhance the economic liberalization of natural resources. Scholars have generally seen water commodification as a minor piece of the larger political-economic and ideological rubric of neoliberalism because of the push to create a competitive and efficient water market. I will also discuss the specifics of water governance and infrastructure as they pertain to the move towards commodification. Then, I will discuss the types of water commodification that have become prominent in rural and urban areas of Latin America, and differentiate how these reforms have taken root geographically. Finally, I will discuss how this literature explains neoliberal reforms in the water sector, particularly in Latin America. This chapter will preface my case analysis chapter, where I analyze a specific case of rural water commodification in the agricultural reliant city of Sinaloa in Sonora, Mexico.

Typologies of water commodification

The commodification of natural resources, including water, refers to the process in which water is perceived solely as an economic product or commodity framed on economic incentives rather than as a free natural resource. Karen Bakker (2007) develops a model that illustrates the various neoliberal environmental reforms, and also captures social mobilization techniques as they relate to water reforms. In her argument she focuses on the ways in which reforms cultivated an environment of successful and social movements. Her article is useful in delineating a typology of neoliberal water reforms and discusses how reforms vary depending on geography, such as urban versus rural reforms. As an extension of this analysis I draw upon Diana Liverman’s 2004 article, where she argues that there are two emerging and important
themes in regards to nature which include both commodification and governance. Also focusing on the backlash of commodifying nature, and privatizing water infrastructure is the 2001 article by Estache Gomez-lobo and Leipzier. All three of these articles highlight the nuances of governance and economic politics in terms of water and reform. These authors further aid in creating the landscape for understanding the particularities and versatility of water geographies. These collective works aid in the depiction of water sector analysis and cases where creating economic reforms around water establishes broader problems of political interests and civil unrest or mobilization around water policies.

Literature focused on the water reforms in the rural and urban areas of the global south are treated mainly as separate and individualistic entities. However, in my case analysis I discover that there are modes of intersectionality between both types of literature and I analyze how reforms in the different areas inform one another. One of the ways in which to gauge the underlying differences and similarities of urban and rural water reform is the relationship in regards to the typologies of water reforms. Bakker’s article demonstrates language in understanding different typologies of water commodification. She first makes an argument that voids the assertion that water privatization opposes the United Nation’s sanction of the human right to water. She indicates that this argument is invalid, “it makes three strategic errors: conflating human rights and property rights; failing to distinguish between different types of property rights and service delivery models; and thereby failing to foreclose the possibility of increasing private sector involvement in water supply” (Bakker 2007, p. 439). She then delves into the ways in which water can be structured into different forms of commodification.

Included into Bakker’s illustration, the different typologies include but are not limited to: Privatization, de-regulation, marketization, and commercialization (Bakker 2007). The
importance in categorizing these reforms helps in uncovering the way in which academics and researchers analyze reforms occurring across the globe, this also answers why populations engage in the different social movements around these reforms. Recognizing the rather large arena of neoliberalizing nature aids in identifying and labeling the different processes:

This typology is also useful in addressing the widespread failure to adequately distinguish between different elements of neoliberal reform processes, an analytical sloppiness that diminishes our ability to correctly characterize the aims and trajectories of neoliberal projects of resource management and reform” (Bakker 2007, p. 436).

In Bakker’s article the different ways in which to view water resource management stems from the way in which governments view the resource, it is either used as a public or as an economic good. Although she doesn’t explain the rural enclosure aspect I will later identify, she does incorporate a significant categorization process and discusses how that affects the larger scale of debate and contention around water reforms.

In addition to Bakker, Liverman (2004) agrees with the idea that water is increasingly becoming commodified and the way in which this occurs is through the governance of the resource. Liverman writes, “In Latin America, these ideas have become part of a general neoliberal consensus that argues that efficient resource management and allocation requires the allocation of individual titles in land, water, forests…. (Roberts and Thanos 2003)” (Liverman 2004, p. 734). She also emphasizes that the movement toward commodifying nature has a direct transformative effect on the on the human-environment relationship (Liverman 2004). This directly correlates to geography and in turn affects the way in which resources are marketed and reformed. This notion of geographical importance is the most emphasized idea in this article as it relates to the process of commodification. In terms of governance, Liverman points out that the most important part of environmental and international relations are governments, intergovernmental organizations, consumers, multinational corporations, and NGO’s who play a
limited role. Her framework debates the idea that although neoliberal water reform is a global issue, there is still local autonomy and control of how and when it occurs. Therefore, power is not taken away from local control. This aspect aids in the deconstruction behind the reasons or impact of water reforms locally.

The act of privatizing water is widely scrutinized as resulting in a lack of local control and local autonomy. Estache Gomez-Lobo and Leipziger discuss this facet of debate. Their article highlights the relationship between utilities and privatization. The main argument indicates that Latin America is most affected by the liberalization of utilities, and how water is the most significant utility directly affected by it. Like Liverman, this article highlights the ways in which infrastructure and governance affects the relationships between water and the public. This article brings attention to the ways in which water can be managed through other means and not directly in relation to streams or infrastructure, but also through land which is also represented in Liverman’s article. These authors indicate that the poor populations tends to suffer from the privatization process through poor infrastructure. Infrastructure privatization is often telling of the wider set of reforms while also reflecting the status of the poor in policy or decision making processes (Estache Gomez-Lobo Leipziger 2001). Understanding how privatization affects costs, agriculture, and services in the household is important in the field. Although this article centers on the form of privatization and it delves into the effects of water and services as more costly for this specific form of commodification, it also sets up the next couple of pages which focus on the specific neoliberal water reforms for both urban and rural areas.

The typologies of commodification, the governance and infrastructure in which reforms are implemented are vital components needed to understand the difference between urban and rural water reforms. They also provide an understanding to the ways in which local governments
are in control of the implementation of these reforms, and this connects to the broader range and examples of neoliberal reform of water. The last article, hones in on the one facet of commodification in the form of privatization in relation to utilities. However, it is important to understand the dynamic of power especially in relation to the concept of neoliberalism. Governance then becomes a local issue for communities, and if areas are undergoing reforms of privatization local communities tend to lose autonomy as the government shifts control to outside actors. Moving forward, these dynamics are explored in regard to location and implementation strategies.

**Globalization in the urban south and water reform**

There are a variety of ways in which urban areas across Latin America experience the commodification of water resources. Though Bakker’s (2007) article gives an account of the various typologies of urban water reform, two of the most overt types of reforms come in the form of privatization and commercialization. What is interesting about these processes are the ways in which they relate to the numerous ways that both rural and urban water reforms occur. Most Latin American countries have experienced an influx of urbanization due to the industrialization of developing countries meant to aid in development, Mexico is no different and has experienced this along its northern U.S. border. Literature surrounding the narratives of privatization and commercialization help inform the literature focused on rural water reforms that I discuss later in this section.

Urban water reforms and commodification can be undertaken through a variety of typologies such as privatization, enclosure and public-private partnerships. These reforms affect a multitude of variables such as access, pricing, and the hardship of enclosure of public utilities; all of these variables overwhelm the poorest communities in these developing countries. Priya
Sangameswaran (2008) articulates the ways in which the water sector reforms are commercializing the sector in India as well as attempting to depoliticize the systems. In regards to the reforms she indicates that there are two distinct processes occurring; one which is neoliberalism influence economic policies and social beliefs. The second treats water as an economic good focusing on the importance of government decentralization (Sangameswaran 2008). This article, although centered on the specific case of India, it offers a variety of concepts that relate to the effects of privatization and neoliberal water policies in urban areas of developing countries. The process is political as well as personal for these communities.

Although there is often conversation emphasizing the push for privatization in the developing world, authors Budds and McGranahan (2003) cite that only 5% of the world’s population is currently served by the formal private sector. In the 1990s the level of private sector participation increased significantly in Africa, Asia, and Latin America and specifically in higher urbanized areas. These policies are part of a framework supportive of pro-market oriented individuals centered on efficiency, economic plurality, and government decentralization. These policies are indicative of the politicization of ecology, which Bakker indicates cannot be understood in isolation from the political and economic contexts in which they are produced. Environmental change processes can project the unequal power shares regarding these policies. In states with “weak” political actors the environmental management, physical landscape and ideals behind the human production of nature are exploited and challenged. Therefore, an argument formed in the rural context and applies to urban areas centers on stressing the need for political solutions instead of solely technical or policy driven solutions. This article highlights the idea that water is often reduced to either the category of economic or material good, which then takes away from its simultaneous use of both identity driven and social qualities. These
dynamics greatly affect the process of reform and in some cases where dualistic reforms occur, the poor are often the losers.

The commercialization of water in the global south context seems to be a pertinent part of water management, especially in urban areas. Bakker indicates in her 2003 article that, “A combination of socio-economic, political and cultural factors underlies the growing dominance of the state in water supply provision in industrialized countries in the twentieth century” (Bakker 2003, p. 328). Transporting water seems to be a very costly endeavor, and investments in the infrastructure networks create barriers into market entry. One of the major issues most debated issues in Latin America is the issue of sanitation. With heavily urban populations the government’s struggle to offer exceptional service to everyone and therefore it’s easier to shift the responsibility to corporate vendors. Bakker offers a model that explains the different modes of urban water supply, in the sector of corporate control in which private for-profit actors are water vendors, bottled water companies, and water multinational corporations ranging from artisanal to industrial dimensions. On the other side of that are wells –rivers-streams, water cooperatives, and municipal water services that fall under community control and also range from artisanal to industrial dimensions. Often used and successful in urban area is the success of industrialization and corporatization of the management systems.

Urbanization tends to aid in the industrialization of water supply and in addition to this creates a measure of corporate control. One of the most significant findings in this article is how the author redefines what privatization is and what it looks like when implemented. In answering the question of what privatization entails she write, “Privatization is better read as an overlapping set of strategies- industrialization f water supply production, the territorialization of corporate power in zones where a high degree of non-corporate activity already exists, and the
internationalization of control of water supply” (Bakker 2003, p. 339). This then defines the way in which urban areas, and even in some cases rural areas, interact with privatization policies. Territory and industrialization play an important role in the process of privatizing an area and therefore there must be an examination of what privatization is and in most urban areas, the literature suggests it is highly corporate driven.

Urban water reforms can occur in multiple capacities, these reforms are not limited to a certain type of process. Water privatization, as explained above, also can be seen through an array of lenses. In the urban context, the priority seems to manifest in the idea of efficiency along with the hope for economic alleviation for the government. First understanding the way in which water is viewed from the government, as an economic good or primarily as a natural resource, and then understanding the government’s biggest issue when it comes to access to water (infrastructure or perhaps sanitation) help explain urban water commodification. Then, distinguishing from privatization and commercialization in the area and the scaling of the reform as artisanal or industrial creates clarity on the reasons as to why or how certain processes take effect. Lastly, it is important to understand the economics of urban water reforms and their relationship to the infrastructure issues, governance, and partnerships with corporations. These are the most prominent components of urban water reform, and although they may not be as complex as rural water reforms, it does offer its own form of complexity.

Rural water and informal markets

An issue that arises in the rural areas is the less formalized institutions of water systems, whereas in the urban areas reforming water policies are easier because they are more formal institutions. This is distinctly tied to the economics of the country and how it varies by geography within the country. Informal water sectors are dependent on “self-provision” such as
streams or private wells and therefore there is a limited use of pricing for the user charge and limited cost recovery for use of the resource, or to guide the resource into a clear market (Koppen Butterworth Juma 2005). In contrast, the formalized institutions found in the urban areas of developing countries, and are prominent in North American and Europe, there are service providers such as private corporations and municipals. Therefore, pro-market oriented policies intend to create a formalized system that benefits from cost recovery institutions. It seems that the overall economic progress of any given country will directly affect reforms made in regards to water policy initiatives. This gives voice to the push for commodification of water across the developing world.

In an international workshop document regarding African water laws further explains the rural neoliberal water initiatives and reforms, the opening abstract indicates, “Much institutional analysis in the water sector at national as well as global levels has focused principally on the working of law, policy and administration of water sector—the three pillars of water institutions” (Koppen Butterworth Juma 2005, p. 2-2). These institutions are the ways in which policies concerning water are governed and managed. The four levels of social analysis as explained by Oliver Williamson are: the social embeddedness level where customs, traditions, mores and religion are located; the evolutionary process where markets become more formal and there is opportunity for design; the definition and enforcement of property rights; and understanding how things ‘actually’ work (Koppen Butterworth Juma 2005). The document illustrates the importance of identifying and interpreting the differences between water policies in rural and urban areas, due to social and economic factors as well as formal and informal institutions already in place.
Although a lot of the common problems facing urban areas in the global south can also be applied to rural areas, the literature tends not to focus on reform in these areas as a growing number of people have flooded to cities in search of economic opportunities. In Perreault’s 2004 article he uses the 2002 peasant’s movement in Bolivia as an indicator of common rural issues. The commercialization of local water sources sparked conflict between irrigator’s and state government. In turn, these mounting issues led to questions regarding governance, environmental impact, and state vs. national interests in infrastructure restructuring. In his example he also argues that these new attempts of restricting environmental governance have led to new modes of social organization (Perreault 2004). Perreault (2004) writes, “Though neoliberal policies the world over share an underlying logic, they are shot through with contradiction and inconsistency that reflect the struggles involved in designing, implementing, and resisting them” (p. 266).

These new reforms have also indicated a difference between rural and urban water reforms, Perreault (2004) indicates that the neoliberalization of water management has been more visible through media and rural reforms have been less pronounced with less attention. He mentions that in rural areas water reform differs from that of urban areas because of issues such as political difficulties, logistical issues, and because rural areas are spread out and the legal framework is not cohesive but rather protected under different laws affecting things such as mining and agriculture. Rural areas, especially in Latin America, are populated with high levels of agricultural based communities. Therefore, issues of geography and these populations sustaining their economic means are overwhelmingly prevalent in the rural south.

In general, rural systems are rarely privatized and it is even rarer for these systems to be privatized in the same way as urban water systems (Perreault 2008). The processes of rural water reforms include multiple state and non-state actors. As explained by Perreault (2008) the
water systems in rural areas are complex and involve a mixture of user associations, state agencies, and nongovernmental organizations. These actors support the large spatial scales of reforms, and the community users’ rights, and tend to deliver aid where water is not available due to issues such as piping costs. Because of all these actors and the types of initiatives they undertake there are difficulties in understanding or navigating the rules of governance around water in these areas. Perreault suggests that in order to understand governance and reforms around rural water outlets that the role of civil society is significant as they are responders shaping institutional configurations, therefore their roles are seen as imperative to the process. Environmental NGOs and consumers create important social movements that affect the governance and opportunities for neoliberal reforms. Focusing on social movements and the struggles involving environment create substance around the issue of governance which is reshaped through the context of neoliberal ideologies. Environmental governance is defined by Perreault (2008) as “institutional diversification of environmental resources management as a component of broader process of political-economic restructuring under neoliberalism” (836). Therefore the new issue with neoliberalizing nature is identifying who governs these policies and both the state and civil society roles are prevalent and key within the initiation of reform policies. Social movement and governance are added issues faced in the rural south as opposed to the emphasis being on the commercialization and privatization models that are discussed in Bakker’s typology model.

The populations that usually encompass rural areas are peasants, farmers, and indigenous communities. Consequently, in addition to dealing with issues of politics, governance and infrastructure, there are policies and governance around indigenous rights and autonomy to consider. This makes the reforms of water in rural areas cloudier, and hence, controversial. When
Perreault analyzed the Bolivian model of rural Usos and Costumbres\(^1\) in relation the irrigators movement, the basic tenets of the agreement included: 1) habitual practices 2) based in thorough and intimate knowledge of the social and environmental context in which irrigation takes place and 3) they are voluntary and mutually agreed upon within a given social context and are not imposed by an external actor (Perrault 2008). These concepts alone give context to the fragile relationships of rural water to the local populations. Although the Bolivia example only serves as one examples to hundreds of rural areas experiencing reforms, there are many laws that protect these rights of local citizens in Latin America. One of the largely debated issues in rural water reform is that of farmer’s rights, as these populations depend financially on their crops in order to survive.

Cultural beliefs have an overwhelming effect on the policies that govern rural areas; water rights are adapted and contested based on whether these policies negatively affect the social facets of life in those areas. Therefore there are international laws that states must abide by the rights of local indigenous populations, which further confuses the issue of governance. In Bolivia water rights of the indigenous are sanctioned under the International Labor Organization’s Convention 169: “on the Rights if Indigenous and Tribal Peoples in Independent Countries (ILO 160, ratified in Bolivia by Law 1257 in 1991)” (Perreault 2008). Many Latin American countries have ratified this law as well, and I will discuss one case study of this in a later chapter. Jessica Budds offers insight to the indigenous rights in the Chilean context where she emphasizes that Indigenous Laws set provisions for indigenous resources and includes ancestral lands and the passing over of control in indigenous communities. In addition, although it states that indigenous water rights must be protected, it contains no specific procedure for this

\(^{1}\) Usos y Costumbres translates into Customs and Traditions and refers to Latin American customary laws for Indigenous Populations.
The literature indicates this a common issue in most Latin American countries, and because of the malleable nature of these laws for water access and extraction, it has become grounds for local mobilization in many countries. The indigenous cultures also have rights surrounding autonomy and self-determination, and because water is a sensitive issue and a scarce resource the language of law becomes essential. Budds also includes the issue of dispossession which many indigenous communities face as well, when competing rights impede upon one another. Such has been the issue in attempts to extract water resources that would benefit state governments immensely.

Both urban and rural water reforms, sometimes, are implemented through the aid of larger organizations devoted to development. The World Bank, and the International Monetary Fund have given aid in order to create these changes. Also, as I will discuss later, economic neoliberal programs and policies that were instituted in these countries are also underlying factors that motivate neoliberal reform for water. Water reforms are also subject to the issue of revisiting territory and can benefit the larger economically inclined organizations that seek to create policy in favor of regional trade agreements. This also leads back to the issue of governance where international institutions also seek to govern policy and reform for their own benefit (Perreault 2003).

The differences between rural and urban water reforms rest increasingly upon the need and movement in civil society around policy. Environmental governance is a confusing setting to be part of due to the overwhelming amount of actors and laws surrounding water rights. The less formalized institutions of the rural communities also brings more confusion to the process of water reforms. Indigenous communities offer an independent issue in regards to land and water rights based in cultural and identity based components, which can make reforms an impediment
upon their cultural rights. However, with water being such a scarce resource, which urban areas are unable to provide adequate service to, the language of law becomes murky. Therefore, social movements become part of the language in rural areas in order to foster rights for the citizens. Also playing a role in rural reform is the nature of geography and how the land is spread out, which makes piping these areas costly. Water sanitation and utilities are not as prevalently contested in these areas because there is no government accountability in this regard. These populations lack education, healthcare, and potable water and the main concerns are access to land and water for irrigation. Therefore worries and types of reforms from rural to urban areas differ on such a broad scale.

**Water appropriation**

In my research, literature regarding water appropriation and enclosure were mostly written in the 80’s through the 90’s. This suggests a gap in the literature that seemingly makes these typologies of commodification appear insignificant or uncommon. However, regardless of the trend towards urbanization and water privatization, rural areas of developing countries are still victim of the appropriation of water resources. Peasants, farmers, and indigenous populations, in a society the uses significant amounts of water for industry, often fall prey to the reallocation of their water sources. In my review of urban water commodification literature, Bakker maps out a typology of water systems and how they vary from urban to rural areas. For rural areas, streams-rivers-dams are the sources that these communities have access to through previous government agreements and land titles.

The most popular trends in water are not finding commodification in rural areas as lucrative as it seems to be in urban areas. However, due to the fragile nature and irreplaceability of water, rural areas are facing a different dichotomy of commodification. It is not with the threat
of access to potable water or water for sanitation, although there is a severe lack of access to this, land and water seem to be the main area of contention. In this section I will review literature that explores the avenues of water commodification as it pertains to rural areas of the global south.

In an article by Mehta, Veldwisch, and Franco, the dynamics of land grabbing, and water appropriation were explored with an emphasis on how this affects agriculture and sustainability in rural areas. The whole process is undergirded by the inequality of power and the lack of clarity between legal and formal/informal rights, and problems with unclear administrative boundaries. It also includes issues with negotiations processes (Mehta Veldwisch Franco 2012). Water and land are largely intertwined especially in the rural south based on how these communities maintain their livelihood with dependence agriculture. Depending on the region, there are often different water laws from the urban to rural communities as rural agricultural services require a specific set of guidelines. In this article the authors are exploring the phenomenon beyond the 2008 “land grabbing” occurrence, and indicate this was merely as way of taking control of water services through water grabbing. The authors define what land grabbing manifests as, “First, land grabbing is ultimately 'control grabbing', or capturing the power to control land and other associated resources such as water, and how they are used, in order to corner the benefits, a point that builds on Ribot and Peluso’s (2003) theory of access” (Mehta Veldwisch Franco 2012, p. 195). Then, they continue to define how water plays a role, and how water grabbing is largely associated with the agricultural industry and the appropriation of water, “The cases presented in the collection demonstrate how in many cases water is itself an object of the grabbing, not only for agricultural purposes but also for purposes like mining or hydropower development” (Mehta Veldwisch Franco 2012, p. 194).
The power relations that are an important aspect of the water grabbing scheme, the properties that affect water create tension in the water grabbing process. There are issues of legality, formal/informal rights, boundaries and jurisdictions, which all make water grabbing a conflict in regard to drastic impacts it can have on water and its benefits (Mehta and Veldwisch and Franco 2012). In rural areas because of geography and infrastructure, the effects of situations that involve water grabbing align with the author’s indication of power, and formal/informal water rights of various areas. This connect to Peter Mollinga’s article (2008) where he discusses the inherent political nature of water governance, especially in relation to rural water. This relates to the ideas of dispossession and identity conflicts within the water sector, especially towards those citizens that hold less power. Seemingly, what needs to be part of the discussion in water governance is the social-political structures found in the sub-sectors of agriculture. The author makes reference to different discussions surrounding management and notes an assessment on the Comprehensive Assessment of Water Management in Agriculture with regard to the voice of the social context. Mollinga (2008) indicates the following based on the assessment:

Water governance in this context refers, among other things, to the allocation of rights (rights to water and technology, decision making rights) and resources (water itself, but also maintenance and investment funds for instance), and thus creates more space for considering issues like ‘interest groups’ and ‘social power’ than the notion of management intended to do. (p.9).

In rural areas, the social context is vital, especially when considering the local identities amongst communities, specifically noting indigenous groups. There are various relationship to water that occur in rural areas, which largely affect the management or governance of systems. Therefore, although power is also an issue in the urban region, the social aspect is a key area of difference. Ultimately, governance seems to be a form of political control that makes a great impact on society.
While enclosure can be seen through instances of water grabbing through land reform, and resource governance there is also the phenomenon of “corporate land deals.” While this relates to the land grabbing and reform, it focuses on the restructuring of agrarian societies. Water pricing and irrigation services are an extension of land reform. Corporate land deals refers to corporations buying large scale amounts of land in the rural south and in some cases owning the services rendered to those locations. Authors White, Boras, et al. in their 2012 article focus on this form of privatization, although this is not directly tied to water systems and management, it does create indirect pressure on water reforms and the political economy of those areas. The authors indicate that agrarian reform involves investment and dispossession that expel people from the agriculture section. I also see this as a way of commodifying not only nature and jobs, but it also seems as though it affects water services and access. The idea of corporate land grabbing also can be attributed to the global role of water and food insecurity in the world. What is discussed in this article is the overwhelming nature of industry and how corporations seek to make a more efficient agricultural industry without regard to local communities or impact on other resources such as water.

Water pricing has been a focus of contention in water reform. Charles Howe (2005) discusses the issue of pricing water for users and indicates the specific factors that influence the price, which include: those who depend on the service; the revenues and structures; and the type of water market that is accessible. Pricing is largely based on efficiency, particularly under the umbrella of neoliberalism. The most important concepts from this reading focus on the following: operation, management, and expansion of water services in for water users and operations (Howe 2005). In his case studies, he used the evidence from the United States and Canada, and finds that the primary role of water prices are to give an economically efficient
allocation of supplies, generate adequate revenues, provide equitable treatment to water users (Howe 2005). Concentrating on his section to the role of agriculture and irrigation in the U.S. is that inefficiency seems to be a trend for the country. Farmers are vying for the ability to seem profitable enough to gain access to water supplies and services.

Governance, infrastructure, pricing, and land grabbing are all very intrinsic aspects of rural water reform and commodification. Considering that rural water differs from the urban sector based on geography, demand, and farming/indigenous communities, it is imperative to understand that social and economic livelihood are different components susceptible to being violated. Bakker’s article set up the typology of rural water services and infrastructure, while the subsequent articles explore these variables in detail. Threats of water reallocation, displacement, and dispossession of communities are the most prevalent outcomes of neoliberal water reforms in rural spaces. The notion of land grabbing, and water pricing serve as indirect case of reforms but as land and water are tied together in rural areas, they are intertwined variables of contention.

Vulnerable indigenous populations and the water sector

In reviewing the context of water reforms in Mexico in relation to indigenous groups, it is important to bring into account the intersection of identity, economics, and policies such as NAFTA. All of these concepts and variables greatly impact the ways in which indigenous populations respond to, and are affected by, issues of not only water reform but also relatedly land and agriculture reform. Although these categories may seem to be completely different areas of social impact there is a direct correlation when it comes to policy. Authors Alison Brysk, Susan Spronk, and Terhorst, Olivera, Dwinell, engage this topic and the intersectionality of it in relation to indigenous groups through their collective works.
Brysk’s book (2000) explores how the relationship between globalization and, in tangent, neoliberalism shapes and creates a more marginalized environment for indigenous communities specifically in Latin America. Two main concepts include the importance of Indigenous movements in affecting global politics, and how a globalized market greatly impacts these marginal societies. In this original work the author analyzes human rights experiences in case studies done in five Latin American countries. A central argument in her work has been the idea that Indigenous communities have responded to neoliberal policies with new and enduring social movement’s which fit the new mold of global politics. Her book delves into the perils of globalization in relation to the ideals of empowerment and the issues of neoliberal policies, such as NAFTA in Mexico, across Latin America. Her findings involve the concept that ideals of empowerment arising from a global market are a fabrication of the realities for groups existing on the periphery who face the economic hardship. Production, consumption, and investments are just some of the characteristics that can seem, on the outside looking in, as though they are creating equity and modernity. Found hidden beneath these policies are situations of job loss, displaced workers, and the evolution of disempowered communities. Overlooked and often treated unjustly, many Indigenous communities are greatly affected by these policies and practices.

Brysk dislodges the links between policies such as NAFTA and how they affect indigenous populations at momentous levels, because they are often the most impoverished communities. This book discusses the way in which neoliberalism helped breed the Latin American/Indian Rights movements. For example, in Mexico the most prominent movement of the indigenous would be that of the Zapatistas who began fighting against U.S. investment in Mexico as part of NAFTA, which took away land rights and jobs. What is most powerful about
the movement as explained through Brysk are the ideologies and ways in which these
movements manifested, “Mexico’s Zapatista uprising was the culmination of decades of peasant
mobilization, although the rebellion signaled a new level of identity politics and drew on a new
level of international support. The Zapatistas operate more like an armed social movement than a
Leninist campaign” (Brysk 2000, p.83). Factors of neoliberal markets, investment and
corporations in developing countries weigh heavily on marginalized societies. What is to be said
of the trajectories of these movements? How was neoliberalism seen as a gateway to
privatization of water, and what is the response of the indigenous?

Much like Brysk, authors Terhorst, Olivera, and Dwinell (2013) focus on the way in
movements around neoliberal policies shaped the political structure of many Latin American
countries. These authors indicate that for decades global water policy has focused primarily on
promoting privatization, public-private partnerships, and commercialization; however, social
movements have greatly affected this agenda. A key component of this article is the articulation
of the unique properties of water, and how it is understood different than most resources and
commodities because it is both a human right and economic good. Having these dual meanings
creates a delicate power dynamic. Whoever controls the water wields a certain amount of power
because of its properties. What becomes a pertinent issue is the role of the state in the
privatization process both before and after policies are enacted. There is a reliance on the state to
create a more just and balanced equilibrium in the decentralization of power. In creating these
private entities, the state sometimes removes itself from the picture but still needs to create a
social understanding of what is happening in relation to citizen rights. Political woes in Latin
America directly affect water reforms and neoliberal policies.
The relationship between the politicization of Indigenous movements can be seen in a historical perspective. Latin America has witnessed a long standing fight against neoliberal policies invoked on natural resources and land rights. Mexico has seen the indigenous movements create a political platform with the Zapatista movement which was created as a response to NAFTA and foreign direct investment. This turned into the ‘Frente Zapatista de Liberacion Nacional or EZLN’. In Ecuador the peasants and indigenous founded the Confederacion de Nacionalidades Indigenas del Ecuador, or CONAIE. While the structures and tactics vary by region and state, the threat to communities in most countries were similar. As neoliberal policies gained momentum, the ways in which these coalitions operated were revised in order to combat looming threats. Governments that continuously negotiated with multinational corporations by building dams, and forsaking the poor/Indigenous nations bred new movement and new political discourse for indigenous communities throughout Latin America.

Susan Spronk highlights all of the above concepts in her article and one key concept she underpins is that understanding why water is privatized is necessary in understanding indigenous relations to it. The article centers on Bolivia and although the ‘Cochabamba Water War’ is highly regarded as the mecca of indigenous wins over water rights, there were a variety of experiences during the process of water privatization. Indigenous and Peasant mobilization engaged social conflict that was sparked by privatization of water sources that reached heightened extremes. One highly contested water law also applied to draw water resources in the region surrounding the concession area was that of Cochabamba Valley peasants, who depend on water for irrigation (Spronk 2006). Members of different levels of civil society became involved in the movements and in November 1999 sparked civil society protests by peasants and the indigenous against the water law. Spronk indicates that people of all class levels were fighting
these policies that denied their right to water and thus began bigger movements with more inter-class level efforts. Government, feeling the pressure of the people, ultimately started to give in to some of the demands. However, as Spronk highlights, although there was a victory in response to privatization, there is a link between political prowess, identity and neoliberal oppression. Although this movement has been recorded as the most successful, five years after the reform there have been issues in creating a public democratic water system structured in a neoliberal era. This movement will forever change the politics of indigenous mobilization around neoliberal policies, and the relationship between these marginal societies and the political structure in which they live.

The concepts which are most interesting and relevant to neoliberal reforms are the effects of globalization on indigenous communities; how government corruption and tradition affect the sustainability of reform; the politicization of Indigenous communities; and the creation of a political indigenous movement to combat water reforms. With the looming displacement of a people and the government ignoring the cultural repercussions for these communities, there is a need to disentangle the neoliberal models that have trickled through the country. The main questions that arise from this work concerning the author’s in this section include: Can neoliberal models still allow for the UN sanction of the right to water? Is there a gap in the literature concerning rural water reform versus that of urban reform? Future literature should focus on these ideals, as indigenous social movements become more frequent as reforms increasingly affect their water and land rights.

Current Affairs: Indigenous populations in Mexico

Most literature and statistical reports indicate there is great difficulty in giving concrete numbers on the amount of indigenous peoples in Mexico, largely due to political and
infrastructure issues. According to the International Work Group for Indigenous Affairs, as of January 2010 the National institute for Statistics, Geography and Computing conducted the 13th census of Population and Housing and found there were a total of 15,703,474 indigenous people in the country.\(^2\) This number also includes Indigenous language speakers and Population between the ages 0-4.\(^3\) The figure indicates that Mexico is the country in the American continent with the largest indigenous population. When the Catalogue of Indigenous Languages of Mexico was officially published in 2008 by the National Institute of Indigenous Languages, there was a list of 368 variants of 68 indigenous languages grouped into 11 linguistic families. According to the organization’s website, the National Population Council estimated that in the 2005 that indigenous populations accounted for 13% of Mexico’s total population spread throughout the 32 states of the country, with a high level of concentration in rural areas.\(^4\) Jonathan Fox (1999) indicated in a 1999 article that more than 1 in 10 Mexicans speaks an indigenous language.

In 1992, Mexico was recognized as a pluricultural nation after the 1990 ratification of ILO Convention 169 (International Labour Organization). What created a significant platform and voice for indigenous communities across the country, specifically in terms of political participation and social justice causes, stemmed from the formation of the Zapatistista National Liberation Army or the Ejercito Zapatista Nacional -EZLN, which took up arms in 1994 as a response to the political and economic hardships imposed on the indigenous communities (Brysk 2000). During this time, the Zapatistas shut down Mexico City, it was no coincidence that this armed protest occurred upon the signing of the North American Free Trade Agreement.


\(^3\) Ibid, accessed 3/25/2014

\(^4\) Ibid, accessed 3/25/2014
Following this armed campaign came the signing of the Sane Andres Accords in 1996 (Hernandez and Noruzi 1999), and it was in 2001 that Congress approved the Law on Indigenous Rights and Culture which still did not fully appeal to the indigenous communities. From about 2003 to present day the EZLN and the Congreso Nacional Indigena-CNI are the most outspoken groups for the indigenous communities of Mexico, making strides towards justice and equity for the all indigenous tribes. Indigenous governments in Chiapas, Michoacan and Oaxaca are autonomous, and a couple of more territories have their own state constitutions indigenous legal systems struggle to gain full recognition. In 2007, the United Nations Voted in favor of the Declaration on the Rights of Indigenous Peoples.  

In the most recent depiction of Indigenous Populations of Mexico, The World Directory of Minorities and Indigenous Peoples indicate that indigenous communities face looming economic and political strife. In a post-2000 analysis of issues some of the more overwhelming matters include harassment of farmers from paramilitary groups, over-representation of indigenous peoples in the prison system, particular marginalization around indigenous women, structural economic factors, and government fraud. A controversial event which occurred in 2006 there was a presidential election which is linked to the resurgence of the Zapatistas movement, along with many other rural movements in the country. The leftist candidate lost to the conservative candidate by less than 1% of the vote, and the day after the election the leader if the EZLN gave a radio interview denouncing the election. Since then the EZLN has issued numerous public statements regarding paramilitary groups breaching Zapatista Territory.  


In 2012 there was indication of increased conflicts and an escalation of violent acts within the indigenous communities in response to privatizing land for economic gains, and political exclusion. The movements sparked by these conflicts have initiated further dialogue around indigenous autonomy and self-defense. There were notable differences between the Nieto government and the indigenous communities, and lack of compliance around the earlier San Andres agreements were areas of contention as neoliberal projects were affecting indigenous territories and natural resources. The ministry of the interior approved the Agreement creating the commission for Dialogue with Mexico’s Indigenous Peoples, which was created to ensure the human rights of indigenous populations throughout Mexico. Noted through the IWGIA, the agreement refers to the Law for Dialogue, Conciliation and Dignified Peace in Chiapas but no reference was made concerning the right to land or territories. Seemingly, the Calderon administration deepened inequality and increased poverty for indigenous populations (IWGIA 2014). The most prominent issue for the indigenous populations have been the issue of autonomy and equity, also the right to govern territories and land that, according to earlier agreements, belong to the indigenous populations that surround the areas. However, neoliberal projects threaten land which in turn threatens agriculture. Most rural indigenous populations survive off income generated from selling Maize, there have been attempts to create companies in these areas that will create genetically modified versions and this is seen as a threat to food sovereignty of the population.

Most issues have to do with the lack of compliance with the San Andres Accords, which are concerning the Indigenous Rights and Culture. San Andrés was important not only for its results, but also for the way civil society participated in the peace process (Hernandez Noruzi 1999). These accords internationalized the indigenous issues in struggles in Mexico, through
official and unofficial channels. The Accords are made up of four different documents: The first is a joint pronouncement of the need to establish a new pact between Indian peoples and the government; the second is a series of joint proposals with national implications that the federal government and the EZLN are required to send to Congress; the third establishes special reforms for Chiapas; and the fourth is a text signed by both parties (Hernandez and Noruzi 1999). The most significant indigenous demands that were negotiated in the accord include: Recognition of Indian people in the constitution and their right to self-determination, political representation, full access to justice, promotion of cultural manifestations, respect to traditional knowledge, and protection of indigenous migrants. In recent years, these negotiations have been the debate on whether these rights have been followed by Mexican authorities.

The reality of Indigenous communities in Mexico is that these populations represent a significant percentage of those living below the poverty line across the country. Access to healthcare, education, and political representation seem to be an overwhelming area of debate for the indigenous, with the government continuously leaving these populations out of the conversation. The Congreso Nacional Indigena and the EZLN are just some networks that have staged campaigns against the government regarding the violation of Indigenous rights. Although these organizations are by no means the voice of all indigenous populations, they do offer assistance and aid to any indigenous tribes that ask for support regarding indigenous human rights. In the following section, I will address a case study that also addresses indigenous contentions with the Mexican government in regards to these earlier negotiations which were signed more than 16 years ago. In response to current neoliberal policies and the perception of state government impeding on indigenous lands and water rights. Present day conflict suggests the continuous struggle for indigenous communities not only in Mexico, but globally.
Conclusion

The above analysis of research informs the case study following this chapter, and emphasizes the lack of literature that merges and analyzes both the urban and rural water reforms. After defining the concept of commodification, this chapter then focused on the importance of rural water reforms and explained how these reforms affect indigenous populations across Mexico. The above analysis points to the different ways water can be commodified, and how that creates a cause and effect situation that directly affects local communities. Rural communities are most affected by the commodification of water due to the array of informal water markets in those areas. There are a significant amount of variables in rural areas such as infrastructure, geography, and social ties to water that create a more difficult environment in regards to water commodification. In the coming pages, I will describe the way in which one facet of water commodification created conflict and deeply affected an indigenous community in Sonora, Mexico.
CHAPTER 3
THE STRUGGLE CONTINUES: YAQUI WATER CONFLICT IN SONORA, MEXICO

The following chapter analyzes and discusses a recent conflict in rural Mexico that affected an indigenous population due to policies affecting development and proposed water commodification. In this chapter I will discuss the events leading up to, and that occurred during a mobilization effort by the indigenous Yaqui community of Sonora, Mexico. First, I will discuss the government’s move towards building an aqueduct and extracting water from a local water dam and how that affected the Yaqui indigenous community. Then, I will discuss the disputes and claims made on behalf of the Yaqui community in regards to the legality of building the aqueduct. I will also discuss the political, social, and cultural repercussions of the announcement and the aqueducts construction. This chapter will also present a timeline of legal events that occurred once the Yaqui publicly denounced the construction of the aqueduct, and will also describe the legal actions that occurred from 2010 until 2014. This case highlights the contentious nature of the commodification of water as it relates to one of the rural communities of Mexico. The following case is fairly recent, and therefore most of the resources used are online articles, news reports, Yaqui blogs, and on the ground organizations directly tied to the conflict.

Acueducto Independencia

In the last three years tensions within Sonora, Mexico have manifested between government entities and farming communities, most notably the conflict with the indigenous Yaqui tribe. This conflict has centered on the Yaqui River, which was formerly named ‘El Novillo Dam’, and the construction of ‘Acueducto Independencia’ or the Independence Aqueduct. In the spring of 2010 the governor of Sonora, Mexico, Guillermo Padres, publicly
announced plans for the construction of an aqueduct that would filter water from the streams of
the “El Novillo” dam into the booming manufacturing city of Hermosillo. This announcement
created a ripple effect of questions and contentions with regard to the lack of consultation with
community members on the project. The president indicated in his announcement that the water
would be going to communities that lacked drinking water, which signaled that there was an
imminent threat to the basic human needs of these communities. However, some community
members such as the Yaqui tribe and local farmers believed that the reasons for the aqueduct’s
construction were related to motives regarding economic incentives. Following the president’s
announcement, many online Mexican news publications released articles that implied that the
water would be used to power manufacturing corporations that would benefit the economy of
Hermosillo. The city of Hermosillo is in the northern part of Mexico, benefitting from its U.S
border the city has seen an increase in population due to manufacturing and industrial businesses
that are part of trade agreements such as the North American Free Trade Agreement. Agreements
such as this support ideals of market-oriented policies operating under a neoliberal framework,
and they support the push for corporations to expand business and trade to create a more global
and connected society.

Some of the contentions from the Yaqui community focused on how the water extraction
seemingly affected a previous government agreement with the Yaqui community that was signed
in the 1940s. Also, the government did not consult with local communities before moving
forward with the aqueducts construction considering their livelihood is dependent on this water.
There are both economic and social hostilities and concerns that the Yaqui community publicly
announced. They formed coalitions and mobilized around this threat not only deeming it an

7 Fox Latino News, 9/27/2013. Indians demands halto to construction of Mexico aqueduct. Last accessed, 5/01/2014,
infringement upon their water rights, but also questioning the aqueduct’s legality drawing upon the Cardenas Decree of the 1940s\textsuperscript{8} and environmental laws protecting the rights of indigenous populations of Mexico.\textsuperscript{9}

The Yaqui are an indigenous population that settled throughout Sonora, Mexico before 552 A.D. Since then, through various wars and conflict, the Yaqui has been able to protect their land and its natural resources from enemies and government entities with binding agreements. It was President Lazaro Cardenas in 1939 who offered peace agreements with the tribe through granting the community official titles to their land and access to the Rio Yaqui, or Yaqui River. Although there have been attempts by government bodies to take their land, they have lived, survived, and endured in the settlements surrounding the river.\textsuperscript{10} When the government formally announced their plans to move forward with building an aqueduct which would pump about 75 billion cubic meters of water into the city of Hermosillo, the process seemingly left out the voices of the populations that would be most greatly affected by this decision. The Yaqui tribe contested this aqueduct on the grounds that it would negatively impact their tribe through economic, social, and cultural ways.

The series of events since the governor’s announcement have culminated in a significant case of indigenous water rights. The Yaqui River has a rich history and the area around it has benefitted agriculturally from its basin. This conflict presents a microcosm of the plethora of on-

\textsuperscript{8} This is a decree that signed by the President of Mexico in 1940 which was granted the Yaqui indigenous community access to the streams of the Novillo Dam for social and agricultural purposes as well as renaming it the Yaqui River.


\textsuperscript{10} Information taken from the official Yaqui Nation Website, http://www.pascuayaqui-nsn.gov/, last accessed 4/21/2014
going issues and tensions in Mexico. Yet, there is little academic attention on conflicts pertaining to rural water and indigenous struggle particularly in Mexico. Much of the existing focus has been on urban water struggles in an era of privatization (Bakker 2007). The Sonora case proves there continues to be important challenges in rural areas, especially when indigenous groups are involved. With a large percentage of farmers, and approximately 40,000 indigenous population in the city of Vicam as of 2010 (Rodriguez 2013), this case proves that the issue of water allocation and water rights are still an overwhelming foundation of debate and form of contention.

Throughout the process an array of government entities and offices played a crucial role in the events that followed the 2010 aqueduct announcement. The following actors have been included in the debate: The state government, the State Water Commission, Environmental and Natural Resources Secretariat, District Courts, Yaqui Indigenous Tribe, The Supreme Court, and Support from the International Community and Indigenous Council, and the Interior Ministry. All of their roles directly affected the outcome as well as the mounting issues that the indigenous community harnessed towards the aqueduct’s construction. In the following pages I will give some background information on the Sonora region and I will give a timeline of events in the conflict over the construction of Independence Aqueduct.

The Sonora region

Figure 1.1 is a map taken from jornada.mx (Velducea 2013), a Mexican online media publication, showing the exact location of the aqueduct in relation to the river. The map also shows the boundaries of the river as it runs through the Mexico into the different U.S. states. Although the stream runs well into California and Arizona there did not seem to be any forms of contention in those areas in relation to the aqueduct’s construction. The area labeled “Pres...
Novillo Plutarco Elias Calles” is where the dam starts and Hermosillo is the city where the water is being pumped/extracted to. The area stretching through the state from the two points holds a large amount of farming communities as well as indigenous peoples reliant on the stream for social and agricultural purposes. Figure 1.2 is a map of the state of Sonora, taken from an online mapping source shows the state of Sonora as a whole in relation to its boundaries between the United States and the other Mexican states. Figure 1.2 shows a blue line of the Yaqui River which runs into Arizona and the Gulf of California.

The state of Sonora is located in Northwestern Mexico, bordering Arizona, New Mexico, Baja California, and the Gulf of California in the United States. In Mexico, the state borders the cities of Chihuahua and Sinaloa. The mountainous state is described as a mixture of semiarid and sub-humid temperatures. Although it is a mixture of both urban and rural geography, the state has a large rural area with significant farming and agriculturally dependent communities. According to a newsletter published by the company contracted to build the actual pumping structure, RUHRPUMPEN, the project would be “a $5 Million USD (approximate) investment”

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used for generating electricity at the Plutarco Elias Calles dam” in Sonora (Ruhrpumpen 2012). The state reportedly suffers from a significant lack of potable water, and in 2010 the city of Hermosillo was facing serious ramifications because of this. The resource of water could not be escaped in this thriving city that in recent years had seen great economic progress, therefore an aqueduct was built to benefit the growing population and booming manufacturing companies.

The following table highlights the events and actions as they occurred throughout the process of the contentions surrounding the construction of the independence aqueduct. Starting with the governor’s formal announcement and ending with the 2014 agreement reached through negotiations, this table provides an outline for the remainder of the chapter.

### Timeline of Events throughout the conflict, Table 1

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<td>Aqueduct Announced</td>
<td>Environment Feasibility Report Published</td>
<td>Environment Secretariat authorized construction without consulting Yaqui</td>
<td>District Judge issues 24 hr. stay to halt construction</td>
<td>Supreme Court give injunction to stop extraction of water</td>
<td>The Supreme Court rules “rights of the Yaqui people to consultation had been violated”</td>
<td>Yaqui maintain resistance camp and roadblock</td>
<td>Supreme Court Ordered the Sonoran Govt. to halt construction</td>
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### Political and Social arguments

“We have been here longer than this country, longer than this state, longer than law...And yet, they keep treating us like we don’t exist”-Mario Luna, Yaqui Leader (cemda 2014)

When the government formally announced their plans to move forward with building an aqueduct to pump about 75 billion cubic meters of water into the city of Hermosillo, the process seemingly left out the voices of the populations that would be most greatly affected by this decision. One of the first political contentions made by the Yaqui concerned an agreement signed in 1940 by President Lazaro Cardenas. The agreement, a copy published on an indigenous
development WordPress blog, renamed the El Novillo dam to the Yaqui River and also guaranteed 50% of the waters for securement of health, nutrition, and cultural vitality of the Yaqui people (The Decree Cardenas 1940). Because the aqueduct would greatly affect their access to this water, questions on the legality of its construction became a great debate in the Yaqui community.

Following the 2010 announcement from the governor, the State Water Commission then published an Environmental Feasibility Report in September 2010. The report reached a few conclusions regarding construction of the aqueduct. Some of the main points included: “There is no factor to be able to assume a variation in the climate, or the air quality, only the noise levels will temporarily increase during the construction of the aqueduct not exceeding permissible limits” (Semarnat 2010, p. 84) and “The construction of the aqueduct will not alter natural drainage patterns, or It will decrease the quality of the water bodies, whether these superficial or underground” (Semarnat 2010, p. 84). However, the most prevalent of the conclusive findings in the report was that collectively all of the evidence indicated that the construction of the aqueduct was feasible from an environmental impact perspective. The report itself gives a final analysis on the impact of climate, noise level, environment, and land, which all culminate into the final decision, “For all of the above, the project “Independence Aqueduct’ is considered feasible from the environmental point of view.” In February 2011, several months after this report was published, the Environment and Natural Resources Secretariat authorized construction of the structure without seeking consultation with members of the Yaqui community. Following that


13 Taken from the 2010 Environmental Feasibility given by the organization SEMARNAT. This version is originally written in Spanish and the citation is translated by me.
authorization construction officially began. Yaqui community believed the 2010 report should be questioned for legality on the basis that no one from the commission sought to consult with the tribe council. As reported by the organization ‘cemda,’ “in July 2010 the Secretariat of Environment and Natural Resources (SEMARNAT), through its decentralized body the National Water Commission (Conagua) awarded 50 million cubic meters of water for the construction of the aqueduct.” In turn the community decided to move forward by appealing to local courts questioning the legality of this report and its decision.

After members of the Yaqui community made appeals to the court In August 2011 on the basis that the rights of the Yaqui community were being denied, the district court issued a 24 hour stay in order to halt construction. Following the 24 hour stay, the Supreme Court then rectified the earlier decision of the district court and decided that the rights of the Yaqui people to consultation had been violated. Regardless of the Supreme Court ruling the Sonoran government still extracted the water from the area into the city of Hermosillo violating a legal mandate, and therefore acting illegally. This inspired the social mobilization of the indigenous group and surrounding farming communities. In May 2013, the Yaqui maintained a resistance camp along a main international highway leading from Arizona to the city of Sinaloa causing a 4 hour interval roadblock for commercial vehicles. In August 2013, the Supreme Court then issued an order to halt the construction of the aqueduct if the Environmental and Natural Resources Secretariat found that this project would bring about “irreparable damage” to the Yaqui

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Following this order, many conversations and meditations between Yaqui community representatives and Sonoran government ensued. In January 2014, through talks mediated by the interior ministry, Yaqui representatives and the Sonoran government reached an agreement that the water only be used for human consumption in Hermosillo and not manufacturing or economic reasons.

Through various channels and appeals, the Supreme Court Justice brought forth at least a momentary halt to the construction of the aqueduct; however, regardless of this sanction the government continued to illegally extract water which only created more pronounced tension. The Yaqui then moved forward with the push to mobilize and create a movement against this perceived injustice happening in their community. Questions which arose while reviewing documentation of the mobilization efforts included whether this was simply a problem of water and access? A conflict of indigenous rights and environmentalism? Or perhaps a business as usual model? The aqueduct signified many issues that the indigenous community was facing both politically and economically. The way in which the political process was handled created a platform for questions regarding the political marginalization of the Yaqui within the larger state of Mexico.

In addition to cultural challenges, the local population relied heavily on agriculture for survival in the area. The farming community also banded together with the Yaqui to create the Citizens Movement for Water. The water being filtered out of the area affected this facet of their living, “The Yaqui argues that drought has reduced the volume of the dam El Novillo and caused millions in losses and because they could not plant 270 thousand hectares for the next

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agricultural cycle.” (Velducea 2013). The policies such as NAFTA, discussed in earlier chapters, have also created a disadvantage for these farmers which operate on a much smaller scale with less means than bigger corporations. What created such profound dissatisfaction were the reasons as to why water was being extracted into Hermosillo. Although there were comments from the government that the water would benefit only the citizens, many indications were presented that this was not fact. In a documentary clip of the Yaqui’s struggle the following was discovered, “It is estimated that 40% of the drinking water in Hermosillo is currently wasted, and the water is destined for industries with high water demand such as recently installed Heineken, Ford, and Big Coca-Cola plants”17 In an article written by the organization America’s Program, comments on how this project would affect the economic and agricultural components of the Yaqui and farmers were given. For examples, engineer Tomás Rojo, coordinator of the Yaqui Defense Brigade said “the purpose of the Sonora Sí project is not only to serve the interests of Gov. Padrés and President Felipe Calderón, but also of economic interests in other countries. As long as there is a scarcity of water in the Yaqui Valley, foreigners will have the opportunity to export their products to Mexico”18 This conflict catapulted into the domain of human rights, political power, and impoverished communities.

Regarding the infringement on Indigenous human rights, there are laws that defend their claims such as the ILO convention, “Convention 169 of the international labour organization (ILO) and these considerations are required for the Mexican state. Sections 6, 7, 15 of the Convention provides that the authorities have an obligation to consult indigenous peoples”


(Velazquez 2013). Another law includes a general law regarding basic ecological protection, “General Law of Ecological Equilibrium and Environmental Protection itself, the obligation in Article 15, Section XII, to guarantee the right of indigenous peoples to the conversation, preservation, and sustainable use of resources natural” (Velazquez 2013). These laws were violated when the impact report by the state water congress was passed without Yaqui consultation. The judgment made by Supreme Court found that the following steps needed to be completed for an environmental impact report to be legitimate, “legitimation or personality to go under, legal interest, warranty hearing. Consultation must occur prior to, be culturally appropriate, with informed query, and the consultation must be in good faith in order to reach an agreement” (Velazquez 2013). These findings that the supreme court acknowledged were seen a huge victory in the Yaqui community, “The judgment of the Supreme Court, delivered on 8 May, is a historical fact because it makes recognition of a right of consultation, information and participation of indigenous peoples in all infrastructure projects affecting their natural rights and its territories.”

Internationalizing the Yaqui movement

Aside from political opposition, the Yaqui also viewed this to be an assault on the cultural livelihood of the entire community. The population mobilized in a variety of ways sparking civil resistance and creating a platform for their struggle. On August 11, 2011 the Yaqui tribe published a letter to the international community which indicated that the aqueduct was a violation of the population’s human rights, water rights, and their very survival. In their letter


the Yaquis explain the intrinsic relationship they have to the river. In a recorded interview given by a third party blogger, a Yaqui official gave accounts of what the movement stood for, "here we are defending the principle that water is for the well-being of people, and not for the transnational financial interests that want to convert water into a commodity." The aqueduct would also affect the food source and economic well-being of the indigenous tribe, a tribe that had been in existence and tilling that land longer than the country of Mexico had been formed. While the letter garnered the support of national indigenous communities it also served as only one tactic.

In May 2013, the population initiated a human roadblock 4 hours at a time along a commercial highway leading from the United States into the cities of Sonora. This was an attempt to gain the attention of the government in their plea for a halt to the extraction of the water. The campaigns main catchphrase became the sentence, “Our life is Water.” Although the Yaqui were attempting to create alliances with the international community and generate attention around their struggle there was little attention on the issue, “There is a media blackout in the mainstream outlets of communication and this struggle is virtually unknown on a national level.” Although in the beginning international attention seemed hopeless, in the end it was not an appeal done in vain. The Yaqui received support from- Zapatista General Command (CCRI-CG of the EZLN), in conjunction with the Mexican Indigenous National Congress (CNI). Together these organizations issued a statement of solidarity and support for the Yaqui on July 9,


2013. The Yaqui also signed up with change.org and created a petition delivering, “more than 9,000 signatures to Mexico's environmental enforcement office demanding a halt to construction of an aqueduct in the northern state of Sonora that is based on the notion the aqueduct will leave the tribe without water.”

By the end of the campaign that number would soar to more than 25,000 signatures.

The Yaqui came forward during the conflict with statements that the government was attempting to threaten their cultural survival as well as including a component of dispossession of not only land but also water:

The aftermath of AI are not only environmental, it also involves social and cultural impacts to the Yaqui tribe. Define as social and cultural impact of state policies induced changes (or resulting from) and / or private projects that lead to changes in the social structure of a group and form of social organization against their own collective will. Also included that cultural impact I refer to the effects that a traditional or ancestral society, or self-referential as an ethnic group, point to undermine any objective or subjective in their culture elements: territory, language, traditional social organization; festive system and ritual, worldview, planning and organization of your space; administration of justice according to customary law, and others point to the group as part of their culture (Rodriguez, 2013 p.25).

The cultural struggle of the Yaqui population has been affected by a variety of profound characteristics. Globally, Indigenous groups who rely on water for both economic and cultural reasons are finding that because of dried up streams they must uproot their families and find placement elsewhere. Water laws, and the economic gain of controlling water as a commodity have also affected the displacement of Indigenous tribes. Examples of the Bolivian and Chilean struggles serve as a platform to the plight and continuous invisibility of indigenous groups in a global political marketplace. It is not just indigenous voices that are being ignored, but also the

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peasant community of farmers who cannot compete with the larger scale growers, nor afford the cost of potable water. In the Yaqui context, potable water is nearly unreachable with a small percentage of these towns having access to piping or potable water. A documentary taken by an on the ground organizer, who has published videos following the events of Yaqui mobilization, “The Yaqui tribe is composed of 45 thousand people in eight villages and 56 towns. The tribal leaders indicated that the city of Hermosillo is thirsty as we have been thirsty here on this earth.” To date, no member of the Yaqui tribe has drinking water and only 30% of the population has piped water without treatment, said Mario Luna, executive secretary of the Yaqui tribe. If the government takes away the only source of food and income, then these groups will essentially have no access to sustainable living. The only alternative would be for these populations to migrate from what they have known as their home for generations. Unfortunately, with this alternative scenarios it is probable that these populations of 40,000 plus would split up and be at risk of losing their unique cultural traditions which are passed down through community teachings. Concern and grief were felt deep in the community in regard to their relationship to this land:

Considering that we inhabited this territory for 2,500 years, a place where we were born and have developed our existence, where mother earth provides us with everything for our life and like all the world’s indigenous peoples live as brothers, with plant, trees, animals, birds, insects, the air, the heat, the cold, the sun, moon, stars, earth and water, of which is our home, food and healing, and the source of our power (Norrell p. 28)

There are a variety of factors that the water supply actively affects in a direct manner, and therefore the causes of this conflict are various and affect these communities politically as well

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as personally. In a previous chapter I highlight the literature surrounding rural water commodification and how these policies and projects affect the local communities in a particular way. This case highlights those affects. The issues of power relations, governance, and water appropriation are facets of this struggle.

**Negotiations and failed agreements**

As of January 23, 2014, an agreement was signed between the state, and federal government as well as Yaqui Indian representatives in Mexico City. This agreement was regarding the roadblock on the federal highway of Sonora and well as the limits on water extraction from the Yaqui River. Details from the agreement concern the following, “The Northwest Basin Conagua Agency noted that this document gives certainty to the Yaqui tribe, the people of Hermosillo and Irrigation District 041 Yaqui River, to have enough drinking water and sustainable regional development” (JPG 2014). Among the parameters of the agreement was the demand that the water be used strictly for human consumption and it also states that, "the extraction of water for human consumption is authorized only to obey actual Hermosillo and emergency needs and shall not affect in any way the volume of water to which the Yaqui tribe is entitled to. Therefore, the extraction would still take place, but with less level of water than was indicated before and solely to address the human need for water. The ruling also implied that water extracted from Aqueduct Independence cannot be used for activities of the construction industry, automotive, aerospace and mining” (Velasquez 2013). The terms of the agreement indicated that the roadblock would be lifted before March 1st as long as the government followed the parameter of their end of the agreement.

As of February 7, 2014, there were allegations that the federal government was not in compliance with the agreement signed in January. The members of the Civil Monitoring Mission
made a trip to the Yaqui territories of Sonora to consult with leaders on the how each party was making its headway on their end of the agreement. According to a member of the mission, “The Tribe alleged that the federal government, through the National Water Commission (Conagua), and the state government, through the State Water Commission of Sonora, have not complied with the agreement previously taken” (Linares 2014). This factor has meant that in turn the Yaqui have decided not to end their roadblock along the commercial highway. Reportedly, it seems that the Yaqui find that the water commission as well as the environmental protection agency are not in compliance. In an interview a Yaqui representative the individual stated, “We signed the agreement, Bucareli agreement with the Secretary of the Interior, SEMARNAT and Conagua own, plus the governors of Sonora and Sinaloa as witnesses. Even so, the Tribe, as a show of generosity, confided in the three months to fulfill the judgment. But ultimately failed to comply” (Linares 2014). The Yaqui seem to be continuing the fight for their right to their water resources. Which only solidifies the delicate balance between life and water for these indigenous communities.

In addition to the mission’s visit, the Yaqui released a press release that indicated all of the reasons as to how the government was not in compliance with the agreement made in January 2014. The opening of the letter says:

“Just two days after the Yaqui Tribe signed an agreement with the Federation to seek a solution to the conflict in Sonora Independence Aqueduct, now is the federal government through the National Water Commission (Conagua) - who breaks the agreement political subscribed to defaulting on the terms agreed for the delivery of water.”

According to the letter issues such as the way in which water would be extracted, the amount of water that was allotted for extraction, and also what qualified as emergency services were some

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28 Taken from the Yaqui Open letter to the community from February 2014.
areas of further contention. Previous agreements and appeals made by the Supreme Court were being contested and Yaqui consultations on some elements of the agreement were not sought. When representative of the tribe spoke out he indicated the agreement of January 2014 would not be followed by the government, because there was no attempt to on their behalf to recognize the rights of the Yaqui established in the Cardenas decree of 1940. Therefore, the Yaqui continue to mobilize and protest around the issue with the human blockade until there is a legitimate and upheld agreement signed and put into practice.

Conclusion

The building of the Aqueduct in this case not only sparked a movement or simply a rebellion but also highlighted the intricacies of culture, and economic ties between water and the indigenous community. Research shows that there are a variety of reasons as to why and how water is treated as a commodity and how that affects indigenous communities globally. Displacement and dispossession are becoming a great threat to indigenous communities everywhere, for reasons beyond power, and deeply woven into the fabric of economics. What is unique about the case of the Yaqui is that Sonora is a rural area in which policies supporting neoliberal goals are very much a reality, and it is not an isolated situation focused on either economics or water but rather an amalgamation of the two.

The literature supports the notion that water is a growing dilemma for poor indigenous communities. For instance, Boelens argues “Many new water policies in Latin America have been culturally, economically, and politically harmful for local water-user collectives, peasant communities and indigenous people” (Boelens et al. 2013). What makes the battle even more impossible to fight is that governments usually refuse to believe that water is anything other than a commodity. Author Boelens (2013) indicates that neoliberal reformers have focused their
debate on the political economics of water and therefore reduces it to being viewed solely as a commodity, and minimizing its social value and cultural function in materialistic worldview. In this analysis the author surmises that economics is the window for understanding social reality. The policies on a global scale are becoming less focused on the individual person and are more so centered on the broad society spectrum. The issue or pain of one must succumb to the power of the elite. In Sonora, they are facing many dilemmas that are overwhelming their livelihood and sources of their survival. There are continued issues of de-politicizing and de-contextualizing principles of water policies and planning. The Sonora case is simply a product of these new principles formulating pathways of struggle.
CHAPTER 4
FURTHER RESEARCH AND QUESTIONS

Neoliberal policies across Latin American impacted the political, cultural, and economic systems; these policies were used in order to commodify natural resources and privatize multiple former public sector services. It was during the neoliberal era that Latin America restructured many of its former liberalized sectors in society, and this was done through trade policies, international developmental aid, and the onset of a global society. The 20th century well into the 21st century remained a time of constant change and transition, while many governments were also facing the backlash of political strife. In addition to this, what is most significant of Latin America’s transition is the fact that it was the very first area of the developing world to adopt these policies. This is significant considering that a lot of these models were created as pilot programs, and while some were successful they were only successful at a specific cost.

The regional liberal trade process that the U.S., Mexico, and Canada created played an important role for future models. Taking into consideration the drastic change in Mexico’s once closed-off economy into a relatively open market is important when assessing the country’s future failures and successes. Canada and the United States did not stand as much to lose as Mexico did especially in regards to smaller scale business and farm owners. Mexico has seen many facets of neoliberal policies, and has had a great amount of privatized and production companies build and transform the country into a largely urban dwelling. The water sector has transitioned and the PES system in place does not seem to be a stable way of accessing water for citizens. The literature indicates that Mexico certain areas of Mexico are unable to keep up with the demand of water services, this calls into question whether the competitive nature of farmers and MNCs to compete with global demands of production is going to remain a possibility. I
believe there will be another set of reforms for Mexico based on water availability which also begs the question of rural agriculture, and the survival of indigenous populations in these areas.

The literature review on water commodification treats the urban and rural areas as completely separate entities. Largely, rural water reforms are ignored in the literature and academics tend to focus on the urban water reforms rural water is very difficult to understand in regards to geography, informal markets, and agricultural communities. More literature that focuses on the small battles of water reforms and reallocation, such as the Sonora context, would benefit the field of study. Also, treating the urban and rural water reforms and informative steps for one another rather than completely separate entities is missing from the field. Conducting research on the rural Latin American context of water reform was extremely difficult and I believe builds the argument for the need of connecting the literature or urban and rural water. However, the chapter provides a basic outline for the spate reforms, and through that chapter honing in on the Indigenous population brought the rights of the indigenous groups into question. With a country like Mexico that holds such a rich social and cultural history it is imperative to question the rights of indigenous groups who cannot financially compete with a liberal and global market. These populations are slowly more threatened and as the Sonora case highlights they are less likely to occupy the top concern for access.

The Sonora case study provides a framework for broader questions on access to water and the rights of indigenous populations. Often times the line between the United Nations sanction on the human right to water, and that of property rights and consumption become murky. In the literature review regarding water commodification I not only attempt to dissect the key elements of the various processes, but also define what commodification entails and how that differs from the human rights component. The Sonora case was very difficult to find
information on, and I believe this points to a hole in the international sphere. Many social
movements in Mexico were supported by the international community and this case was not as
prevalent as former movements. The surprising findings in this case were the continued denial of
any wrong doing on the governments end.

The Sonora case exemplifies the tensions underlying the political and economic transition
in Mexico. The government was seemingly willing to sacrifice the rights and legally binding
deals with one population to ensure the economic wellbeing and profitability of another. This
speaks to the marginalization of the indigenous tribes, as well as the overt process of continued
commodification of nature. I believe these are all indicators of the next phase of Mexico’s
economic reforms. The lack of available water, the increased victimization of indigenous groups
will create a platform of new water reforms and social reforms. Also, given the time restraint on
this work, I was unable to employ methods that I believe will be useful for future research. In
person interviews with the Yaqui and government would have greatly benefitted this work, as
well as an in-person visits to the local area where the aqueduct was built, and where the Yaqui
protests are being held. However, I believe that the literature analysis does magnify the ongoing
connections between neoliberal environmentalism and indigenous marginalization in a rural
landscape.
Bibliography


