

**Uses and Customs in Bolivia:
Impacts of the Irrigation Law on Access to Water in the Cochabamba Valley**

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ABSTRACT

Networks of indigenous irrigating farmers played an influential role in the Cochabamba Water War of 2000 that succeeded in ousting the major water company Bechtel from Bolivia and securing changes to the national legislation to recognize indigenous water rights. In their mobilization against privatization, the irrigators used a narrative grounded in the defense of their water rights and traditional uses and customs or *usos y costumbres*. Following the Water War, the irrigators effectively organized to have their traditional water rights recognized in the new Irrigation Law no. 2878, which was signed into law in 2004, and the Regulations, which came into effect in 2006.

This paper critically examines the impacts of the Irrigation Law on access to water in the heavily farmed region of the Cochabamba Valley. It asks whether the social inequalities amongst farming communities, often exacerbated by *usos y costumbres*, are being reinforced through the law's implementation. An analysis of the political processes of institutional change and the power dynamics in the rural water sector reveals that the configuration of power asymmetries formalized in the Irrigation Law maintains unequal access to water resources.

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INTRODUCTION

April 2010 marked the ten-year anniversary of the Water War in Cochabamba, Bolivia that succeeded in ousting the major multinational water company Bechtel from the country. The Water War is widely known as the first successful revolt against the neoliberal economic policies that were introduced in Bolivia over the previous two decades. These neoliberal policies included the privatization and commercialization of water through changes to legislation that promoted the signing of private contracts with foreign investors. However, within six months of signing over Cochabamba's municipal water company to a private consortium, the act was met with strong resistance from the public who opposed the spikes in water bills and the transfer of water rights to multinational corporations. Tensions culminated when residents of Cochabamba, including workers and peasants, formed the organization La Coordinadora (*La Coordinadora de Defensa del agua y vida* – Coalition in Defense of Water and Life) to coordinate protests to fight for public control of the water systems. The protests resulted in the cancellation of the contract between the Bolivian government and the U.S.-based conglomerate Bechtel.

Since then, the Water War has become a reference point for discussions and debates in several circles on various aspects of water resource management within Bolivia, and worldwide. For instance, the theme of the 2010 Annual International Water Conference in Cochabamba was the state of water management “10 years after” the Water War. Evidence of concrete improvements to service, e.g. water delivery, following the Water War is difficult to find. SEMAPA (*Servicio Municipal de Agua Potable y Alcantarillado* – Municipal

Drinking and Sewerage Services), Cochabamba's water distribution company, is rife with corruption scandals, which have frustrated the development and improvement of the water system. Currently, water is provided by the public water utility to only half of the city's population, being located in the wealthier zones of the city (the north and centre), leaving the poor southern zone marginalized. For decades, the latter population has self-organized in order to create their own communal water distribution systems. However, it can be argued that parallel water networks further embed the city divide (Bakker, 2007). Thus, while the Water War is seen as a triumph, not all of the outcomes have been positive, as problems of unequal access to water persist in the city centre as well as in the surrounding rural areas.

The first to object to the water privatization were the peasants residing in the Cochabamba countryside, who played a pivotal role in the Water War protests, establishing and highlighting that access to water is not only an issue in urban areas.¹ The "success" of the Water War encouraged social movements to continue to organize in opposition to neoliberal policies that attempt to restructure governance through privatization. These social movements largely consist of indigenous peasants or *campesinos*, groups of historically marginalized peoples that form the majority of the Bolivian population. Long engaged in conflicts with the state and municipal water utility over access to water, networks of irrigators from the countryside have, over the past fifteen years, strengthened their mobilization efforts to defend their water rights and traditional practices, or

¹ While the major events took place in the city core, there were blockades of the highways and roads leading to the city. The central organizational actor was *La Coordinadora* that encompassed the *Federación de Fabriles de Cochabamba*, FEDECOR, and the *Coordinadora de las seis federaciones del trópico de Cochabamba* (Coordinator of the Six Coca Grower's Federations of Tropical Cochabamba) that had joined the conflict in solidarity.

usos y csotumbres. After the Water War they pushed for the establishment of an Irrigation Law drawing upon the discourse of protecting of *usos y costumbres*. Following a four-year process, the Irrigation Law no. 2878 was introduced in Parliament in September 2004 under the Carlos Mesa administration and was accepted the following month. In August 2006, the regulations to the law were approved under the new indigenous government of Evo Morales. The Irrigation Law, which bans privatization and recognizes the customs and uses of the indigenous population, has been promoted by many observers as a progressive shift away from neoliberal policies (Linera et al., 2010). Although widely heralded as a social movement victory, the law is not without its critics. Leading analysts on water issues in Bolivia such as Carlos Crespo and Rocio Bustamante, and scholar Tom Perreault, have argued that the law's outcomes are potentially detrimental to the poorest of the poor as they only protect the rights of farmers who already have access to irrigation systems.²

Viewing water reform and the new Irrigation Law through a critical lens raises the three main questions that will be explored in this thesis: (1) Do all community members have equal access to water under the new Irrigation Law? (2) Is the Irrigation Law reinforcing social differentiation amongst the population? (3) How has the concept of *usos y costumbres* been used to legitimate the irrigators' claims to water, now entrenched in the Irrigation Law?

Based on the analysis of the Irrigation Law and the political process of institutional reform, I argue that the Irrigation Law protects the water rights of

² Crespo, Carlos. Personal Interview. 1 June 2010. Bustamante, Rocio. Personal Interview. 13 May 2010. See Perreault, T. (2008). Custom and contradiction: Rural water governance and the politics of *usos y costumbres* in Bolivia's irrigators' movement. *Annals of the Association of American Geographers*, 98(4), 834-854.

certain stakeholders, namely irrigating farmers, while impeding the access to water of community members that do not already enjoy these water rights. Notably, the narrative of *usos y costumbres* was used to legitimate the establishment of the Irrigation Law. The lack of objection from those that do not stand to gain from the law exemplifies the strength of this discourse. The following sections introduce the question of irrigation in the Cochabamba Valley, including demographic and geographic information, and important themes in current irrigation literature that guide this thesis. Finally, the thesis objectives and organization are outlined.

WHY STUDY IRRIGATION? ACCESS TO WATER IN THE AGRICULTURAL SECTOR

“Riego es todo – Irrigation is everything” was the response from Carmen Peredo, leader of Cochabamba Federation of Irrigators, to the question, what is the importance of irrigation for Cochabamba as well as for Bolivia as a whole?³ All of the people whom I interviewed gave me variations on this answer, even if their opinions differed on every other point. Simply stated, irrigation connotes the human control of water, which involves directing a water source, be it via networks of canals, channels, small or large dams, springs, wells, pipes, sprinklers, or other modes, for agricultural use that complements or compensates for rainfall levels (Beinart & Hughes, 2007). Since rainfall and cropping cycles do not necessarily coincide, managing water resources is a necessity for agricultural production in many parts of the world, and notably so in Cochabamba.

³ Peredo, Carmen. Personal Interview. 1 June 2010.

The Department of Cochabamba is the tropical highland region of the Andes Mountains in the heartland of Bolivia. It is made up of intermediate elevations that span from the high Altiplano in the west to the Amazon Lowlands and the Andean 'piedmont' in the east (Zimmerer, 2000: 151-2). Mountain basins at 2000 to 3000 meters are dispersed across the region.⁴ Due to the different altitudes, there are a variety of climates in the region from extremely dry to very humid (Gerbrandy & Hoogendam, 1998: 24). The Cochabamba Valley is a historically heavily irrigated zone that supports agricultural production, with a reputation since pre-colonial times as being the "bread basket" of the south-central Andes (Zimmerer, 2000: 151). The irrigation systems in the Cochabamba Valley are characterized by incredible socioeconomic and cultural diversity (Gerbrandy & Hoogendam, 1998: 89). This diversity is reflected in the complexity and variety of water arrangements across the region (ibid.). The systems in place today have emerged from existing practices shaped by the history of the Andean water landscape from Inca times to the present. There are a reported 1,035 irrigation systems currently in use in the Cochabamba Valley, constituting the most irrigation systems in the country. These cover 87,534 hectares of irrigated land, to the benefit of 81,925 users, which equates to an average of one hectare per user. There is a diversity of water sources, differing availability of water and land, and varied types of irrigation systems and infrastructure (Programa Nacional de Riego, 2000: 37). Authors such as Boelens and Bustamante argue that contemporary national food security depends upon sound rural management in the Cochabamba region (Boelens & Bustamante, 2005: 10).

⁴ In fact, the indigenous Quechua word for Cochabamba *Cochapampa* signifies 'land of lakes'.



Figure 1: Map of Bolivia (Perreault, 2006:157)

The population of the Department of Cochabamba is approximately 2 million people, the majority of whom are rural or semi-urban farmers living in indigenous peasant communities, who may also work part-time in the informal sectors of the urban area (Zimmerer, 2000: 155). Most of the population speaks Spanish as well as either the indigenous Quechua and Aymara languages, and often a person will be fluent in all three. The indigenous identity has come to play a strong role in the popular struggles for indigenous autonomy, as will be examined in Chapter 2. Previous to the election of Morales, indigenous water users, amongst the poorest in Bolivia, rarely had representation in the national

or international decision-making process (Boelens & Bustamante, 2005: 10). Although Cochabamba has lower poverty rates than most other Departments in Bolivia, the large population size equates to a larger number of poor residents.⁵ Residents in poor rural areas, the majority of whom face harsh working and living conditions, are notably lacking basic requirements such as access to drinking water (Zimmerer, 2000: 155).

Water is viewed as being central to human development as well as pivotal to international development targets. However, global water policy does not necessarily prioritize the needs of the poor, and it is typically the poorest and most vulnerable members of the population who lack access to water (Hope, 2006). Bolivia is facing major problems of water shortages, as increased water demands are exacerbated by problematic water management. For example, approximately 45% of the Bolivian rural population and 7% of the urban population do not have access to an improved water sources. In total, one third of the population of Bolivia lacks access to clean water (Bennett et al., 2005).

The international community has acknowledged the need for more “equitable distribution of resources” as stated in the 2006 World Bank Human Development Report (Movik, 2006). Given perceived water scarcity, more attention has been paid in recent years to water governance reform, including irrigation management (ibid.). The application of irrigation aids in stabilizing farming, increasing yields and thereby increasing incomes (Leiva & Skees, 2008). Thus the governance of irrigation institutions has now come to be viewed as a way to promote agricultural development as well as a tool to alleviate poverty

⁵ *Bolivia poverty assessment: Establishing the basis for pro-poor growth* (2005). No. 28068-BO. World Bank.

(Shah et al., 2009). As with any development project, however, irrigation infrastructure often benefits some members and not others.

Community-oriented governance has been proposed to rectify the imbalance in distribution of resources. The promotion of local arrangements in the form of private or independent not-for-profit organizations and local water user associations in lieu of state-based irrigation policy represents a steady policy shift in both developed and developing countries (Gorton et al., 2009). Also referred to as 'irrigation management transfer,' this type of local management is touted by countries and international agencies (such as the International Fund for Agricultural Development and the World Bank) as most beneficial to farmers (ibid.). The community management model is often supported in the literature, sometimes taking a romantic view of community management. For example, in his analysis of irrigation in Peru, Trawick (2003) argues that a historical understanding is needed to inform water laws and policies, as he traces the origins of the current water crisis in Peru to the legacy of colonialism. In his article, Trawick analyzes the flaws of existing water legislation. He states that the current law in Peru is a reflection of an agronomic model that seeks to meet the needs of the crops, rather than the needs of the people. Management models compound local problems, such as water waste, that are products of specific histories (Trawick, 2003). These local histories demonstrate how the local interacts and frequently conflicts with national laws and policies, which are often imposed by external powers. Trawick proposes instead a policy alternative that is Andean in origin: a communal system of ownership and management. However, Trawick's solution and the general governance shift towards the "local" are flawed in painting a romantic portrait of community management as

they negate complex local realities and power dynamics. This thesis challenges the romanticization of local community management. By using the political ecology perspective that places power at the centre of the analysis, I aim to demonstrate that social inequalities amongst farming populations exist and must be taken into consideration.

More critical analyses in recent irrigation research provide a starting point to draw out major themes and questions that are important to consider in the study of irrigation in the Cochabamba Valley. In an article on the social geographies of the changing waterscapes of southeastern Anatolia, Turkey, Harris (2006) argues that irrigation, water uses, and management practices are central to the “re-articulation and maintenance of a suite of social inequalities” (Harris, 2006: 191). Irrigation is a great source of benefits to landowners, however, the landless—an estimated 80% of the adult population in the region—do not enjoy the same benefits (Harris, 2006). Furthermore, this unequal access to irrigation and water resources occurs along gender and ethnic lines. For example, the lack of access experienced by the Kurdish is in stark contrast to that of the Arabic minority population in this particular region, thus aggravating existing tensions. Newly established water user groups supported by the Turkish state are meant to strengthen collective water management. However, Harris demonstrates that decisions tend to be made by those who already have access to resources (*ibid.*). As irrigators’ associations’ membership is restricted to irrigators, landless farmers and those without access to irrigation systems are denied involvement in the decision-making process. Harris argues that these water management institutions have worked to amplify difference amongst the population of southeastern Anatolia. The same is true of irrigators’ associations in the

Cochabamba Valley. In this thesis, I will analyze the potential differentiating impact of the new Irrigation Law in Bolivia, given the large role of irrigators' associations in its creation.

Theesfeld (2004) presents the difficulties of local water governance in one of the few works on Bulgaria's irrigator sector, which was greatly impacted by the changes brought on by the collapse of the socialist regime. The Bulgarian irrigation system designed for large production is no longer adequate as the countryside now consists of many small-scale landowners, creating challenges for sustainable water management. In her article, Theesfeld examines the possibility of local self-governance of water in Bulgaria. Her observations reveal that collective action is not likely to be successful to resolve Bulgaria's water problems, the main reason being that the more powerful local actors seek to maintain power relations, rather than change rules, in order to maintain dominance. Theesfeld argues that the existing information asymmetry is used as a power strategy. Governance information is not distributed evenly or in a timely manner; it is even withheld altogether. This contributes to what the author calls a 'milieu of opportunism' (Theesfeld, 2004). The inconsistency of formal rules and effective rules creates conditions that facilitate this opportunistic behaviour coloured by distrust and individualism in communities. Thus, Theesfeld is pessimistic that collective action can be achieved. In Cochabamba, where there is a lack of effective formal law, and instead local water governance has historically been based upon informal institutions, conflicts between communities over access to water have been numerous and well documented (Bustamante et al., 2004; Perreault, 2006). As such, it is important to evaluate the conflict resolution mechanisms proposed in the Irrigation Law no. 2878 to ask

how they deal with the existing power asymmetries within and between communities.

The use of narrative in water and irrigation policy development is highlighted in Mehta's (2001) analysis of the extra-basin transfer in Kutch, Western India. Mehta investigates the perceptions of water scarcity versus the realities of water scarcity. She finds that there exists a widespread perception of dwindling rainfall and intensifying drought despite meteorological data that discredits this claim. Mehta argues that this perception of water scarcity has been manufactured by elites in the region to legitimize a large dam project to their benefit. She argues that this constructed narrative works to mask "plural readings of landscape use practices" (Mehta, 2001: 2037). Taking a cue from Mehta's analysis, I will explore whose interests are served by the narrative of *usos y costumbres*, and whether the narrative is used to obscure aspects of inequality that shape access and control of water; and if this is the case, whether an irrigation law that promotes *usos y costumbres* is the appropriate answer to the problem of access to water.

Without a doubt, irrigation plays an important yet complex role in agricultural development and environmental governance. As this brief review illustrates, access to irrigation systems and water resources is a widespread challenge. The authors cited above discuss several aspects of this problem that will be examined in this thesis. This research on the impact of water legislation reform in Bolivia, intended to contribute to the academic literature, will address questions pertaining to social inequalities present in the irrigation sector.

THESIS OBJECTIVES AND ORGANIZATION

To recapitulate, in this thesis I will attempt to answer the following questions: (1) Do all community members have equal access to water under the new Irrigation Law? (2) Is the Irrigation Law likely to reinforce or reduce social differentiation amongst the population? (3) How has the concept of *usos y costumbres* been used to legitimate the irrigators' claims to water, now entrenched in the Irrigation Law?

The thesis is organized into four chapters. The first chapter presents the research methodology, and the theories and concepts from the political ecology perspective that will be used throughout the analysis. The second chapter is dedicated to tracing the history of the strong indigenous peasant organization from the colonial period to current anti-neoliberal struggles. The third chapter analyzes the irrigators' movement and use of the concept of *usos y costumbres* in the process of political reform achieved in the irrigation sector. As will be demonstrated in the fourth chapter, the new Irrigation Law no. 2878 can be interpreted as one of the results of the 2000 Water War and as a response to the perceived threat of water privatization. The main tenants of the Irrigation Law will be presented, most interestingly the creation of oversight committees to govern the irrigation sector and a new registry to protect irrigators' water sources. The fourth chapter will also analyze the Irrigation Law and the criticisms of it, and discuss the law's impact on the water sector in Cochabamba, making use of field research results, including interviews conducted in the rural town of Punata, Cochabamba.

In these chapters I will demonstrate the complexities of water reform, the political processes of institutional change, and the power relations in the rural

water sector of Cochabamba. A deeper analysis of *usos y costumbres* reveals the inequalities that exist in communities of agricultural workers. Ultimately, there has been a reconfiguration of power asymmetries as irrigators stand to benefit from a law that formalizes their *usos y costumbres*. Thus, the Irrigation Law can be understood as a tool to maintain and reinforce the status quo of unequal power dynamics.

CHAPTER 1: THEORY AND METHODOLOGY

“It is fundamentally mistaken...to speak of the impact of society on the ecosystem as if these are two separate systems in interaction with each other. The typical manner of depicting the world in terms of a box called ‘society’ in interaction with a box labeled ‘environment’ not only makes little intuitive sense...but also has just as little fundamental theoretical and historical justification” - Harvey (1993: 28)

This thesis analyzes how water governance reform has impacted the irrigation sector following the 2000 Water War in Cochabamba, Bolivia, and how this shift has impacted communities’ water resource management. In this chapter I will outline the theory and methodology that guided this research, namely the political ecology approach, which rejects the nature and culture dichotomy to focus rather on their reciprocity. Following a brief outline of the emergence of the approach and its central debates, the terminology and concepts used throughout the text will be defined: power, scale, and social differentiation. In the final section I will elaborate on the project design and methodology and the successes and challenges that arose in conducting fieldwork in Bolivia.

THE POLITICAL ECOLOGY APPROACH

The political ecology approach is particularly appropriate for this study of the impact of institutional reform and water resource management in Bolivia. Political ecology has emerged in recent decades from the disciplines of ecology, anthropology, and environmental history, amongst others. Due to the range of theoretical influences, the perspectives of political ecology authors differ, and debates arise over concepts, methodologies, and research focuses (Neumann, 2005). It is more accurate, therefore, to speak of political ecology as an interdisciplinary approach rather than a coherent theory. Debates amongst these

different approaches centre on the conceptualization of the political and how the political and the ecological interconnect.

Political ecology as an approach first appeared in the late 1970s as a critique of cultural ecology. Cultural ecology emerged from ecological anthropology, a subfield of cultural anthropology, which Julian Steward defines as the “study of adaptive processes by which the nature of society and an unpredictable number of features of culture are affected by the basic adjustment through which man utilizes a given environment” (cited in Netting, 1986: 6). The “first generation” of political ecologists (Watts, Blaikie, Bunker, Hecht) criticized cultural ecology’s apolitical nature that viewed communities and environments in isolation. They placed power back at the center of the analysis to focus on the structures of inequality that effect human and nature relations (Biersack, 2006). These theorists saw political ecology as a departure from Marxism, which, in their view, did not pay enough attention to nature and the environment. By reconciling political economy with ecology, political ecology sought to make up for the shortcomings of both (Biersack, 2006), seeking to explain “how the politics of access to and control over land and resources [are] related to environmental change” (Neumann, 2005: 5).

The “first generation” of political ecologists was also influenced by world systems and dependency theory (writings of Andre Gunder Frank and Immanuel Wallerstein) that critiqued neo-Malthusian explanations by emphasizing the need to consider how global economic and political forces impact the environment. Class systems were conceptualized on a global level: the First World at the “core” of the world system consisting of capitalists that were “owners of the means of production” and the Third World at the

“periphery” consisting of workers of the world (Biersack, 2006). This framework entailed a structuralist explanation of environmental degradation attributed to capitalist or state policies that impact society and the environment (Forsyth, 2003: 8).

The “second generation” of political ecology that emerged in the late 1980s (Blaikie & Brookfield, Guha, Peluso, Neumann & Schroeder)—inspired by post-modernism and post-structuralism—is characterized by its greater focus on the influence of history and culture on the evolving concepts of ecological change and degradation, which they view as politically powerful processes in themselves (ibid.). According to these theorists, the “first generation” of political ecologists failed to acknowledge their own bias, fragmentation and incoherence, due to their overly structuralist and determinist views (Biersack, 2006). They argued more importance needed to be placed on “historical and cultural influences on the evolution of concepts of environmental change and degradation as linguistic and political forces in their own right, premised on a sense of social justice for environmental explanation and development” (Forsyth, 2003: 8). In contrast to the “first generation” political ecologists, who distinguished symbolic and material aspects of existence (i.e. the superstructure from the base) but tended to argue that the economic base determined the political superstructure, “second generation” political ecologists attempt to find the “nexus of symbolic and material factors, [and analyze] how each conditions the other” (Biersack, 2006).

<i>Phase</i>	<i>Critical of</i>	<i>Theoretical bases</i>	<i>Explanation</i>	<i>Key problems</i>	<i>Major works</i>
1 Late 1970s to mid-1980s	Neo- Malthusianism & cultural ecology	Neo-Marxism (Frank, Wallerstein, Amin, de Janvry)	Structural. Explain local conflicts / change as outcome of global production process	To specify patterns of surplus extraction & class relations	Watts (1983a) Blaikie (1985) Bunker (1985)
2 Late 1980s to 1990s	'Deterministic' neo-Marxism	Neo-Weberianism (Skocpol, Tilly) & social movement theory (Scott) & household/ feminist (Guyer & Peters, Agarwal)	Agency. Explain conflict / change at all scales as outcome of interaction of various actors possessing unequal power capabilities	To specify unequal power relations between actors & motives & interests of various actors	Blaikie & Brookfield (1987), Guha (1989), Peluso (1992), Neumann & Schroeder (1995)

Table 1: Phases of Third World political ecology Bryant & Bailey (1997: 14)

This thesis draws from the “second generation” of political ecology and its focus on power relations between actors, as well as the historical and cultural influences in the analysis of discourse and narrative. I draw upon Forsyth (2003) in particular, who proposes to examine the power relations in the creation of environmental knowledge and policies, to deconstruct the production of knowledge and situate it politically. He places attention on the structures of state, industries and society, while focusing on how interactions among these actors constructs environmental narratives, including ‘local’ or indigenous knowledge and mainstream knowledge, and how each is defined and by whom (Forsyth, 2003).

POWER AND SCALE

Central concerns of political ecology that will be considered throughout this thesis are the concepts of asymmetrical power relations and scale (Ferguson & Derman, 2005). Paulson (2005) draws on Swedish anthropologist and human ecologist Alf Hornborg’s definition of power as a “social relation built on an asymmetrical distribution of resources and risks” (Paulson, 2005; 175). Unequal power relations exist in the processes of resource exchange and distribution, and

importantly, at the level of national and international decision-making that shape the market, production, and exchanges (ibid.). Therefore political ecologists' application of this concept of power disallows treatment of different actors and their discourses (ie. NGOs, donors, state) as one front. Instead, each actor is examined separately (Paulson & Gezon, 2005: 62). Political ecologists hold that there is an unequal distribution of the benefits and costs connected to environmental change, which in turn impacts social and economic inequalities in society (Bryant & Bailey, 1997).

The 'political' refers to the "practices and processes through which power, in its multiple forms is wielded and negotiated" (Paulson et al., 2005). Power is articulated in many ways including the power to shape the space of interaction, and the power materialized in access to resources through use of position or knowledge (ibid.). Following Foucault, Judith Butler (1997) identifies power in the composition of places, resources, and people. Here power is not only what subordinates from the outside, but also what forms the subject, what is depended upon for existence (cited in Paulson et al., 2005). Actors who are presumably weaker also possess power to pursue their interests (Bryant & Bailey, 1997: 25).

As previously stated, Marxist-inspired theories explore the asymmetrical exchange of power that occurs between humans, resources and space, as seen in world systems and dependency theory on a global scale. The political ecology approach follows these lines of thought as it seeks to broaden the scale of analysis beyond the community level in order to observe consequential globally and nationally occurring processes (Paulson & Gezon, 2005). Rather than analyzing the global and local as intersecting yet separate scales, political

ecologists posit that “global flows are necessarily embedded in local processes” and that place should be viewed “not as an isolatable physical space but as a dimension of historical and contemporary connections” (Paulson & Gezon, 2005: 9). For example, in her study of gendered practices and landscapes in the Andes, Paulson (2005) examines gender and socioeconomic differences in local productive practices, identifying the power relations within the asymmetrical processes and exchanges. Paulson incorporates a multi-scalar frame of reference to her study by examining the relations between farmers, landscapes, production and markets, and national and international interests. Political ecologists stress the importance of examining the local “not only through rural or marginal spaces, but through spaces in which powerful decisions are made” such as “corporate boardrooms, legislatures, cyberspaces” (Paulson & Gezon, 2005: 10).

Given that political ecology research is an approach rather than a theory, there is no definitive methodology. Researchers therefore use “accepted methods” from other fields. However there is a focus on the multi-scale research model that combines “local cultural and political spaces, global flows of policies, capital, personnel, and discourse” (Paulson & Gezon, 2005; 14). This entails acknowledging the distinct political ecologies of the local, but also recognizing how these are formed and linked globally through “flows of commodities, knowledge, capital and labour” across time and space (Neumann, 2005: 116). Neumann calls for an “integrated and relational approach” in order to examine how access to resources is impacted by the configuration of property rights on many scales, and how these are “defined, negotiated and struggled over among different social groups,” while examining how international development policy unfolds and renders changes in local resource management (Neumann, 2005;

103). In short, political ecology needs to be “framed by unfolding geography of uneven development” (Neumann, 2005; 116). This thesis will use this multi-scalar approach to understand the unequal exchanges manifest in the case of Bolivian water sector reform.

SOCIAL DIFFERENTIATION

As noted above, the political ecology approach is critical of theory that overlooks social divisions that occur within communities (Neumann, 2005: 106).⁶ Paul Robbins stresses the need to shift the analysis to study not resource management alone, but how social power unfolds through systems (both local and state) of domination (cited in Neumann 2005: 106). The examination of social difference, grounded in class analysis, highlights the power relations in communities that are differentiated by class, gender, ethnicity, and so forth (Paulson et al., 2005: 26). This is the crux of this thesis, to see how power is being deployed in the implementation of water governance sector reforms, specifically the Irrigation Law no. 2878, which was passed in 2004.

To note, Marx’s ‘many determinations’ reminds us that the “tendency to differentiations...is not evident in identical trends everywhere” due to “particular concrete circumstance and local dynamics” (Bernstein, 2010: 112). Just as the concept of differentiation demonstrates that there is not a homogenous class of ‘peasants’ or ‘farmers,’ differentiation materializes itself in many ways (Bernstein, 2010: 112). It is therefore important to consider locally specific conditions and relations that led to differentiation among the peasantry in Cochabamba, which will be analyzed in the following chapters. Moreover, there

⁶ For example, common property resource theory clearly elucidates the ways in which peasant communities are interdependent, but tends to ignore differences within communities.

is a wide ambit of ways in which differences and inequalities can be articulated. Feminist political ecology also stresses the need to think past the class inequalities of classical Marxism and consider other dimensions of identity within groups such as gender, ethnic, and cultural differences (Forsyth, 2003: 8; Paulson et al., 2005: 26). As Moore (1996) highlights, a focus on macro-structures should not occlude an analysis of the micro-politics of the material and symbolic struggles over productive resources. He suggests examining the micro-politics in order to bring to light differentiation by class, gender, ethnicity, and age that arise from such struggles (Moore, 1996).

The concept of social differentiation is important precisely because it is often discounted. The anti-privatization movement in the Department of Cochabamba is largely viewed as a 'successful' example of a social movement led by a coalition of peasants and other Cochabamba inhabitants (Assies, 2003; Hall & Lobina, 2007). However, what is generally overlooked in such analyses is the potential marginalization of groups that can occur when agrarian interests are defined by rich peasants' ideology and leadership (Bernstein, 2001). Assies (2003) also notes that where collective action is concerned, the unity of the movement cannot be taken for granted. It will be important to ask, which sector of the peasantry was represented in the debates or involved in the creation of the Irrigation Law no. 2878? As Sick (2008) notes, the restructuring of institutional frameworks changes the governance and the rights of use and access of resources. In so doing, institutional restructuring also has the potential to further inequalities, even when the protagonists who promote these changes are not necessarily the most powerful elites of a given society.

Sick (2008) advances a methodology of stakeholder analysis that “unpacks” the social contexts in which institutional reform occurs in order to understand the conditions and consequences of resource management institution building:

Conducting stakeholder analyses in order to understand the economic positions and strategies of all stakeholders (those with right to common property regimes as well as those without)—their social, economic, and political relationships; their perceptions of the environment and resource use; and their cultural values—will be a first step toward identifying (a) the ways in which stakeholders perceive one another, (b) potential sources of conflict and inequity, (c) networks that might facilitate communication flows and institution building, and (d) other social factors related to the development of more sustainable and equitable resource management institutions (Sick, 2008: 101).

The following chapters, remaining cognizant of Sick’s stakeholder analysis, utilize political ecology’s multi-scalar research model, recognizing that the structures and relations that shape marginalization are contingent on historical processes. In evaluating the social consequences in the formation and implementation of the Irrigation Law, this thesis pays attention to historical processes, knowledge and narrative production, which have shaped the governance of water systems and the political process of irrigation reform in Bolivia.

PROJECT DESIGN AND METHODOLOGY

I conducted the field research for this project in an eleven-week trip to Bolivia from April to June 2010. During this time I resided in the city of Cochabamba. It is the site of the 2000 Water War and the home of a very active community involved in water issues including: FEDECOR (*Federación*

Departamental Cochabambina de Regantes – Cochabamba Departmental Federation of Irrigators), an organization representing indigenous irrigating farmers that play a key role in the movement to defend public water; ASICA-Sur (*Asociación de los Sistemas Comunitarios de Agua del Sur* – Association of Community Water Systems of the South), that constructs community-run water systems in the poor areas that do not have water networks, an organization which formed in response to the lack of action from the public water company; and several non-governmental organizations, notably Agua Sustentable, which played a role in supporting the peasant irrigators' associations in the deliberations over the Irrigation Law and its regulations. Cochabamba is also where the more critical scholars in Bolivia reside and with whom I had the opportunity to discuss the law: CENDA (*Centro de Comunicación y Desarrollo Andino* – Centre for Communication and Andean Development); and the Centro AGUA (*Centro Andino para la Gestión y Uso de Agua* – Andean Centre for Water Use and Management), a research centre on water issues which is part of the San Simón University and conducts both social scientific and scientific studies on water use in several areas of the Department of Cochabamba.

My research trip coincided with two major conferences held in the city of Cochabamba. First was the widely broadcast World Peoples' Conference on the Rights of Mother Nature in Tiquipaya, called by President Evo Morales in response to the 'failure' of the Copenhagen summit on climate change. The overarching goal of the four-day conference, attended by 20,000 (a majority of whom were indigenous peoples from the Andean region and abroad), was to analyze the structural causes of climate change and problems that arise there from, but also to propose mobilization strategies and projects to address these

issues in a manner that is harmonious with nature. The conference concluded in the penning of a Universal Declaration on Mother Earth Rights,⁷ submitted by the Bolivian government to the United Nations. However, the many constructive aspects of the conference were offset by a notable lack of attention to the contradictions of Bolivian development plans. To highlight this omission, an unofficial *Mesa 18* (working group 18) was organized. During this workshop, a discussion was held on the development of mining, oil and gas exploration projects supported by the MAS government that organizers argued will lead to environmental degradation and the displacement of indigenous communities, e.g. the Trans-Oceanic Highway project.⁸ The issues surrounding this working group were an introduction to the controversial nature of Bolivian politics regarding environmental protection.

The Third Annual International Water Conference, organized as a collaborative effort by local social water organizations in Cochabamba, was smaller in scale but equally pertinent and focused on local issues. The theme of the conference was to analyze the progress that has been made ten years after the Water War since the water company was returned to public hands. An inaugural march from the historical Plaza 14 de Septiembre, a main site of the 2000 Water War to the conference location at the Complejo Fabril, the factory workers' union building complex, included amongst many supporters, water

⁷ The Universal Declaration on Mother Earth Rights recognizes the Rights of Nature, that is, ecosystems, including trees, oceans, animals and mountains, to complement and be respected on the same level as Human Rights.

⁸ The Trans-Oceanic Highway project is a joint infrastructure megaproject between Bolivia, Brazil, and Peru that would be constructed through the departments of Cochabamba, San Ignacio de Moxos and Beni, affecting over sixty indigenous communities inhabiting the Isiboro Sécure National Park (TIPNIS – *Territorio Indígena y Parque Nacional Isiboro Sécure*). The project runs counter to the Bolivian government's commitment under Convention 169 to obtain the indigenous communities' consent.

activists, members of community water organizations, and the residents of the southern zone of Cochabamba who face chronic lack of water access and water shortage. The conference was divided into thematic workshops and presentations: water source protection, reversing climate change and stopping water contamination; strategies for strengthening public utilities and community partnerships; constitutions and legal frameworks countering all forms of water privatization; community based management and public water management; constitutional changes and the water normative. Both conferences provided an opportunity to network and make contacts with researchers and water activists that would later bear fruitful interviews.

Time limitations prevented me from doing a true ethnographic study in the field by residing in a farming community in the Cochabamba Valley. I was in contact, however, with scholars who shared their ethnographic experience in irrigators' communities. Through contacts at the Centro AGUA I had the opportunity to travel to the Cochabamba countryside and meet farmers. Crucial to an understanding of the Irrigation Law's impact on the ground is the perspective of the peasants, which the law is intended to benefit. In light of this, I conducted research in the rural town of Punata, approximately 50 km south of the metropolis of Cochabamba. I chose Punata hypothesizing that towns in close vicinity to the city have a higher probability of knowing about the law, as information moves more quickly through urban networks (e.g. markets). There is a wealth of information about water issues in Punata because the water research centre, Centro AGUA, has been conducting on-going studies on

irrigation there on an array of subjects regarding water use and management.⁹ The connections established by Centro AGUA amongst communities in Punata facilitated the research process.

I attended a general assembly of the irrigators' association in Punata and interviewed the former association president. On a separate occasion, I was able to interview the current Punata irrigators' association president. It was a delicate situation so I breached the topic very carefully, being an outsider, and I did not want my interviews or questions to cause harm to the Centro AGUA as I was an affiliated researcher with the centre. Although the participants were friendly and willing to talk I knew from other researchers accounts that criticisms are not taken lightly and can prevent further research in the future. On separate occasions I returned to Punata where I attended the meeting of the *Asociación Sin Riego*, (Association without Irrigation), and a workshop run by a research group at Centro AGUA on the theme of sustainability and the future of the group's productivity. This workshop was very helpful to understand and learn the concerns of the farmers firsthand and how these factor into the impact of the Irrigation Law.

Interviews in Cochabamba with both proponents and critics of the Irrigation Law provided insights into the purpose and formation of the law, but also the controversies surrounding the law. I also traveled to La Paz, the capital of Bolivia, to conduct interviews. I was in contact with the international cooperation organization GTZ (German Partner for Technical Cooperation) in La

⁹ More recent projects include *Proyecto Humedal* (2006-2009) involving the construction, monitoring and evaluation of wetland, and evaluating the potential for purification of wastewater as a new technological alternative for rural and suburban areas; and *Proyecto GIRH* that aims to establish operational basis and strategy for integrated management of water resources in Bolivian basins, in interaction with user organizations and municipal governments (www.centro-agua.org).

Paz, but they directed me back to the GTZ offices of Cochabamba, where I held interviews with two irrigation engineers and an irrigation expert. All three staunchly insisted that although they develop irrigation programs and work with communities, all the projects and policy lines come from the government, and that they do not instigate projects (although this point is blurry in historical accounts). Unfortunately, an interview with the Water Minister was denied, but I was able to conduct two interviews with engineers from the Office of the Vice Ministry of Irrigation, which was more specific to my study. I also interviewed the heads of the legal, programs, and projects units at SENARI (*Servicio Nacional de Riego* – National Service for Irrigation), the national supervisory entity established by the Irrigation Law. The members of SENARI provided me with more detailed information on the processes involved with registration of sources, education, and program development. Like researchers before me, I was not granted access to the registration information. This denial of access presents a limitation to the project as the registration of sources contains information on who registered their sources and the location of said sources, which is the most controversial part of the Irrigation Law; it would be very telling of how the law is actually unfolding. I did, however, receive some minimal statistics on the number of registrations made since the law's establishment. SENARI is hesitant to release the data as they view it as a potential source of conflict, which they are trying to avoid. Nevertheless, the lack of public access to quantitative data on the registration is an interesting point of analysis that will be discussed in Chapter 4.

In total, I was able to conduct twenty formal interviews¹⁰ with an array of actors which gave me a nuanced understanding of the law's impact on the people the law is intended to serve, that is, the farmers themselves. I was also able to obtain much first and secondary research materials, such as books, reports, information pamphlets, that are not available outside of Bolivia. While there were some disappointments as I was not able to interview some individuals, conduct more extensive ethnographic research, or gain access to registration data, the field research experience helped me capture a better picture of irrigation in Cochabamba and Bolivia, without which the thesis would be lacking.

As the fieldwork progressed, the difficulties in assessing the impact of such a new law became clear. Such an evaluation, including empirical data, would require a longer period of time since the law's establishment and continuous field work in different regions of Bolivia. Thus, the intent of this thesis is to analyze the context of the new law, the dilemmas and power relations that emerge surrounding water and irrigation governance in Bolivia using the political ecology framework.

¹⁰ See Appendix for full interview list.

CHAPTER 2: INDIGENOUS PEASANT ORGANIZATION

Drawing upon the political ecology approach by focusing on the interactions between actors, this chapter aims to provide an historical perspective to contemporary resource struggles. Throughout Bolivian history we can trace the repeated themes of indigenous peasant marginalization and differentiation within communities resulting from systems of oppression. However, in parallel, a strong peasantry has consistently organized to resist these injustices. From the “system of ethnic stratification” established by the Spanish, which persisted far beyond the colonial period and continued to shape social relations and an unjust land tenure regime over the 19th and 20th centuries, to the new challenges of neoliberal reform and state restructuring, there has existed a “tradition of indigenous, campesino and worker mobilization and revolt” (Rivera Cusicanqui, 2003, 2004 cited in Perreault, 2006: 155). Nowhere is this more true than in the Cochabamba Valley, the “breadbasket” of Bolivia in which an important population of smallholding peasants emerged in the late 19th century.

COLONIAL PERIOD [1570 - 1826]

During the colonial period, indigenous groups suffered injustices and racism at the hands of the Spanish colonizers, which would endure throughout the centuries. Indigenous groups nevertheless managed to successfully form a class of smallholder peasants outside the control of the Spanish.

Prior to the arrival of the Spaniards, indigenous groups had certain control and access to natural resources under the Inca rule, which they managed using the Andean rationality (Peredo, Crespo, Fernández, 2004: 68). Quechua was the language of the Inca settlers, who arrived in the Cochabamba valleys

only a few decades before the Spanish, thus their rule was not consolidated. The fragile balance of power among Aymara and Quechua-speaking ethnic groups in the region under a centralized Inca rule made the area vulnerable to the European colonists as there was a lack of ethnic solidarity amongst the valley Indians and little or fragmented resistance in comparison to other regions (Larson, 1988: 298).

The Cochabamba Valley became known as the “breadbasket” of the Andes. By the 1570s and 1580s, the Spaniards had established ground in the Cochabamba Valley and expropriated the most fertile lands of the extensive irrigated agricultural terraces while creating a dependent rural labour force (Zimmerer, 2000: 158). Cochabamba became the supplier of food to colonial settlements throughout the Andes. The agriculture of Cochabamba was needed to support the emerging mining metropolis of Potosí. The Valley saw intensive maize production on irrigated lands, as well as the growth of livestock farms and the spread of agricultural fields primarily producing the highly demanded wheat flour to conform to the food of the Spanish (Larson, 1988: 299; Zimmerer, 2000: 162).

The Spanish settlers dismantled the existing land use arrangements of the indigenous groups that were established during the Inca rule (Zimmerer, 2000: 162). A hacienda system of landholdings and labour control was cemented (Larson, 1988: 302). Through crown rights and acquisitions, Spaniards claimed farmland and the rights to irrigation for their hacienda estates. Often, existing water systems built by the Inca were usurped intact from indigenous groups (Zimmerer, 2000: 165). Local and canal-based arrangements were sustained, but repurposed to serve colonial needs of wheat production. Towns were founded in

the valley basins and there were forced settlements of the indigenous peoples, known as *reducciones* (valley settlements included Capinota, Tiraque, Mizque, Aiquile, Tiquipaya, El Paso, Sipe Sipe) (Zimmerer, 2000: 161).

The colonial state established claim over Andean labour under a tribute system where all indigenous men between eighteen and fifty were forced to pay a colonial head tax. In return, the Spanish Crown granted certain privileges to Andean lords and permitted certain customary rights to indigenous communities (Larson, 1988: 299). In exchange for compliance with the Spanish state and the payment of tributes, indigenous groups could maintain their organization and customs with regards to the land (Peredo, Crespo, Fernández, 2004: 68). Here, we see the establishment of the concept of customary uses, “traditional practices specific to a place and social group,” that will emerge in the latter half of the 21st century as political and legal discourse.

Court documents suggest longstanding disputes over water rights in the Cochabamba Valley; many landholding claims acquired from the Incas, made by both Spaniards and indigenous groups were disputed in court (Zimmerer, 2000: 165). Indeed, there were constant confrontations over the use of canals between the indigenous and hacienda owners in the Central Valley and the Bajo Valley, although the hacienda owners maintained control (Peredo, Crespo, Fernández, 2004: 68).

Nevertheless, peasant families seeking livelihood successfully established alternative economies. This was possible due to a static economy stemming from Potosí's temporary decline in output, making it a weak market for the wheat produced in Cochabamba; prices for wheat were dropping or remained stagnant. Landlords had to adjust to the downturn of the market by dispensing

resources of the hacienda to the tenants (Larson, 1988: 302). In this context, space was created for the expansion of the peasant smallholder economy, and an emerging class of smallholder peasants that would become an important force of social change in the Cochabamba Valley. Depending on geographic location and viability of crops, peasant smallholders utilized market and non-market strategies (logic of commercial capitalism and traditional Andean subsistence strategies, respectively) to build a subsistence economy outside the control of the Spanish (ibid.). This had the effect of narrowing commercial opportunities for the landed elite in Cochabamba (Larson, 1988: 303).

Yet, this peasant class still faced injustices and racism of colonial society, and within the hacienda, threats to work and livelihood (landowner demands, natural disasters) were no longer sheltered by the Andean village context. The communal traditions of the Andean village, such as group self-sufficiency, reciprocity, and distribution, that reduced threats to subsistence and assuaged class forces, had decayed in the Cochabamba Valley under colonial rule (Larson, 1988: 304).¹¹

BOLIVIAN INDEPENDENCE [1826]

Bolivia achieved its independence from Spain in 1826, however, the new republic did not result in much change in the daily life of the average Bolivian. During this period, we see the continuation of injustices against the indigenous, through the continued payment of tributes and the Law of Expropriation.

¹¹ Larson notes, however, that village life had not been egalitarian; conflicts and social differentiation did occur; yet these were non-destructive inasmuch as the internal communal life and collective interests were defended against external threats (Larson, 1988: 305).

However, as the hacienda system continued to breakdown, the smallholder peasants continued to gain strength.

The Bolivian Independence from Spain in 1826, led by Simón de Bolívar, held the promise of change as he abolished the tribute tax. However, this was reinstated in 1831 by José Antonio Sucre as the primary source of revenue due to the financial crisis brought about by mining. Thus, throughout the 1830s and 1840s, the tribute payment to the republican state persisted (not abolished until 1882). In the highlands, where the *ayllus* was prevalent, the Andean peoples considered the tribute to be an affirmation by the state of their right to hold communal lands and protect their way of life (Larson, 1988: 306). The peasants of the Cochabamba Valley viewed the tributary system differently, as an unjust extraction. For them, the tribute did not hold the same symbolic value, as the state did not in exchange grant land to indigenous people living on hacienda lands (ibid.). These peasants resisted paying the tribute through the covert action of denouncing their ethnic status. Thus *mestizaje*, mixed blood population, spread throughout the countryside, where Quechua was spoken extensively, and “undermined [the state’s] ability to extract tribute” (Larson, 1988: 308).

In the 1870s and 1880s, Bolivia was incorporated into the world market for its mineral production with the explosion of silver mining, exported to Chile via a new rail system. This opened the country as a market for easily and cheaply imported wheat crops from Chile, not without important implications for agriculture in Cochabamba (Larson, 1988: 311). The influx in food imports isolated the once commercially active region of Cochabamba (Platt, 1998: 629). This decrease in profits from agricultural production, combined with the burden of heavy taxes, introduced difficulties and reduced profits for the large valley

hacienda landowners. However, this space allowed for the tenant peasants to earn money through petty capital accumulation and gain proprietorship to become smallholder peasants (Larson, 1988: 311).

In 1874, The Law of Expropriation was established by the Bolivian government, which introduced a private property regime. In order adopt capitalist policy which aimed to “unfetter the economy, shift the tax base to productive enterprise, and unlock the nation’s human and natural resources,” the law sought to break up communal land and effectively eliminate Indian communities (Larson, 1988: 310; Gotowitz, 2007: 26). Importantly, the law also established private property rights over water, creating distribution lists for water use for these communities (Peredo, Crespo, Fernández, 2004: 68). The law was met with violent resistance in some areas of the country that had strong communal solidarity such as the *ayllu* regions of Chayante in the department of Potosí.¹² Yet in areas where community and village life had deteriorated in the context of deepening market integration, as in the Cochabamba Valley, land and water rights were more easily transferred to private holding without resistance. The emerging peasant class was able to buy up small sections of land. In fact, from 1886 to 1894, 60% of land in the towns of Sipe Sipe, El Paso and Tiquipaya in Cochabamba, came into possession of small-scale cultivators (Larson, 1988: 312). Although many of the best bottom-valley lands and associated irrigation systems remained under control of the large hacienda owners, the hacienda system had significantly weakened, and a “robust peasant economy” was solidifying (Perreault, 2008: 841; Platt, 1998: 629; Larson, 1988: 312).

¹² The distribution lists were met with a violent response by the *ayllus* in a series of uprising against tax collection. This culminated in the “Caste War” of 1899 followed by elaboration of “cultural liberation and ethnic revindication”(Larson, 1988: 311).

Nevertheless, the smallholder peasants remained on the edge of insecurity, and any prosperity was always at risk of reversal by natural¹³ or personal disaster (Larson, 1988: 315). Furthermore, the distribution of resources was far from equal; some smallholders were able to accumulate, while others became landless labourers and squatters (ibid.). The unstable economic situation advanced social differentiation and created conditions for the emigration of poorer populations. Historical records note the high numbers of peasants and day labourers seeking wage work and subsistence security who migrated out of the region to work in the tin mines of North Potosí and the nitrate fields of Chile as early as the 1880s and 1890s. These former peasants would forge a new militant proletariat of mining workers whose labour movement would greatly influence the Cochabamba peasant resistance (Larson, 1988: 219). Indeed, during the 1910s and 1920s several regional indigenous rebellions emerged, most notably the Chayante Rebellion in 1927¹⁴. This type of social protest, aimed at changing the “social relations imposed by the haciendas” was halted by the Chaco War (1932-1935)¹⁵ (Linera et al., 2010: 109; Webber, 2011: 52). Participation by the indigenous in the Chaco War occurred through forced conscription, yet it was also viewed by indigenous peasants as a way to incorporate themselves within the state system in order to gain citizenship rights that would give more weight and legitimacy to indigenous demands involving land rights.

¹³ The increase of peasant smallholdings concurred with ecological deterioration and pressures from a growing population’s demands for land and water (Larson, 1988: 315).

¹⁴ The Chayante Rebellion started in July of 1927 in Chayante, Northern Potosí. The rebellion saw the destruction of haciendas and attacks on landowners that spread throughout the country to four other Bolivian Departments. The rebellion was stopped by the military, with the killing hundreds of indigenous peasants, and a small number of hacienda owners (Webber, 2011).

¹⁵ The Chaco War (1932-1935) between Bolivia and Paraguay was led by Salamanca’s authoritarian regime with some disastrous consequences, including over 52,000 dead and the ceding of hundreds of kilometers in Bolivian territory (Webber, 2011).

At the end of the disastrous Chaco War in the mid-1930s, many questioned the Bolivian Republic governing parties' legitimacy, deeming their policies racist and exploitative, and in favour of the landed elite and the tin-barons (Carter, 1971: 238). Many returning soldiers settled in Ucureña, in the region of Cliza, Alto Valley of Cochabamba. These veterans were particularly militant in challenging the hacienda system, organizing and successfully renting land in Cochabamba owned by nuns. However, surrounding hacienda owners perceived this as a threat and managed to join forces to simultaneously take over the rent at a higher price and thwart the leaders' efforts. These actions only bolstered the veterans' determination; they began establishing formal peasant unions or *sindicatos* on several estates of the Cochabamba Valley (ibid.). In fact, the first peasant union, the Agrarian Union of Huasacalle, was established in Ucureña in 1936 (Linares et al., 2010: 108). This type of peasant mobilization continued for the two decades leading up to the national popular revolution in 1952. Most notable were the 1947 rural uprisings, when indigenous peasants took direct action against authorities and hacienda owners in response to then-President Hertzog's refusal to recognize the proposed decrees that included returning the land to the indigenous, and ensuring their freedom and respect (Webber, 2011: 64). Ultimately, the 1947 uprisings did not rupture the hacienda owners' power; however, the indigenous peasant mobilization soon after became a catalyst of agrarian reform (ibid.).

NATIONAL POPULAR REVOLUTION [1952]

The 1952 National Revolution, led by Paz Estensorro, brought about a new wave of transformations in the countryside (Ballivián, 2009: 49). The

populist (at the time) MNR (*Movimiento Nacionalista Revolucionario* – National Revolutionary Movement) severed the old regime of elites and established a centralized state. It occurred at the time of popular mobilization in the city as well as in the countryside. The rural movement continued to gain momentum following the revolution with mobilizations in Oruro, La Paz, north Potosí, Chuquisaca, and in Cochabamba, where peasants occupied land, refused to work for hacienda landlords, and demanded expropriation (Yashar, 2005: 156). At the time there was a vast disparity in Bolivia as 4.5% of the population owned 70% of the land. Agrarian reform was achieved in a moment of alliance between peasants, workers, and revolutionaries, who orchestrated an expansive and swift redistribution of land from the hacienda lands in the Altiplano and the Cochabamba valleys (Perreault, 2006; Ballivián, 2009). This land reform combined with the “freeing of labour” granted access to land and greater autonomy and freedom to rural inhabitants, and in turn more space to “negotiate daily life according to individual and community norms” (Yashar, 2005: 156).

MNR established what Yashar (2005) terms a “corporatist citizenship regime.” To create a rural base for their political party, MNR implemented populist measures including the extension of citizenship rights and universal suffrage to the rural population, extending education in the countryside, moreover granting political positions to peasants. Importantly, the MNR capitalized on the agrarian unions formed in previous decades, to create institutionalized support for the party, and attempted to build strength of the national peasant unions to act as the intermediary between the state and the peasants (Yashar, 2005: 160). However, the MNR’s attempt to build up a

“peasant” class of support and control through a federal structure also entailed the promotion of a new form of identity, *mestizaje* or blended national unity, which aimed to suppress the multiethnic indigenous identity of the majority of the population (Albó, 1994: 67). Indeed, Indians were referred to as “peasants” in official documents and discourse. The Ministry of Indian and Peasant Affairs created by the MNR would eventually be renamed Ministry of Peasant Affairs in an attempt to “turn Indians into peasants” (Yashar, 2005: 159). Illegal favouritism was rampant, and members of unions had greater access to land and resources as part of unions (Yashar, 2005: 160). Thus, access to resources and political life was tied to the systematic exclusion of indigenous people and encouraged their conformation “to a homogenous mestizo ideal” (Albro, 2005: 434).

In the years following Agrarian reform, investment in agriculture remained limited, yet the growth and expansion of commerce happened quickly where there were prior established connections to the market. It infiltrated agricultural production and impacted smallholder peasants, subordinated to the capitalist market, as they had no influence on market prices, kept substantially lower than the work value (Ballivián, 2009: 93). This structural exploitation pushed the small-scale producer into ruin. This resulted in “depeasantization” as peasants had fewer resources to spend on agriculture and they tried to earn a living elsewhere (ibid.). However, because capitalist development remained weak throughout the country, the peasant remained in a constant state of transition between agriculture and the sale of labour in the formal and informal sector. New social groups emerged: semi-proletariat and paupers in the countryside, and strict proletariat in urban centres that no longer made use of the land (i.e. the very poor migrant workers who lived in the ‘slums’) (ibid.).

In the countryside, capital accumulation was very difficult for peasants who could not earn enough capital to possess land. As such, they were obliged to practice so-called migratory agriculture, which entailed migrating to previously abandoned lands until the land's fertility was exhausted. Not to mention, the high land erosion, this practice placed some peasants in what Ballivián (2009) terms a situation of permanent migration. Here we see the social differences amongst peasants, those with access to land and the accompanying water rights, and the landless peasants.

At the same time, the Cochabamba agrarian unions gained power by self-governing locally within communities and former hacienda lands, while making demands for land and citizenship nationally (Albó, 1994: 75). These unions adopted an updated version of the structure of traditional communal organization, in spite of MNR's attempts to repress indigenous forms of identity. (ibid.). The MNR corporatist citizenship regime however continued for many decades. Despite hardships, the rural communities gained greater local autonomy, although organization around indigenous issues remained limited – this began to change during the 1960s.

EMERGENCE OF INDIGENOUS MOVEMENTS

During a time of great unrest caused by a harsh military rule (1964-1980s), mobilizations began to take a decidedly indigenous stance. The Kataristas—a prominent group of young Aymara radicals that emerged in La Paz—successfully re-articulated an identity that has been suppressed in the previous regime. This identity and discourse would inform subsequent struggles later in the century.

In 1964, the military government of General René Barrientos toppled the MNR rule, breaking the corporatist arrangement which would signal a decade of oppressive military regime. The military government sought to tie the rural population to the military government through the institution of the Military-Peasant pact. Payments and threats were enacted upon union leaders in return for support to the regime, stifling autonomy amongst communities, and cutting resources once pledged by the MNR. The union structure was used to benefit the military, and did not legitimately represent the communities the unions purported to represent (Yashar, 2005: 164). In rural areas that had already been successfully linked to the state, namely Cochabamba, the Military-Peasant Pact was most successful. Thus, Cochabamba was the ground of regime support, despite the strong peasant organization (Yashar, 2005: 165).

However, this support diminished in the mid 1960s due to the military government's unfavourable measures towards the peasantry, including the devaluation of money, the increase of staple food prices and the freezing of agricultural goods' prices. By 1969, a dwindling percentage of the national budget was being allocated to the Ministry of Agriculture, and the bulk of these moneys benefited the budding agro-business in the eastern lowlands rather than farmers in the Altiplano. This incited urban and peasant protests throughout the 1970s in the form of strikes, demonstrations, and highway blockades, important tactics of peasant organization in Cochabamba (ibid.).

By contrast, in La Paz, the peasants' mobilization for local autonomy took shape along ethnic lines, and would come to form "a new generation of indigenous leaders to demand their rights as Indians, as Indian communities, and as Indian citizens" (Yashar, 2005: 163). In Cochabamba, traditional indigenous

authorities had been displaced and subordinated historically both by market forces and through the union structure during the military rule. Yet in La Paz, since the indigenous community structure had been maintained, the military threat to autonomy was interpreted as an indigenous issue, thus the emergence of indigenous movements (Yashar, 2005: 157). In La Paz, a prominent group of young Aymara men formed the Kataristas, a movement which identified their struggle against racial discrimination and reclaimed the importance of indigenous identity after years of state rejection.¹⁶ Their Katarista¹⁷ movement “embraced that Indian past as part of contemporary and forward-looking future” as they set forth to attain indigenous self-determination as an indigenous nation with specific communal practices within the Bolivian state (Albro, 2005: 434). The Kataristas denounced the Agrarian reform of 1953 as a failure since it encouraged individualism and fragmented indigenous communities (Yashar, 2005: 179). The Kataristas capitalized on the transcommunity networks, the pre-existing indigenous community networks and political associational space (Yashar, 2005: 157). They did not separate ethnicity and class but rather highlighted both: “Indians, by virtue of being Indians, were discriminated against just as Indians who were peasants confronted additional and equally central forms of exploitation” (Yashar, 2005: 170). The Katarista leaders organized at the local level at union organization, they aimed to gain control of organizations, and create space for indigenous traditional practices and customs. They promoted the use of the *wiphala*, the multicolour indigenous flag, played

¹⁶ Another movement called the Indianistas also emerged but failed to garner the same level of support as the Kataristas mostly due to the urban focus of their outreach that did not extend to the communities surrounding the city of La Paz (Yashar, 2005: 157).

¹⁷ Named after Túpac Katari, an Aymara leader of the rebellions against the Spanish in the 1780s.

traditional musical instruments and commemorated Indian martyrs in order to promote indigenous history and break down the MNR's doctrine of a homogenous *mestizo* peasant class (ibid.). As previously stated, the indigenous community tradition in Cochabamba had been weakened, so it was not until La Paz had organized successfully along indigenous lines that Cochabamba communities followed (ibid.).

In 1971, Banzer's brutal military government overthrew Torres' rule, closing political associational space and effectively overpowered the Katarista movement, marked by the 1974 massacre in Cochabamba.¹⁸ Indeed, during the military governments, the levels of repression and the associated political openings and closures corresponded to the space for Kataristas to protest and organize, form peasant organizations with autonomy from the Military-Peasant Pact. The Katarista movement began to strengthen once again during less repressive rule at the moment of political liberalization beginning in 1977. The transition of 1977-1982 of seven military and two civilian governments caused much unrest, however, it did allow for the opening political space for a resurgence of civil society, with the Kataristas playing a major role in the mobilization against the regime. They successfully brought together many peasant federations, reorganized under one unified *campesino* union, the CSUTCB (*Confederación Sindical Única de Trabajadores Campesinos de Bolivia* – Sole Confederation of Peasant Workers of Bolivia) effectively ending the old leadership tied to military governments after the MNR (Hertzler, 2005: 56). The CSUTCB would continue to play an important role in the mobilization against

¹⁸ In January of 1974, peasants protesting price policies and raised taxed through roadblocks were massacred by Banzer's military government. See Silvia Rivera (1984) *Oppressed but not defeated: Peasant Struggles Among the Aymara and Quechua in Bolivia 1900-1980*.

the government when the latter announced the IMF-endorsed economic package that would freeze agricultural goods prices and increase prices for fuel, transportation, and basic goods. The CSUTCB organized, through peasant unions, a nation-wide blockade of thirty roads in each department, which paralyzed the country for longer than a week – reportedly the biggest peasant mobilization since the revolution in 1952 (Yashar, 2005: 175). The CSUTCB put forth an Agrarian Reform Proposal in 1983-84, a demand to amend the agrarian reform policy of the 1950s and introduce ethnic demands into political debates, including the recognition of communal lands, cultural pluralism, and communal labour. They demanded state recognition of indigenous authorities and the approval of related practices of organization, customs and traditions, and local economic production (ibid). While the proposal was never brought to a vote before Congress, it did mark autonomy as a key issue of Bolivian indigenous movements (ibid.).

Indeed, while the Katarista movement ultimately did not reach the status of elected political party, the movement brought forth communal autonomy and indigenous national assembly as important ideas that would re-emerge in subsequent struggles, as we will see below.¹⁹

STATE RESTRUCTURING UNDER NEOLIBERAL REFORM AND INDIGENOUS MOVEMENTS

The 1980s and 1990s saw exclusionary processes continue with the damaging and drastic reforms carried out through neoliberal policies. During

¹⁹ The Kataristas did not achieve electoral success for many reasons including insufficient financial resources, lack of urban base support, and internal dispute, and the cooptation of movement leaders (Jenaro Flores and Victor Hugo Cardenas) into government office (Albro, 2005: 441).

this period emerges what Yashar terms the 'second generation' of indigenous movements. These new movements built upon the Katarista ideas and concepts, and used indigenous discourse to their advantage.

Thirty years after the national popular revolution of 1952, Bolivia was in the midst of a redemocratization process, yet faced a conjuncture of political and social unrest, and economic crisis. The country had hit its highest hyperinflation rate, greatly due to its reliance on tin exportation while prices for this commodity were dropping (Perreault, 2006: 155). In 1985, the MNR was once again elected to power under the leadership of Paz Estenssoro, this time reversing the statist policies implemented at the time of revolution (a point of confusion for Bolivians), including terminating programs that benefited peasant communities. (Yashar, 2005: 182). As in other Latin American countries beset by the region-wide debt crisis, Bolivia was pressured by the World Bank and multilateral financial agencies to impose structural adjustment measures, based on neoliberal theory of economic liberalization, the free flow of good and capital, with minimal state intervention (Veltmeyer & Tellez, 2001: 68). Paz Estenssoro introduced the first rounds of neoliberal reforms with the New Economic Policy (NEP), economic liberalization and adjustment measures in order to counter hyperinflation and recession (Barja & Urquiola, 2005; Veltmeyer & Tellez, 2001). The NEP, drafted by the "Chicago Boys," was instituted through Decree 21060, an economic reform policy that advanced a new ideological framework into Bolivia's economic, political, and social spheres (Veltmeyer & Tellez, 2001: 76). Bolivia switched from a state-led to a market-driven economy as market allocation mechanisms were promoted and key prices were liberalized (Barja & Urquiola, 2005). The administration of Paz Estenssoro (1985-1989) fixated on

achieving economic stability through strict fiscal discipline and the implementation of structural reform through tax reform and independence for monetary authorities. The Structural Adjustment Program (SAP), stabilization measures and long-term structural reforms that would reduce the size and role of the government, were insisted upon by the World Bank, the International Monetary Fund (IMF) and the Inter-American Development Bank (IDB) in order to service external debt. Bolivia would come to be a 'star reformer' as the measures actualized some intended results such as the GDP increase to 3.8% in 1989 (Veltmeyer & Tellez, 2001: 77).

However, these results were achieved by enacting extreme measures such as closing state-owned enterprises, the most drastic reform being the closure of mining enterprises. This was done due to the perceived over-reliance on the mineral export, despite the revenues of this industry being the greatest contributing source to foreign exchange (Hertzler, 2005: 47). This closure effectively placed 25,000 (of 32,000) mining workers into unemployment. The move was met with great resistance from the COB (*Central Obrera Boliviana* – Bolivian Workers Central), the national trade union federation and miners' union, who led the *Por la Vida* (For Life) protest in 1986. The protest was met with military force, abrogation of civil rights and the banning of unions (as a requisite of neoliberalism is the stability and governability of a country) (Veltmeyer & Tellez, 2001: 77). Other measures that negatively impacted the countryside were the liberalization of trade and agricultural prices, the freezing of wages, and the removal of price controls and subsidies for agricultural products, petroleum, and gas (Hertzler, 2005: 47; Yashar, 2005: 182). The NEP also had social impacts as the degradation of working conditions (lack of legal

protection, increased insecurity, weakened union capacity) caused by the unemployment that in turn, spurred the growth of the informal sector (Veltmeyer & Tellez, 2001: 80).²⁰

In response to the harsh neoliberal reforms, a 'second generation' of indigenous movements emerged from the countryside (Yashar, 2005: 180). The ex-mining workers returned to their rural communities of origin, yet faced high levels of unemployment as they were unable to be absorbed into the local economies, given the dearth of land, often prompting conflict between ex-miners and peasants. Along with some impoverished peasants, these ex-miners moved to the Chapare region to cultivate coca. The 'radicalism' of the tin miners would carry over into the coca-growing communities in the Chapare (ibid.). It is estimated that the population of the Chapare region doubled between 1984 and 1989. From this region, the cocaleros emerged, a movement that affiliated with the CSUTCB,²¹ that fought to "valorize the coca leaf and to legalize its production and consumptions" for indigenous communities (Yashar, 2005: 185). The cocaleros defended coca production as part of Indian culture and tradition. They had "woven an ethnic discourse about cultural rights and autonomy" (ibid.). The Bolivian government had been cooperating with U.S. demands to eradicate coca, which threatened the cocaleros livelihood (Hertzler, 2005: 45). Yashar argues that this generation of indigenous mobilization had understood from the former Katarista struggles and successes, the "strategic value of mobilizing along indigenous lines." It was a useful discourse to adopt, rather than strictly class-

²⁰ Notably, social development did improve, largely due to community-based organizations' service provision (Veltmeyer & Tellez, 2001: 80).

²¹ The state led a failed attempt to weaken support for the CSUTCB in rural areas by creating separate official state unions led by former peasant leaders during the military-peasant pact and dispensing patronage. (Yashar, 2005: 185)

based organization, as a means to gain political ground (Yashar, 2005: 182). The discourse became an important part of their struggle even if at first the cocaleros did not concern themselves with local autonomy, the discussion soon turned to the “needs and rights of their indigenous local communities in the Chapare” (Yashar, 2005: 185).

The next set of neoliberal reforms were introduced by the administration of Jaime Paz Zamora (1989-1993), the New Investment Law (1990) and the Privatization Law (1992) were established providing the framework to privatize state firms mainly owned by public development corporations. The state apparatus was further downsized through the reduction of the number of public employees. By 1993, economic growth had reached 4.3% and the investment rate was 15.7% (Barja & Urquiola, 2005). However, the consensus formed that to notably reduce poverty, Bolivia would require an even higher growth rate. In a free market setting, this meant that Bolivia would need to attract more foreign direct investment. Bolivia’s macroeconomic stability was scrutinized by the World Bank as public investment continued to be the source of growth across several sectors: electricity, water, sewerage, telecommunications, transportation, oil exploration, health, and education. International organizations such as the World Bank were promoting privatization as the path to development and democracy (ibid).

However, in the nineties, the high social costs of restructuring were becoming apparent, and a new ‘antipoverty’ approach prompted the World Bank to redesign the SAP (Veltmeyer & Tellez, 2001: 83). In Bolivia, this approach materialized under the Sanchez de Lozada administration (1993-1997) with the *Plan de Todos* (Everyone’s Plan), which called for privatization, decentralization

and popular participation to create a compelling environment for private investment (Ahlers, 2005). Key pieces of the *Plan de Todos* were the Law of Capitalization (1994), the Popular Participation Law (1994) and the Decentralization Law (1995), which provided the institutional basis to deepen neoliberal reform.

Through the Law of Capitalization, five state-owned industries, representing 12.5% of GDP, were partially privatized (Kohl, 2002, 450). In each of the major industrial sectors, organizational reforms were carried out through a regulatory framework promoting competition and efficiency. The SIRESE Law (*Sistema de Regulación Sectorial* – Sectorial Regulation System) established in 1994 was the key legislation creating a centralized regulatory system for the infrastructure sector, defining the role and structure of the regulatory agencies or *superintendencias*. These are agencies that oversee coordination, appeals and evaluation, and introduce the principle of market competition (Barja & Urquiola, 2005).²² Privatization is viewed as a way to attract foreign investment while improving the management in key sectors of the economy (by drastically reducing government intervention) (ibid.). However, the investment generated by structural adjustment and state reform was less than expected. Economic growth grew at 4.2% per year from 1990-1999, which was not sufficient to meet

²² Productive sectors were transferred to private firms with 51% of the share remaining in Bolivian hands in the anticipation of democratizing business ownership, stimulating investment and achieving growth. The promise of privatization was growth and efficiency along with social equity (e.g. prevention of wealth concentration). However, when privatization was implemented, the idea of 51% majority control was deserted as foreign investors wanted at minimum 50% share to control the company, for they feared government intervention. With this 50% share, the investor has the right to manage the firm, but also commits to investing in the industry's development within a specified time frame. The firms were investing in quality, employment, and increasing coverage rates whereas the government would potentially spend the money on projects that would not greatly impact economic development. The emphasis is on investment, and the government does not receive disposable income through this transaction. (Barja & Urquiola, 2005).

the 2.4% population growth over that same period (not to mention saying little of wealth distribution). The Gross National Product per capita was \$1,010 at the end of the nineties, leaving 70% of the Bolivian population below the poverty line (Nickson & Vargas, 2002).

The Decentralization Law broadened the local municipal government jurisdiction to rural areas previously governed by traditional and indigenous organizations that did not receive public resources. The Popular Participation Law (PPL) created over 300 local administrative units or *municipios* that would receive 20% of the national budget, along with the responsibility for local infrastructure maintenance and investment (Kohl, 2002: 450). In order to create a mechanism for popular participation in government decision-making, the PPL made provisions for municipal boards and councils, but also legally recognized over 10,500 community-based organizations (e.g. neighbourhood associations, agrarian unions) as *Organizaciones Territoriales de Base* (Territorial Base Organizations) (Veltmeyer & Tellez, 2001: 88).

The participatory mechanisms of these laws, combined with privatization, were put in place in order to provide social stability and the right conditions for transnational corporations to access natural resources and labour at low costs (Ahlers, 2005). On the other hand, decentralization and popular participation had been long-standing demands of civil society (Veltmeyer & Tellez, 2001: 87). Importantly for the irrigators, these new *municipios* granted authority over particular resource administration functions, including irrigation systems (fewer than 100 hectares) (Kohl, 2002). Irrigators saw the law as a window of potential for greater local resource management organized by civil society (Perreault, 2008: 842).

The PPL also provided a new definition of Bolivia as a multi-ethnic state, making space for indigenous inclusion (Albro, 2005: 435). However, some authors (see Nancy Postero, 2004) frame these multicultural reforms as another tool of indigenous assimilation into the nation-state. Albro views the recognition of indigenous peoples through the PPL as a subordination of indigenous peoples as 'indigenous citizens' in order to serve nation building. Without addressing questions of exclusion and injustice, this designation ultimately makes use of cultural rights to quash the indigenous movements (Albro, 2005: 435). Moreover, the PPL shifts responsibility for rural development from the state to 'civil society,' which in many cases means non-government organizations (Kohl, 2005: 458). Nevertheless, these laws and the corresponding multicultural reforms allowed for indigenous leaders to demand that the state fulfil its commitments. Using the local government of new municipalities created by the PPL as a channel for national political participation, indigenous leaders were being elected as local officials. In fact, by 1997, 29% of the municipal candidates were indigenous (Perreault, 2006). These local indigenous officials entering the formal electoral arena were in a position to take hold of municipal politics, most prominently, Evo Morales of the *Movimiento al Socialismo* (Movement towards socialism) or MAS party of the Chapare region (Yashar, 2005: 184).²³

The indigenous movements had re-emerged to protest the neoliberal policies that "destroyed the means of survival for many of Bolivia's poor people in exchange for meagre amounts of aid and unrealized promises of development" (Hertzler, 2005: 45). They spurred the majority indigenous population to organize for a common cause, successfully mobilizing many

²³ Evo Morales eventually was elected the first indigenous President of Bolivia in 2005.

Bolivians on issues using strategies of direct action protest to pressure the government to hear their demands. By advocating for an inclusive pluralist Bolivia using existing rural networks and appealing to an urban base, indigenous movements were able to mobilize around indigenous rights across several social spheres (Albro, 2005: 434; Yashar, 2005: 182). The successful and strategic use of indigenous discourse will be illustrated in greater depth in the following chapter through the case of the Water War in Cochabamba.

CONCLUSION

The purpose of this chapter was to explain historical moments important to understanding and contextualizing the irrigators' movement, which will be addressed in the next chapter. A strong racist ideology perpetuated throughout history in Bolivia, from the colonial to the post-colonial or neo-colonial racist policies that attempted to assimilate the indigenous population. Interestingly in the Cochabamba Valley, the early breakdown of the hacienda system (prior to the Agrarian reform) led to the emergence of a strong class of peasant smallholders that mobilized throughout the years. However it was not until the 1970s and 1980s that these peasants or *campesinos* began to mobilize around indigenous issues, after having their indigenous identity suppressed for many years. Next, we examine how the indigenous discourse continues to play an important role in anti-neoliberal mobilization in the case of the Cochabamba Water War, and the subsequent reforms that led to the formation of the Irrigation Law.

CHAPTER 3: THE IRRIGATORS' MOVEMENT AND INSTITUTIONAL REFORM

The previous chapter informs of the historical struggles from which emerged a powerful peasant movement that eventually adopted an indigenous discourse of respect for traditional uses and customs. The irrigators' movement forms part of this broader mobilization, focusing on indigenous rights of the use and management of natural resources. The irrigators engaged as key actors in the Cochabamba Water War, and continued to campaign for institutional reform that led to the establishment of the Irrigation Law no. 2878. This chapter will first introduce the concept of *usos y costumbres*, namely its importance and social significance in local irrigation management in the Cochabamba Valley. Next, the formation of the irrigators' movement and their implication in the Cochabamba Water War will be explained, employing a multi-scalar frame of reference by identifying the global processes that prompted local reactions. In the context of a broader 'fight against privatization', the discourse of *usos y costumbres* proves to be a powerful tool.

USOS Y COSTUMBRES: LOCAL IRRIGATION MANAGEMENT IN THE COCHABAMBA VALLEY

In the Andes, water use customs have changed significantly over the past centuries (Trawick, 2002: 981). Some historical practices in Bolivia, such as water distribution practices dating from 1884, have survived (Peredo, Crespo,

Fernández, 2004: 67).²⁴ The concept of *usos y costumbres* was cemented shortly after the Agrarian Reform in 1953 when water rights along with land titles were transferred from the hacienda owners to peasant farming communities. This shifted the governance of irrigation systems, which would henceforth be based on agreements within and between communities (Peredo, Crespo, Fernández, 2004: 68; Orellana Aillón, 2006: 501). Due to the dearth of state water laws, users who received land as the result of Agrarian Reform in the 1950s and 1960s were able to organize and manage resources based on established norms, rules, and agreements based on principles that are grounded in the Andean worldview (Bustamante & Gutiérrez, 1999: 163). These include general principles of reciprocity and redistribution (Bustamante & Gutiérrez, 1999: 163). There are also general norms within these communities that govern the collective right to access water and irrigation infrastructure, with individual rights existing within the collective framework (Bustamante & Gutiérrez, 1999: 164). That is to say, contemporary water governance practices exist in a context of legal pluralism where local rules and arrangements interact with state institutions (Boelens & Bustamante, 2005: 10).

There is competition over water use from other sectors that places pressure on irrigating groups. The use and management of rural water is contained in separate resource and sectoral laws that have established water rights (e.g. mining, electricity generation, etc.), posing a threat to irrigating farmers who typically are less prioritized. Although there have been thirty-two

²⁴ The distribution of water is based on the distribution 'native basis,' with the distribution list established by the Expropriation Law of 1884. Different groups of irrigators present themselves at meetings, or to collect their water, they use their ancient names "Manuela Pachucama" this corresponds to a form of organization – organized by different *ayllus* of groups from a particular territory (Peredo, Crespo, Fernández, 2004).

proposed new versions of the 1906 Water Law, none have been accepted by the state to create a single cohesive law regarding water use (Bustamante, 2002; Perreault, 2006). The competition over water between sectors spills over to create competition between communities for the scarce resource.

In relation to irrigation systems in the Cochabamba Valley, *usos y costumbres* can be defined more generally as mutually agreed upon rules of water governance established by the peasantry. Given that the majority of peasants are Quechua and Aymara peoples, *usos y costumbres* can be considered indigenous (Perreault, 2008: 835). The customary practices can be defined as traditional customary practices that are: “repeated, habitual and regular; based on thorough, intimate knowledge of the social and environmental context in which irrigation takes place; voluntary, mutually-agreed-on, and accepted within a given social context and not imposed by an external actor” (Perreault, 2008: 839). In short, customary practices consist of the day-to-day practices employed by individuals, households and communities to secure the material basis of life (Perreault, 2008: 839).

Although *usos y costumbres* are justified with reference to ancient traditions and customs, they are contemporary and dynamic. Different groups and communities interpret and internalize *usos y costumbres* to suit their particular needs (Perreault, 2008: 839). As such, the *usos y costumbres* are in a permanent state of transformation, which takes place in relation to other systems. This enables groups to arrive at solutions through agreements as problems arrive, be it fluctuation in the number of users, ecological problems that impact water availability, or pressures from competing sectors (Bustamante & Gutiérrez, 1999: 166; Perreault, 2008: 839). *Usos y costumbres* govern the water

use and management of an irrigation system, the water rights that give the users permission to irrigate a plot of land, the permission to make use of a given source of water according to the system of *mita* or water turns, and to determine how contributions of labour or sanctions and penalties will be invoked (Trawick, 2002, 978; Gerbrandy & Hoogendam, 1998: 84). In short, they are a set of social relations that determine who can or cannot access water (Gerbrandy & Hoogendam, 1998: 82).

Water rights are best understood as a “bundle of rights” that includes water access, management, and decision-making rights (Perreault, 2008: 839; Gerbrandy & Hoogendam, 1998: 105; Bustamante & Boelens, 2005: 10). At the operational level, water rights consist of the right to water usufruct (to acquire a part of the water) and the right to use canals (right to use infrastructure to conduct the water). At the level of collective decision-making, water rights refer to the right to manage (regulate internal patterns of use and transform resources); the right to exclusion (to determine who can obtain right to water and the transfer of this right); and the right to transfer rights of collective decision-making and use to other users (Gerbrandy & Hoogendam, 1998: 105). The rights and powers are distributed differently depending on the right-holder (Boelens & Bustamante, 2005: 10).

Since water is managed collectively, not at the level of the individual, water rights cannot be understood under a ‘singular’ concept of property (Gerbrandy & Hoogendam, 1998: 84). The communal character of water rights is a common characteristic of irrigation systems in the Cochabamba Valley. There are collective rights that irrigator groups or communities have over water. Each community has defined water rights for the different sources and types of water

or irrigation systems, according to turns, hours, and days. Irrigation groups share collective patrimony over their water rights. Families in communities also have defined water rights in turns, dates, and hours that have been acquired through inheritance or otherwise. It is a collective right to use a water source and irrigation infrastructure (Peredo, Crespo, Fernández, 2004: 69). In order to retain their water rights, users must contribute in ways that reproduce community life (Gerbrandy & Hoogendam, 1998: 84). Collective work in the construction and upkeep of irrigation systems is fundamental to the established relations of social reproduction between the peasants in the Cochabamba Valley. This work is the main criteria for water access and user rights to a particular system (Orellana Aillón, 2006: 497). Sanctions are in place for non-compliance, but are more symbolic as they do not always imply punishment, but rather the possibility of punishment (Bustamante & Gutiérrez, 1999: 164).

The organization of communal management is complex and varies according to the irrigation systems. Typically, there is a peasant union that provides the political framework that determines the norms and customs of labour exchange between community members (Regalsky, 2006: 131). Yet there are also irrigation organizations, which are autonomous and decentralized, further explained below.

Finally, of important note for this study is the social significance of *usos y costumbres*. Below Crespo, Peredo and Fernández (2004) offer a ‘conceptual approximation’ that marries the different visions of *usos y costumbres* present in the Cochabamba Valley:

Los usos y costumbres son los derechos naturales que Dios ha dado al hombre. El agua es la Pachamama y Wirakhocah, que no es una persona ni espíritu, sino la tierra que nos da la vida y su sangre es el agua que permite la vida de la humanidad. Son todos los derechos que nos dejan los abuelos, es decir los originarios, lo que heredamos de los patrones, y que han

leevado nuestros papas, abuelos y hasta ahora manejamos nosotros. Era costumbre desde el principio, de nuestro gusto hemos despertado a eso y eso se habia llamado usos y costumbres, el agua esta caminando segun usos y costumbres, como un camino que se abre siempre, nadie puede cambiarlo. No hay patron, para nosotros no hay alcalde, ni quien nos diga algo, entonces nadie nos tiene que decir esto haz, aquello o aquel otro. Es una Ley que no esta escrita en papel. Por los usos y costumbres nuestra lucha sera permanente, por esa causa hemos peledao y siempre vamos a defender.

Uses and customs are natural rights that God gave to man. Water is Mother Earth (*Pachamama*) and the Creator (*Wirakhocah*), that is not a person or a spirit, but the earth that gives us life and (her) blood is the water that allows humanity to exist. They are also all the rights left to us by our grandparents, that is to say those who came before us, what we have inherited from the owners of the land, according to uses and customs practiced by our parents, grandparents and still we practice today. They will never be lost. The water flows according to the uses and customs, like a path that is always open, nobody can change it. For us, there is no owner, there is no mayor, nobody that tells us anything. It is a law that is not written on a paper because uses and customs is our perpetual fight, and for this cause we fight and will forever defend.

This excerpt demonstrates the Andean worldview of water rights and the communal governance of the corresponding irrigation systems, shaped by historical struggles to maintain these practices. *Usos y costumbres* are reflected in cultural expressions, tied to a particular conception of water and nature (Gerbrundy & Hoogendam, 1998: 32). The Andean peoples' traditional belief considers water as a being, with which humans must coexist harmoniously (ibid.). Water is a sacred gift from the gods, *Pachamama* and *Wirakhocha*, to the people, thus it does not belong to the state nor can it be sold (Peredo, Crespo, Fernández, 2004: 69; Olivera, 2004: 8). In this regard, respect is shown to the gift of water in the ceremonious actions tied to use, management and construction practices. In the Andes, there are various examples of ceremonies and festivals relating to water. Rituals can include asking the gods for increased precipitations or the quick passing of frost, interpreting weather and ecological signs to forecast the season and decrease unpredictability, and harmonizing production cycles with climate cycles (Gerbrundy & Hoogendam, 1998: 32). As we will see

below, the irrigators' movement was able to capture this ancestral collective memory in their use of *usos y costumbres* as political discourse against water privatization. The concept is socially significant in its reference to the indigenous identity, and thus become the basis for water rights vindication and a rejection of external state intervention (Bustamante & Gutiérrez, 1999: 166).

THE IRRIGATORS' MOVEMENT

The irrigators' movement emerged in the 1980s in response to state policies that impinged upon their water governance. Throughout most of the 20th century, communities were grouped under an agrarian union that regulated water rights internally within the union structure, directly linking water to land rights and the local authority.²⁵ Previous to the foundation of irrigators' associations, small water committees could be found in the Cochabamba Valley, but their existence was fragmented and they held little public prominence, as their representation was assumed under agrarian unions, which were the force of mobilization in the region (Linares et al., 2010: 647).

In the 1980s, the irrigators began to organize separately as they felt the agrarian unions did not recognize the pressing water issues and remained focused on struggles over land (Linares et al., 2010: 653).²⁶ Not coincidentally, irrigation committees or associations first emerged in areas where government and NGOs had implemented irrigation programs that contrasted with the

²⁵ Some communities remain organized solely under the union structure. Other communities are grouped under the agrarian union and also have separate local irrigators' associations. The union regulates the land rights, whereas the water rights are administered at a different level. The community has different ways to manage water, be it within the union structure or through irrigators associations that coordinate with the union structure.

²⁶ In fact, there is tension between the CSUTCB and FEDECOR, since the latter branched off from the former to split the peasant movement between irrigators and non-irrigators (Linares et al., 2010: 653).

indigenous peasant rationality, (Peredo, Crespo & Fernandez, 2004:13). The German bilateral aid agency, GTZ (*Deutsche Gesellschaft für Technische Zusammenarbeit* – German Partner for Technical Cooperation), had a prominent role in supporting these early irrigators' associations. Young Bolivian engineers hired by the GTZ, who held a more nuanced understanding of the socio-cultural dimensions of rural peasant life than their predecessors, helped to establish the first network of small-scale irrigators. They believed these new associations would have the capacity to advocate for canal-level organizations and act as conflict mediators (Perreault, 2008: 842). In 1992, the organization of irrigators' associations formalized with the creation of the Association of Irrigation Systems of Tiquipaya-Colcapirhua in the Central Valley of Cochabamba, as well as other associations in the Alto Valley and the Sacaba Valley (Peredo, Crespo, Fernandez, 2004: 57). These irrigators' associations are "autonomous, decentralized, and flexible;" they are more or less interdependent, as the level of autonomy varies depending on the complexity of the interrelation of the irrigation systems and water basins (Peredo, Crespo, Fernández, 2004: 70).

A few years following their formation in the 1990s, the irrigators' associations' capacity for mobilization was tested during several conflicts in the lower valley of Cochabamba over the expropriation of water. In 1992, the irrigators faced the municipal water service company SEMAPA which sought to drill wells in the countryside in order to extract water for use by the growing urban centre. The drilling of groundwater had an environmental impact, and the '*ojos de agua que afloran en la tierra*' (eyes of water that surface in the earth), the shallow springs used for irrigation, dried up as the groundwater levels dropped. This threatened the irrigators' livelihood, and initiated their fight against the

drilling of deep wells that would last over several years. The intensification of drilling efforts by SEMAPA continued in the Cochabamban towns of Sipe Sipe, Vinto, El Paso, Quillacollo, and Violema, leading to confrontations with the irrigators in 1994 and 1995 that are now known as the *Guerra de pozos* (War of the Wells) (Perreault, 2008: 842; Linera et al., 2010: 648). The Association of Irrigation Systems of Tiquipaya-Colcapirhua led this successful struggle, and the president Ómar Fernández, continued to play a key role in the irrigators' movement. Again in 1998, the government wanted to drill wells, however the strengthened irrigators' movement was able to successfully protest and halt the drilling (Perreault, 2008: 842).

In the late 1990s, the irrigators mobilized again, this time in response to the neoliberal policies that were introduced with Sánchez de Lozada regime. The President sought to reform the water law and the irrigators feared such reforms would undermine their water rights and access to water, while giving preference to non-agricultural sectors. Furthermore, the irrigators were concerned with the possible introduction of privatization of water through the law, which had become highly promoted by development agencies and internal donors, to which Bolivia was indebted (Perreault, 2008: 842). Following workshops and seminars, and with the support of development agencies, and a \$1,000 grant from the Dutch government, the irrigators were able to legally establish a department-level federation (Peredo, Crespo, Fernandez, 2004: 2004: 60). October 3rd, 1997 saw the inauguration of FEDECOR (FEDECOR (*Federación Departamental Cochabambina de Regantes* – Cochabamba Departmental Federation of Irrigators), through the unification of the three major irrigators associations from Tiquipaya-Colcapirhua, Apaga Punta, and Punata (Linera et al., 2010: 649).

In the following years, hundreds of irrigators' associations became affiliated with FEDECOR.

The organizational structure of FEDECOR reflects the complexity of the irrigation systems in the valleys, with a representative from each of the eight basins and their irrigation systems. The principle objective of FEDECOR is to defend *usos y costumbres* (Peredo, Crespo, Fernández, 2004: 70). One longstanding effort in achieving this objective has been the promotion of a water law to guarantee *usos y costumbres* (Perreault, 2008: 841). FEDECOR also successfully politicized the concept of *usos y costumbres*, garnering the symbolic and historical moral value of water to cultivate indigenous solidarity through a collective memory (Perreault, 2008: 839; Linera et al., 2010: 653). With this discourse of customary practices, the irrigators laid claim to their water rights and their rights to livelihood, while rejecting commercial and capitalist logic (Perreault, 2008: 839).

Throughout the struggles over the wells, FEDECOR had become a force of mobilization for rural protest, and well versed in the water legislation debate (Assies, 2003: 21). FEDECOR carried out this role in the Water War of 2000, where the irrigators successfully mobilized against water sector reforms, and reached a national platform that incited institutional shifts in Bolivia's water governance (Perreault, 2008: 839). FEDECOR would continue to play a major part in the fight for recognition of local water use and management, becoming a force of great social influence amongst community members in the Cochabamba valleys, surpassing the agrarian unions' power to mobilize (Linera et al., 2010: 647). Water, rather than land, became the means of vindication and resistance to governmental policies (Linera et al., 2010: 653).

THE COCHABAMBA WATER WAR

The irrigators played a major role in the Water War, which solidified their place as one of the most influential social movements in Cochabamba, not to mention their political power on the national scale (Linares et al., 2010: 653). Indeed, FEDECOR was an “early riser” (Tarrow in Assies, 2003) in the Water War, and formed the initial opposition to the water privatization Law no. 2029 put forth by the Banzer administration (Assies, 2003: 31).

The problems of water shortages in the city of Cochabamba were rampant.²⁷ SEMAPA, the Cochabamba municipal water company, faced financial deficit from water loss due to pipe leakage, illegal connections, and non-payment from public sector companies and the municipality (Nickson & Vargas, 2002: 106). This situation, compounded by weak legal and institutional frameworks for natural resource management, placed the World Bank in the position to pressure the Bolivian government to introduce neoliberal policies and institutional reform to enable private investment. The World Bank offered institutional and legal reform advice and the Inter-American Development Bank approved a \$4.5 million loan towards basic sanitation programs in Bolivia, conditioned on the creation of a law that would privatize the water systems (Assies, 2003). The Law no. 2029 (*Ley de Servicios de Agua Potable y Alcantarillado Sanitario* – Law on Potable Water and Sanitary Drainage), was introduced in October and took effect

²⁷ At the time of the Water War, SEMAPA, the Cochabamba municipal water company only delivered to 57% of the city’s population. Water was constantly rationed due to water shortages, which was compounded by water pipe leakage and surface water shortages in the dry seasons. This meant that, even with a connection to the network, water was not always available. Facing such shortages, consumers decided to construct their own wells and storage tanks, which often led to damaging health repercussions from the contaminated groundwater. The lower-income residents without connections to the network had to rely on other sources of water, including constructing their own wells, organizing water co-operatives, or buying water from private truck vendors at much higher rates (Nickson & Vargas, 2002: 105).

in November 1999. The law granted the commercialization of water allocation and the privatization of SEMAPA through a concession (Ahlers, 2005). FEDECOR was immediately concerned with the law's provision of monopoly rights over water resources within the concession area.

Meanwhile, a bidding process was opened for the package deal of SEMAPA and the Misicuni Multipurpose Project (MMP) (Nickson & Vargas, 2002: 105).²⁸ Finally, on September 3, 1999, the concession was granted to Aguas del Tunari (AdT), a subsidiary consortium of U.S.-based Bechtel, an engineering conglomerate of San Francisco, and the only consortium that had submitted a bid.²⁹ The forty-year contract granted AdT control of the water sources and provision of services in the majority of the province of Cercado, including exclusive use of water resources for the entire Cochabamba Valley, the largest irrigated area in Bolivia (ibid). The contract also contained mandatory expansion targets for water services and the construction of the \$214 million MMP, which entailed electricity generation, irrigation and water supply to the city (Nickson & Vargas, 2002). The concession area included several small neighbourhoods, communal, municipal and irrigators' organizations' water systems, whose rights were affected by the concession (Bustamante, Peredo & Udaeta, 2005).

²⁸ The Misicuni Multipurpose Project (MMP) was conceived in the 1960s. The Empresa Misicuni was established in 1987 as a public sector corporation in order to implement the MMP. The MMP comprised the multiple use of water resources from the basin of the Misicuni, Visachas and Putucuni rivers. It involved building a 120m dam, a reservoir to regulate the 6.6 m³/sec. flow of raw water, a 19.4km tunnel and a hydroelectric power plant. The project was expected to generate benefits in the form of drinking water to five municipalities in the Cochabamba valley, raw water for the irrigation of 10.000 ha. and 120 MW in new electricity generating capacity (Nickson & Vargas, 2002: 105).

²⁹ Aguas del Tunari was consortium of enterprises including International Water (in which US-based Bechtel Corporation held the majority) and four Bolivian companies (one of which belonged to Samuel Doria Medina, a prominent politician of MIR) (Olivera, 2004: 10).

The irrigators, not directly affected by the tariff increases, were threatened with the loss of control of water for farming (Spronk & Crespo, 2008: 6). Under Law no. 2029, concessionaires had exclusive rights over water resources within the area defined by the contract for forty years, while the peasant irrigators would be granted temporary licenses for only five years (Nickson & Vargas, 2002: 113). The second and fourth annexes of the AdT contract specified the Valle Central and the Valle Alto as concession zones, space that encompassed water sources of irrigating peasants—strongholds of FEDECOR (Olivera, 2004). Having previously mobilized in defense of their collective water rights, the irrigators recognized that the Law no. 2029 and the contract with AdT would impact their historical rights to the resource (Spronk & Crespo, 2008: 7). The concession threatened the traditional systems of water provision and distribution, particularly common in rural areas, as water could no longer be used for ‘free.’

In October 1999, FEDECOR, led by Ómar Fernández, made the first contact with the *Fabriles* (*Federación de Fabriles de Cochabamba*—Federation of Factory Workers of Cochabamba). The *Fabriles* was already an established presence in the city, due to their proactive response to the trade-union crisis after 1985. They informed the population of current labour conditions and helped found unions within the restructured industrial sector. They had since grown to respond to concerns from all popular sectors (Assies, 2003: 24). Members of the *Fabriles* were stirred by FEDECOR’s concerns, and intent on joining their struggle. Before Parliament approved the Law no. 2029 that would legalize the AdT contract, FEDECOR organized its first 24-hour blockade on November 4, 1999, in the Central Valley, Sacaba Valley and Alto Valley (Ahlers, 2005). Knowing greater organization was required, it was FEDECOR that called the

November 12, 1999 meeting to organize the mobilizations that would come to be known as the Water War (Olivera, 2004: 26). At this meeting, the irrigators and the Fabriles (led by Oscar Olivera, a factory worker at the Manaco shoe factory and union activist) formed La Coordinadora (*La Coordinadora de Defensa del Agua y de la Vida* – The Coalition in Defense of Water and Life), an organization for all who were affected by the contract, including urban and rural residents, such as workers and peasants.

Indeed, by December of 1999, AdT had raised the tariffs for urban water services. For some households, the price of water went up by over 200% on their monthly bill (Nickson & Vargas, 2002: 113). Moreover, pressured by the World Bank, the Bolivian government declared that water services would no longer be subsidized. Water became more expensive than food, placing particular strain on low-income families (Barlow & Clarke, 2002). Through La Coordinadora, FEDECOR mobilized people behind the belief that water is a sacred gift that belongs to the community and should be a common interest, not sold (Olivera, 2004: 11). At its base, the debate was about who made decisions regarding resource distribution. The population refused to accept the “perverse imposition of dictatorship of privilege and moneyed interests” (ibid). Rallied behind these beliefs, the citizens of Cochabamba wanted to see Bechtel out of Bolivia and took to the streets to protest. A broad movement was formed by the residents of Cochabamba, with FEDECOR at the helm, to fight for public control of the water systems in defense of *usos y costumbres* (Ahlers, 2005). La Coordinadora thus became the “consciousness of the people”, a place for people to voice their concerns and demands. (Olivera, 2004: 28). La Coordinadora’s strategy included organizing meetings, assemblies, and blockades in defense of their basic

democratic rights of access to water. The decisions taken by La Coordinadora were guided by the demands of the population (ibid).

On December 1, 1999, a mobilization of 1,000 rural and urban workers evolved into an open town meeting. A decision was reached to give the government until January 11, 2000 to end the contract and repeal the Water Law. If these demands were not met, an indefinite roadblock of regional highways and roads would be held. On January 11, 2000 the Civic Committee (an association that represents local business) called a 24-hour citizens strike, and La Coordinadora maintained a blockade. The following day, Manaco factory workers entered the city to encourage the protest by slowing traffic and forcing shops to close. A town meeting was held in the Plaza 14 Septiembre to determine whether the government should send a commission. The next day, a government commission arrived to discuss with Oscar Olivera and Evo Morales of the cocaleros (who had since joined the struggle in solidarity). During the negotiations, the police gassed crowds in the city. This police repression prompted Olivera and Morales to leave the meeting. Later that day, the government signed an agreement to revise the contract and the Water Law within three months. As the rate hikes were not being considered in this revision, citizens resisted the water bills by refusing to pay them, and symbolically burning the bills in the plaza.

On February 4, 2000, a symbolic and peaceful demonstration called the “take” (*la toma*) of Cochabamba was organized to signal a reminder to the government of their agreement. Security forces, including the infamously brutal “Dalmatian” police from La Paz, were deployed to block the arrival of peasants from the countryside. At this point, more downtown residents of Cochabamba

began to identify with the rural protestors. The following day, on February 5, 2000, residents of Cochabamba upset by the presence of the “Dalmatian” police, began to set up blockades within the city, without prior planning. The press played an important role in helping illuminate the situation.

On February 6, 2000, the cocaleros took decisive action to erect barricades. Men, women, children, and the elderly joined in the struggle.³⁰ This strong resistance pressured the government to sign an agreement to freeze the rate hikes within two months. However, by mid-March of 2000, the government still had not made revisions to the contract. This prompted the first popular referendum in Bolivian history, where 5,000 people were present to vote on a voluntary basis for the expulsion of AdT and a modification of Law no. 2029. La Coordinadora then presented these revised demands to the government. As protests occurred in the context of municipal elections, the government reproached the movement by claiming that La Coordinadora wanted to discredit the election candidates (Olivera, 2004: 30).

Tensions culminated in the *Guerra del Agua* or Water War that took place over several volatile days from April 4-8, 2000. During this “last battle,” participants blocked the main highway and masses occupied the city center in a general strike, effectively stopping business in the city. The initial reaction of the government was an unexpected move not to respond with soldiers or police force. The now 50,000-70,000 protestors attended a popular meeting to discuss the stalemate, and decided to takeover and occupy the AdT building,

³⁰ Accounts of the involvement of women and the gendered roles are crucial to understanding the conflict, but beyond the scope of this paper, see Nina Laurie (2011) for an insightful account of the gendered roles during the Water War. Laurie, Nina (2011) “Gender Water Networks: Femininity and Masculinity in Water Politics in Bolivia.” *International Journal of Urban and Regional Research* 35(1): 172-88.

symbolically destroying the sign. Still, no police appeared. A delegation of ministers met with the Civic Committee, ignoring and not involving La Coordinadora. After several attempts to enter the meeting, entry to the caucus was finally granted, as negotiated by Mayor Manfred Reyes Villa. However, upon entry, the members of La Coordinadora were arrested based on a warrant accusing them of sedition and the destruction of private property. Olivera and Morales were eventually released from custody on bond, but the arrests and charges prompted 40,000 people to mobilize in the main plaza. The protests were met with violent reaction by the state police, which led to several arrests and the government's declaration of martial law (Barlow & Clarke, 2002). Young "water warriors" broke up the military occupation of the city centre on April 9th 2000.

Finally, in another meeting between La Coordinadora and the government following the popular uprising, the Banzer government was forced to cancel the contract³¹ between the Bolivian government and conglomerate Bechtel and to negotiate modifications of the Law no. 2029 (Bustamante, Peredo & Udaeta, 2005). This agreement was signed on April 12, 2000, and the Cochabamba water company reverted to municipal ownership. A transitional board of directors was established including two members from La Coordinadora, two members from the Mayor's office, and two unionized

³¹ Amidst the success of the cancellation however, the Bolivian government faced a \$25 million lawsuit file by Bechtel in 2002 with the International Centre for Settlement of Investment Disputes (ICSID), a centre run by the World Bank. The lawsuit claimed the government had violated terms of their bilateral investment treaty and demanded compensation for lost investment and future profits (Spronk & Crespo, 2008: 7).³¹ As leader of the movement Oscar Olivera stated, the money requested and the money being spent on lawyers to fight a company earning double the amount of Bolivia's gross national product, could be put to much more productive use (ibid). The lawsuit was met with transnational social movements campaign to petition an international campaign against Bechtel. This public pressure effectively prompted Bechtel, in March 2004, to drop the lawsuit in exchange for a symbolic sum of 2 bolivianos paid by the Bolivian government (Spronk & Crespo, 2008: 8).

workers from the company. Once the agreement was signed, the urban blockade was lifted and the barricades came down.

FEDECOR, however, refused to lift the rural blockade until Congress actualized the changes to the Law no. 2029 that would address the irrigators' concerns (Olivera, 2004: 30). The law was modified the following day and renamed the Law no. 2066. The law contained 35 articles that established four main principles: 1) promises to establish a national water council in order to increase public participation in the formation of water policy; (2) five-year licenses for peasant and indigenous organizations were replaced by "registration" that would last for the "useful life of the service"; (3) concessionaires no longer have monopoly rights as water committees, co-operatives and uses and customs of irrigators are recognized; (4) rate structures require consent of municipalities are territorial base organizations (Assies, 2003: 30). The Law no. 2066 was considered a victory by FEDECOR as it recognized *usos y costumbres*.

The movement against the privatization of the Cochabamba water systems is widely heralded as a triumph in light of the forces of economic globalization. The citizens of Cochabamba protested against the privatization of water, defending the traditional rights to water resources, meanwhile highlighting the social obligations of governments and corporations (Shiva, 2002). While Bolivia still has far to go to establish laws protecting water access for all, there is optimism that the failure of privatization, and the subsequent transformation in regulation of water in rural areas have led to new forms of social organization. The attempts to restructure governance through privatization have encouraged social movements that debate and resist

neoliberal policies (Assies, 2003; Bustamante, 2005; Perreault, 2006). Neoliberalism worked to break up the labour movement, from which emerged a new movement of the unemployed and self-employed, including youth and women. This is illustrated during the Water War, which Olivera depicts as a search for authentic democracy that returns the power to the people in order to “construct a country in which we are actors, not spectators” (Olivera, 2004:47). Indeed, the Cochabamba Water War symbolizes the re-articulation of the left, and the catalyst of a cycle of indigenous insurrection in Bolivia in opposition to neoliberalism (Spronk, 2007; Webber, 2011). The Water War demonstrated the possibility to move towards the protection of public water resources.

Most importantly for the purposes of this study, the Water War launched FEDECOR as an important social movement organization in Bolivia. Through organization, proposals and education campaigns on the issue of privatization, FEDECOR has been able to make their concerns resonate with citizens, broadening their protest base (Assies, 2003: 31). FEDECOR’s concerns now form part of the national political agenda (Perreault, 2006). The network of irrigators in Cochabamba utilized the narrative of *usos y costumbres* successfully to validate their cause and establish political influence (Boelens & Bustamante, 2005; Perreault, 2007). They framed their struggle as collective action in defense of *usos y costumbres* with slogans such as “Water is God’s gift and not merchandise” and “Water is Life”, reflecting their traditional uses and customs and the value placed on water as a human right (Shiva, 2002; Linera et al., 2010: 649). The irrigators drew upon the historical, moral and symbolic value of water and the traditional practices surrounding water as ancestral patrimony to conjure a collective sovereign memory, going beyond the fight against rising prices of services. The

activists understood privatization as a threat to water rights and the resource critical to life for all, thus the discourse of *usos y costumbres* became a powerful tool to gain widespread support across class and geographical scales (Webber, 2011: 183). Indeed, *usos y costumbres* has become the framing concept for rejecting privatization and the presence of multinationals, but also a tool to advocate the establishment of other forms of property rights, as will be demonstrated below in the creation of the Irrigation Law no. 2878.

CHAPTER 4: IRRIGATION LAW no. 2878

“Tener agua es tener poder” – Oscar Olivera

Thus far, we have seen how the irrigators’ movement catapulted to the national stage using a discourse of *usos y costumbres*. A significant achievement of the movement was the adoption of an Irrigation Law based in customary practices, intended to recognize and protect the irrigators’ water rights. However, closer examination reveals that the new law does not uniformly benefit all community members, therefore the achievements resulting from the Water War may not be shared evenly. The purpose of this chapter is to present findings in the analysis of the Irrigation Law that demonstrate how it may be reinforcing social differentiation.

The chapter first reviews the process of the establishment of the Irrigation Law no. 2878, outlining the main facets of the law. Second, it delves into the problematic aspects of the law. Third, it provides a nuanced account of the Irrigation Law’s implementation on the ground. Finally, the chapter closes with a discussion of the Irrigation Law that can be viewed as a tool to maintain the status quo of unequal power relations.

IRRIGATION LAW NO. 2878

Acting on the momentum of the Water War, which provided the irrigators space to make demands with greater credibility and legitimacy, the networks of irrigators successfully strengthened their mobilization efforts to focus on entrenching their *usos y costumbres* (Linera et al., 2010; Perreault, 2006). The irrigators’ movement is a political movement that seeks to transform, rather than overthrow, the state in order to advance the recognition and respect of

traditional uses and customs of water management beyond local struggles (Linera et al., 2010: 655).

Intent on further defending their water rights, the irrigators undertook a four-year participatory process to elaborate proposals for an irrigation law. Consultation workshops were held in the region of the four major water sources in the country, namely the Altiplano (Oruro, Potosí, La Paz), the Chaco (Tarija, Santa Cruz), the Pilcomayo (Chuquisaca, Camargo, Tarija), and the Río Grande (Cochabamba). Over 13,000 indigenous irrigating peasants, including men and women, participated in the meetings to provide their input (Orellana & Alurralde, 2007). An abbreviated version of the Irrigation Law no. 2878 was presented to Parliament in September 2004 under the Carlos Mesa administration and accepted the following month.³² A skilled lobby took advantage of a more flexible situation caused by the political crisis surrounding the October 2003 mobilizations, which accounts for the ease of the passing of the Law.³³ Nevertheless, there was no political will to approve the corresponding regulations that would enact the law until August 2, 2006, under the new indigenous government of Evo Morales.

The *Ley de Promoción y Apoyo al Sector Riego para la Producción Agropecuaria y Forestal*, the Law for Promotion and Support to the Irrigation Sector for agricultural and Forest Production – or simply the Irrigation Law no. 2878 – forms part of a new institutional framework for water management that

³² This version presented by ANARESCAPYS (*Asociación Nacional de Regantes y Sistemas Comunitarios de Agua Potable* - National Association of Irrigators and Communal Systems of Drinking Water), a new national organization created in 2003 formed by irrigators' associations and drinking water committees) with participation by CONIAG (*Consejo Interinstitucional del Agua de Bolivia* – Bolivian Interinstitutional Council of Water) (Orellana, R., & Alurralde, J. C. (2007).

³³ Peredo, Carmen. Personal Interview. 1 June 2010.

incorporates social participation, tied more broadly to the new vision of Bolivia put forth by the ‘new left’. As such the law, aimed at protecting and promoting indigenous customary water rights and local water management, is presented as an extension of the rights that were established in Indigenous and Tribal Peoples Convention no.169 of the International Labour Organization, Article 171 of the Bolivian Constitution (initially introduced in the 1994 Constitution),³⁴ and in articles 49 and 50 of the Water and Sanitation Services Law no. 2066.

In the absence of a general water law, the Irrigation Law establishes a sectoral rights regime and a decentralized model for irrigation management which, unlike neoliberal government-proposed projects, gives precedence to indigenous uses and customs and prioritizes water use for human consumption and irrigation needs. The law does so primarily through the creation of a registry of water sources and oversight committees as stipulated in Article 21, as follows:

Artículo 21. – Derechos de uso y aprovechamiento de recursos hídricos para riego. Los Registros y Autorizaciones para el uso y aprovechamiento de recursos hídricos destinados al agua para riego, así como la revocatoria de los mismos, serán otorgados por la Autoridad Competente de los Recursos Hídricos destinados al agua para riego. En tanto esta sea creada, el Servicio Nacional de Riego (SENARI), otorgará y revocará los que correspondan, de acuerdo a reglamento. Son formas de reconocimiento y otorgación de derechos de uso de agua para riego en el marco de lo establecido en el artículo 171 de la Constitución Política del Estado, 49 y 50 de la Ley 2066 de Servicios de Agua Potable y Alcantarillado Sanitario, las siguientes:

a) Registro: acto administrativo mediante el cual el Estado a través del Servicio Nacional de Riego (SENARI), reconoce y otorga el derecho de uso y

³⁴ Article 171.— The state recognizes, respects and protects by law the social, economic, and cultural rights of the indigenous peoples living in the national territory, particularly with regard to their communal lands of origin, guaranteeing their sustainable use of natural resources, their identity, values, languages, traditions, and institutions. The State recognizes the legal personality of the indigenous and farming communities and farmers associations and unions. The traditional authorities of the indigenous and farming communities may exercise administrative functions and apply their own system as an alternative for the resolution of conflicts, in accordance with customs and procedures, provided that the same are not contradictory to this Constitution or the law. The law shall harmonize these functions with the attributes of the branches of government.

aprovechamiento de las Fuentes de agua para riego a pueblos indígenas y originarios, comunidades indígena y campesinas, asociaciones, organizaciones y sindicatos campesinos, garantizando jurídicamente de manera permanente, los recursos hídricos según usos y costumbres.

b) Autorización: acto administrativo mediante el cual el Estado a través del Servicio Nacional de Riego (SENARI), otorga el derecho de uso y aprovechamiento de agua para riego en el sector agropecuario y forestal, a personas jurídicas o individuales que no estén contempladas como sujetos de Registro.

Article 21. – Rights of use and exploitation of water resources for irrigation.

The Registry and Authorization for the use and exploitation of irrigation water and the revocation thereof, shall be granted by the Competent Authority of Water Resources for irrigation water. Until this time, the National Service for Irrigation (SENARI) will grant and revoke those that correspond, according to the regulations.

These are forms of recognition and granting of rights to use water for irrigation under the provisions of Article 171 of the Political Constitution of the State, 49 and 50 of the Water and Sanitation Services Law no. 2066, the following:

- a) Registry: administrative act by which the State through SENARI recognizes and grants the right to use and exploit the sources of water for irrigation to indigenous and aboriginal peoples, indigenous and peasant communities, associations, and organizations and peasant unions, legally guaranteeing in a permanent manner, the water resources according to uses and customs.
- b) Authorizations: administrative act through which the State through SENARI, grants the right to use and exploit water for irrigation in the agriculture and forestry, to legal entities or individuals that are not contemplated as subjects of the Registry.

First established in the Water and Sanitation Services Law no. 2066, the registry is a legal act that guarantees to indigenous and farming communities' access rights to sources of water and the right to provide drinking water services. The Irrigation Law extends this registry to the irrigation sector for use in agricultural and forest production. From a legal standpoint, this converts the registry into a water right, protecting the water use of indigenous and farming communities whose water rights are defined in law. The Irrigation Law grants registry and authorization on sources of water (e.g. micro-basins, natural or artificial water reservoirs, aquifers), according to agreements between users, which are based in *usos y costumbres*. The registry is permanent and can be granted to communities and families for domestic or traditional agricultural use.

Authorizations, on the other hand, are granted to other users (outside of the farming or agro-forestry sector) to use for a maximum of 40 years.

The Irrigation Law and its regulations ensure that the collectively agreed-upon *usos y costumbres* in peasant communities must be respected. Those who solicit registry of their water sources require documentation that certifies them as water users for irrigation purposes, including general information on the water source and agreements with neighbours of source use. In fact, these agreements with neighbouring users form part of the essential requirements to register a water source. Furthermore to guarantee legitimacy of the registry request and the reliability of the information provided, a public notification process must take place, directed towards neighbours and local organizations. Titleholders must develop agreements with each other regarding the use of water or the source of water, and must respect the strict prohibitions tied to the registry relating to the charge, sale, rent, and other forms of gains from water use, in the aim of protecting water rights (Alurrade & Orellana, 2007).

The oversight committees SENARI and SEDERI were also created through the Irrigation Law no. 2878, to carry out the regulatory and administrative work tied to the registry. The newly established SENARI and SEDERI, the national and regional entities, respectively, grant the registry and authorizations, but also provide irrigation education, act as bodies of conflict resolution, and deal with infractions and sanctions. The SENARI and SEDERI effectively replace the neoliberal, centralized SIRESE, and are composed of state delegates as well as irrigators. In fact, the law determines that the board of directors be composed by a majority of irrigators, on the basis that this creates an institutional framework that advances autonomy and decentralization through the inclusion of actors

directly involved in irrigation. Thus, local actors are part of the decision-making process regarding regional development planning, closing the gap between the planning process and the local actors. It follows that the role of the directorate of SENARI and SEDERI also involves coordination with superintendents or other regulatory entities that have authority on water use, in order to reach compatibility amongst sectors and ensure water for human consumption and irrigation is prioritized (ibid.).

As evidenced in the approbation of the Irrigation Law, the irrigators' movement has successfully drawn upon *usos y costumbres* to uphold their cause and establish political influence to promote indigenous community-oriented policies (Perreault, 2008). The Irrigation Law takes into consideration both the physical/geographic and the social forms of water distribution, under *usos y costumbres*, thus viewing the water source on a social basis as well. The inclusion of *usos y costumbres* is defined not only as practices of agricultural production, but also as a symbol of the livelihood of the Quechua and Aymara people of the Andes. The emphasis on indigenous livelihood makes the narrative, and the ensuing law, difficult to dispute. This draws our attention to Lyla Mehta's (2001) work on the use of the narrative of scarcity in water and irrigation policy. In her analysis of the extra-basin transfer in Kutch, India, Mehta investigates the perceptions of water scarcity versus the realities of water scarcity. She finds that there exists a widespread perception of dwindling rainfall and intensifying drought despite meteorological data that discredits this claim. Mehta argues that the elites in Kutch, including politicians, business constituencies and large-scale irrigators, manufactured the narrative of water scarcity in order to advance their agenda of constructing a large dam project. That is, the narrative of dwindling

rainfall and increasing drought legitimized the dam project as the only solution to problem (Mehta, 2001: 2037).

Taking a cue from Mehta's analysis, could the narrative of *usos y costumbres* be similarly serving the interests of the irrigators in Bolivia? The promulgators and promoters of the Irrigation Law advance the concept of *usos y costumbres* unquestioningly. There is a tendency in international development literature to romanticize indigenous cultures. Casting a more critical lens on the Irrigation Law reveals that the narrative of *usos y costumbres* is potentially obscuring certain aspects of inequality that shape the access and control of water.

SOCIAL DIFFERENTIATION

The irrigators' movement seeks to rectify inequalities in the decision-making processes of resource exchange and distribution stemming from the unequal power relations between the national and international and local levels. However, the social divisions present within and between communities are not to be overlooked. Throughout the history of agrarian formation in Bolivia, we can trace the repeated themes of indigenous peasant marginalization and of the process of differentiation within communities. In the Cochabamba context, different social and geographical factors shape inhabitants' access to, use, and management of water. As Perreault reminds us, irrigating peasants certainly cannot be considered as part of the country's elite. However, they are a privileged class among the peasantry (Perreault, 2008). The access to irrigation systems makes an important difference among smallholder peasants. In the Bolivian Andes, irrigation allows peasants to produce in a more reliable manner as the extra water extends the growing season and serves as protection against

frost. The crops of the majority of the approximately 75% of Bolivian peasantry that do not have access to irrigation systems are more vulnerable to climactic conditions. As a result communities without irrigation systems have higher rates of poverty and migration (Perreault, 2008: 847). Moreover, FEDECOR represents a privileged section of irrigating peasants as they own fertile land at the bottom of the Cochabamba Valley, and most have electric pumps for their wells and modern canal systems, and have access to markets (ibid). Much of the efforts of FEDECOR reflect their own interests, a group that is a relatively wealthy minority of the peasantry (ibid). In fact, some researchers argue that the initial establishment of irrigators' associations was strongly supported by international aid with the agenda of creating an elite class.³⁵ As will be examined next, the main critiques of the new Irrigation Law are based on the problems related to unequal access to water.

PROBLEMATIC ASPECTS OF THE IRRIGATION LAW

There are three major impacts resulting from the Irrigation Law no. 2878, which, taken together, reinforce the existing unequal power dynamics present in communities of the Cochabamba Valley: unequal access to water rights and irrigation systems; the aggravation of competition over water sources; and asymmetric participation in decision-making.

ACCESS TO WATER

One of the most controversial aspects of the Irrigation Law is the elaboration of a registry to record uses of water sources, thereby granting state

³⁵ Regalsky, Pablo. Personal interview. 18 May 2010

recognition of existing water rights. The regulations of the law allow for three possible types of registration: 1) collective registration by communities or associations; 2) family registration; 3) joint irrigation and drinking water registration; the majority of registered sources consist of the collective registration. By May 2010, there were 52 sources registered in the Department of Cochabamba, 24 sources registered in the Department of La Paz, and 1-2 sources registered in the Department of Potosí, and others allegedly in the process of registration.³⁶ In total, roughly 80 sources have been registered over a period of four years. This figure appears very low in comparison to the initial goal of 500 registered sources per year, and even more so when considering the 5,000 irrigation systems within Bolivia.³⁷

How has the registry impacted access to water? According to the law's supporters, the results have been positive. A representative from the Office of the Vice Minister of Irrigation stated that the Irrigation Law, in fact, guarantees access to water, as the recognition of *usos y costumbres* within the law assures respect for use of water for irrigation, which is not commercial, since according to the law water cannot be sold or privatized through concessions. Carmen Peredo, a FEDECOR leader, reiterated that the law does not limit the rights of access for anyone precisely because water management is carried out through *usos y costumbres*, on which the law is based.

The registration of water sources by irrigating peasants may indeed protect the sources against external uses or the threat of privatization, and the support of *usos y costumbres* cultivates an alternative to market-driven forms of

³⁶ Guarachi Paco, Gabriel. Personal Interview. 25 May 2010.

³⁷ Gandarillas, Humberto. Personal Interview. 19 June 2010.

water governance. Yet, closer examination of the internal dynamics of community water management reveals a complex reality. The main point of contention regarding the registry is that in order to register a source of water, an individual or collective must have previous access to that resource. Access to water is based in *usos y costumbres* amongst communities, which is not always inclusive or egalitarian. By enshrining the *usos y costumbres* in law through the creation of a permanent title for water sources, a barrier to access to irrigation water is created for those without existing water rights. For example, under PRONAREC, the national irrigation plan, a requirement to apply for an irrigation project is the initialization of a collective registration of the applicants' water source. It follows that without prior access to water, a registration cannot be initialized and therefore the possibility of applying for an irrigation project with PRONAREC is void. The focus of the Irrigation Law seems to be on securing access and improving infrastructure for those who already enjoy water rights.

Previously, water rights were more easily negotiable through different mechanisms of access. It is more difficult to negotiate now that titles are formalized and the water rights that are recognized on a permanent basis. A sense of rights entitlement has pervaded the countryside afflicting those who lack access to water.³⁸ The marginalized are mainly composed of youths; new generations have limited land and water access, largely a result of the process of minifundization.³⁹ The outcome of the lack of access to water and land has been

³⁸ Cossio, Vladimir. Personal Interview. 13 May 2010.

³⁹ Minifundization connotes the fragmentation of subsistence lands among smallholder peasants. As Pearse notes, minifundization threatens agriculture as "the resource base is usually insufficient for effective commercial agriculture, land is too dear to permit the consolidation of holdings into more viable units, and the desperately retained self-provisioning sector of the farm is insufficient to provide food for the whole year round" (Pearse, 1975: 50).

the increasing outmigration of youth from the countryside to the city in search of employment, not without profound implications for the future of agriculture in Bolivia.⁴⁰ While differentiated access to resources can be traced throughout history in the Cochabamba Valley, the Irrigation Law advances the use of natural resources in the name of a particular group, namely the irrigators, in seeming disregard to the implications for the community at large.

The irrigators make use of the concept of legal security in order to defend against privatization, however, the permanent titles established through the registry introduces the concept of proprietorship in communities. A more disparate playing field is created, as would-be water users must negotiate access with quasi-owners of a water source. Therein lays the paradox of the Irrigation Law—a law established to protect against privatization from external powers is entrenching another form of private property rights over water. Although these rights are held collectively, by assigning rights to some communities and not others, or some community members and not others, the law and regulations provide no redress for groups who do not already have prior access to water.

COMPETITION

Water scarcity in the Cochabamba Valley has long been the cause of tension and frequent conflicts over the control of water (Lee, 1990). The registration and creation of titles for water sources aggravates this type of competition. Detailed information regarding the registry is not publicly available and access to such information is repeatedly denied to researchers. This speaks to the controversy surrounding the registry. Indeed, it was confirmed by SENARI

⁴⁰ Cossio, Vladimir. Personal Interview. 13 May 2010.

that a major concern regarding the registration of water sources was its ability to provoke conflict, and for this reason data is not released.⁴¹ It is interesting to note that while criticism of the Irrigation Law is generally downplayed, the registry's potential cause for conflict is strong enough for state agencies to limit access to data to both communities and researchers.

Conflict stems from competition between the plurality of users and uses for a water source. In many cases water is shared and used by several communities for many different purposes (irrigation, drinking water, etc.). Existing agreements, the *usos y costumbres*, regarding the infrastructure of an irrigation system are abundant. For example, one community can use the irrigation infrastructure to direct water during the rainy season while another community will make use of the infrastructure to direct basin water during the dry season. Oftentimes, the source and the infrastructure are not located in the territory of the beneficiaries, so users rely on agreements and arrangements with others for use of the irrigation system. The registration of a source, as introduced by the Irrigation Law, could potentially assist in clarifying agreements and provide state support for these arrangements. Instead, the registry occasions fear amongst water users that if a source is not registered, water rights could be lost. This increases competition and exacerbates conflicts in cases where there is more than one claim to a source.

One instance of conflict occurred in Tiraque, where several reservoirs (*lagunas*) are fed from one micro basin, hence this source serves many communities, thus complicating the registration process. One community's (Cochimita) attempts to initiate the registration process were thwarted by

⁴¹ Guarachi Paco, Gabriel. Personal Interview. 25 May 2010.

surrounding communities that also make use of the water source.⁴² Certainly the conflicts over use of water sources are longstanding; however, the registry aggravates competition by introducing the element of legal ownership.

The resolution of conflicts, as explained by a SENARI representative should be carried out according to *usos y costumbres*. This purportedly protects the independent, decentralized nature of irrigation management at the community and local level, yet makes it difficult to mediate in the event of conflict. The law does not establish controls for abuses or principles of equity (e.g. guaranteed minimum allocations of water), thus those without water rights remain disadvantaged against those with water rights in the community. The oversight committees SENARI and SEDERI established through the law do mediate conflicts, but as we will see below, the irrigators hold the balance of power within these decision-making entities.

PARTICIPATION IN DECISION-MAKING

One of the main goals of the Irrigation Law is to create a local and decentralized institutional model that incorporates social organization at the decision-making level. To this end, the Board of Directors of SENARI is composed of thirteen members: the Executive Director of SENARI, the Vice-Minister of Irrigation, the Vice-Minister of Rural and Agricultural Development, the Vice-Minister of Territorial and Environmental Planning, a representative of CSUTCB, a representative from CONFEAGRO⁴³, and seven are representatives of the national irrigators' association (ANARESCAPYS) who form the majority

⁴² Cossio, Vladimir. Personal Interview. 13 May 2010.

⁴³ CONFEAGRO (Confederación Nacional de Agropecuarios) is the Bolivian Confederation of agriculture that consists of landowners in the Bolivian east and their corporate union representatives.

of board members (Article 9). This is important to note considering that SENARI's involvement in the conflict resolution processes, one of SENARI's major functions pursuant to the Irrigation Law.⁴⁴ In line with the recognition of *usos y costumbres* as established in the law, the initial attempt to resolve conflicts is carried out according to *usos y costumbres*, resulting in a total or partial reconciliation. In the event of an impasse, SENARI will make a decision. This becomes problematic because, as noted above, the directorate is composed of a majority of irrigators that may have a vested interest in the outcome of a conflict. There is recourse against biased decision-making in the event of a non-unanimous vote. In this case, for a decision to pass there must be equal votes from the irrigator and state representatives. However, this does not discount the fact that those who do not have access to water do not truly have a voice in such decision-making processes unless they can depend on the state to represent their interests. If the Irrigation Law is meant to promote greater participation and agency, the question then becomes greater participation for whom? The Irrigation Law provides security to communities whose *usos y costumbres* will be protected, and has allowed irrigators to organize around the law and its institutions, thus gaining strength and prominence at the national level. However, this strength or agency gained does not necessarily represent the entirety of the communities' interests, and unequal footing at the level of decision-making remains. As Perreault (2008: 835) states, "there is no doubt that *usos y costumbres* are central to the management of these irrigation systems, and

⁴⁴ It is interesting to note that no SEDERI (departmental entity) exists in the Department of Cochabamba, the most irrigated region in Bolivia. This could be for various reasons, but it is most likely that FEDECOR replaces this function.

to the livelihoods of the irrigators who maintain them.” However, he cautions that the “the benefits of FEDECOR’s achievements are not distributed in an even manner among Bolivia’s peasants” (ibid.).

IMPLEMENTATION OF THE IRRIGATION LAW

The section above illustrates the problematic aspects of the Irrigation Law with a few concrete examples. As mentioned, I was unfortunately denied access to detailed information regarding the registry, which could have provided insightful empirical data to inform this project with information regarding sites of registered sources and the distribution of water among communities. Nevertheless, my qualitative findings from interviews in the irrigation sector and in the case of the rural town of Punata, Cochabamba, provide insight into the Irrigation Law’s impact in the field. The findings demonstrate a fragmented awareness of the Irrigation Law amongst stakeholders in the Cochabamba Valley, leading to counteractive implications. The examples below highlight that the Irrigation Law has not permeated into the work of official bodies and government-sponsored agencies that develop irrigation projects. This puts into question the law’s reach and its ability to fulfill its goal to ensure *usos y costumbres* are respected.

The engineers working at the GTZ, the most prominent international entity working with the Bolivian government on irrigation development projects, expressed awareness of the Irrigation Law, however, they did not use it as a reference nor does it affect their work. In their view, the aim of irrigation projects is to lift Bolivian peasants out of poverty, which will in turn, reduce

conflicts.⁴⁵ As one engineer pointed out, “rich is beautiful.” The discourse found in the various booklets and brochures on irrigation projects produced by the Bolivian government reflect a concern for equity and *vivir bien*.⁴⁶ However, the protection of *usos y costumbres* through the Irrigation Law is not mentioned, and it remains that projects are economically and technically oriented towards increased productivity.

Furthermore, an interview with the former⁴⁷ head of the Mayor of Cochabamba’s Technical Office, whose responsibilities include the oversight of irrigation projects in the city of Cochabamba, revealed that the office was not aware of the recent Irrigation Law, clarifying that the Technical Office only deals with technical aspects of irrigation projects. This statement is indicative yet again of the gap between technically oriented irrigation projects and the social outcomes of such schemes.

The fact that these two entities that work in the elaboration of irrigation projects do not feel that their work is affected by the Irrigation Law in daily practice suggests that the law, so far, has not achieved much reach in the field, its implementation failing to influence the extent of the irrigation sector. The inclusion of *usos y costumbres* in the law provides a solid basis for the irrigators to defend their practices. However, if the Irrigation Law is intended to uphold

⁴⁵ There is indeed a strong demand for irrigation projects in the countryside, which present new opportunities to gain water rights. However, as several water researchers in the region point out, projects are not carried out in an even manner, granting some users with two or three projects while leaving others with none. Again, those with existing access to sources are accumulating more water rights, and those without access are further marginalized. The notion that the solution to tensions regarding access to water is the increase of irrigation projects is misguided if these projects are creating further disparities that could result in conflict.

⁴⁶ *Vivir bien* is the concept of living well, in balance or harmony with nature, according to the Andean worldview, what the government of Evo Morales puts forth as an alternative model for development in Bolivia that is not based in consumerism.

⁴⁷ Term ending in 2010.

respect for *usos y costumbres*, how can this be achieved if the irrigation projects and the state management of such schemes are not truly guided by the same principles?

PUNATA

A fragmented knowledge of the Irrigation Law was also apparent among community members in Punata, who conveyed only peripheral knowledge of the law. This raises concerns that not all are aware that it is necessary to register in order to protect water rights.

The town of Punata consists of 4,000 hectares divided between 53 communities (Gerbrandy & Hoogendam, 1998: 207). Its lower altitude at 2,552 m and higher temperatures and lower precipitation as a consequence, translate to higher water requirements for agriculture. As the nocturnal frosts only occur in the winter months of July and August, the land can be cultivated during most of the year. Intensive production is limited principally due to lack of rainwater from June to November. Irrigation plays an important role in production during these months. The main harvests of Punata are maize and alfalfa, which are cultivated with rainwater; other crops, such as potatoes, require irrigation (ibid.). The Pucara River, reservoirs, and springs all feed into the town's sources of water. During the rainy season, all communities have access to the rising tide of the Pucara River. However, in the dry season, the diminished flow of water is shared based on the *mita* system of turns at specific times. There are two dams that lie at the mountain range which were constructed by 22 communities; two committees administer the use of this water. The Laguna Robada, the larger dam of the two, was constructed in the first half of the 21st century and its irrigation system

serves 10 communities. The Muyu Loma/Lluska Qhocha dam was built in the 1970s and is utilized by 12 communities (Gerbrandy & Hoogendam, 1998: 207). The remaining communities in the region do not have access to these sources. What are the implications the Irrigation Law on the dynamics of an area with differentiated access to resources?

With the assistance of the Centro AGUA I was able to set up meetings with the local peasants and irrigators in Punata. The findings below are informed by attendance in meetings of irrigators' associations, where I conducted interviews with the association leaders, as well as assisted in a workshop and conducted interviews with a particular group called Asociacion sin riego – the Association without Irrigation. The main finding that emerged from these interactions with different groups in Punata was that communities outside of FEDECOR's network have low levels of knowledge about the Irrigation Law and are unaware of the law's negative potential.

During interviews with leaders (*dirigentes*) of irrigation associations, the only information offered regarding the Irrigation Law and the registrations was that they are "good" because they respect the *usos y costumbres*. They informed me that the Irrigation Law does not impact their access to water or affect their work. Instead, the irrigators turned the conversation to other concerns. During an interview, the former leader of the Irrigators' Association of Punata pointed up the street, then turned around to point the other way, "you see, there are no trees," he said, "everything is dry." The biggest challenge faced by the irrigators is the apparent scarcity of water, and what this means for the future of agriculture in the area.

The second group I interacted with was the Association without Irrigation, an organization formed in 2000 by a collective of 5,000 peasants that do not have access to irrigation systems. This association was born as the result of a conflict between this group and the irrigators of Punata, who blocked access by channeling the water to their own communities. The farmers without access, namely those not associated to the Irrigators' Association of Punata, decided to unite and form their own association and work with the established agrarian union in order to develop concrete and official demands for irrigation projects. Their ultimate goal is to become an irrigators' association of their own, and prioritize the issue of equitable distribution.

The most unexpected result of the discussion with the members of the Association without irrigation was their apparent non-reaction when asked about the Irrigation Law. The marginalized farmers did not echo the criticisms of the law outlined in the section above. They confirmed that the *usos y costumbres* were fair; for example, the idea that one has to participate in the community meetings and the construction of systems to have access to water. They expressed that these locally developed rules were more desirable than privatization. As in the interviews with the irrigators, these farmers were more concerned with the decreasing availability of water. During a workshop that aimed to understand the farmers' long-term twenty-year vision, one man stated that they think in terms of five years, since Punata is turning into a desert. They expressed the need for more irrigation projects established in the area to help agricultural production and combat this problem. The Irrigation Law was not mentioned once. There are many ways to speculate why the Irrigation Law is not a topic of conversation nor contested despite its potential consequences. One

possible explanation it could simply be that not all of the pertinent information regarding the Irrigation Law has reached Punata. The law may appear less important in comparison to the more tangible and pressing issues such as water scarcity, migration, and urbanization. The other explanation is that the strong sentiment of anti-privatization fosters feelings of solidarity among peasants in the countryside in face of this external ‘threat.’ This demonstrates the strength of the concept of *usos y costumbres*. It has become such a dominant narrative that people will support a law that reflects *usos y costumbres* even when they do not stand to benefit, as is the case for the Association without Irrigation in Punata.

ANALYSIS

In sum, the Irrigation Law 2878 and its regulations reinforce the status quo by entrenching the status quo in which a privileged section of the Bolivian peasantry has access to water, and providing no means of redress for communities that do not have access to water. With growing competition over water resources, the Irrigation Law also fails to address a looming problem which will continue to create conflict in the agricultural sector in coming years. As previously noted, irrigators are far from the most powerful economic and political actors in Bolivia, but as activist Oscar Oliver said in an interview, “*tener agua es tener poder*” – to have water is to have power. In other words, if ownership of the water sources is granted to some communities and not others, the governance reforms have entrenched a situation of inequality.

Bakker (2010: 183) points to the limits of the commons or ‘common pool resource management’ that, while functional, are “not necessarily equitable or democratic,” contrary to notions in popular debate where the “ideal of commons

is conflated with notions of equity and democracy.” The case of Bolivia demonstrates Bakker’s position that “commons can be inclusive and progressive or exclusive and regressive”, and that often this membership to the commons works to limit the access of those who are not members (Bakker, 2010: 184). What is interesting in this case, is that *usos y costumbres* are nevertheless, respected by those who cannot access the water resources. Despite the major implications the Irrigation Law may have, there was no resistance to the law on the part of non-irrigating peasants.

Aside from the criticisms outlined above, there are two underlying issues regarding the Irrigation Law that limit its capacity to instill positive change, namely the lost dynamism of *usos y costumbres* when introduced in legislation, and the inadequate scale of the law.

The *usos y costumbres* have an inherent dynamism in that they are in constant flux. In agriculture, nothing is definitive; factors of climate, crop health, markets, and seasons all come into play when the farmers decide their course of action. Agreements of customary uses are achieved in the same manner; they can be renegotiated and changed according to the context. The law is by definition more rigid, affecting the flexibility of the management of the irrigation systems. The result of the Irrigation Law will be to make it difficult for communities that currently do not have access to water to have access in the future: all water sources will be registered through the granting of permanent titles for sources of water. The dynamism of *usos y costumbres* is thus lost when enshrined in law. Moreover, laws are very difficult to reform, as evidenced by the Water Law dating back to 1906, with thirty-two new proposals that have not come to fruition.

The other important point to outline is in regards to the scale of the law, namely that it is a sectorial law, but there still lacks an over-arching Water Law to govern inter-sectorial issues and conflict. In the aftermath of the Water War, and during the workshops that eventually led to the formulation of the Irrigation Law, several issues were identified as pertinent to the irrigation sector, including how it interacts with other sectors in terms of environmental implications and so forth. Initially intended to be a Water Law, in the improbability of passing such a weighty law, the Irrigation Law was settled upon instead. However, a sectorial law that focuses solely on irrigation is problematic. Without a general or comprehensive water law, there is no priority for resource allocation, and different sectors are still in competition over water use. As there is no assurance to the communities of guaranteed water use, intersectorial conflicts persist. Without a general water law to reconcile different claims to water, how much protection of water rights can the Irrigation Law provide? Moreover, the decentralized model focused cannot be regarded uncritically as the best solution if it is disconnected from the larger context. Brown and Purcell (2005) caution against the 'local trap,' that is, the inference that local initiatives, rather than any other scale, will produce the most appropriate environmental and social results. The Irrigation Law, insofar that it supports *usos y costumbres*, presupposes that these indigenous customs are inherently environmentally friendly and equitable. Moreover, as Bakker (2010) points out local management is not necessarily an ideal scale for water ecologically speaking, because the flow of water entails that actions of users can have an impact beyond the local watershed (Bakker, 2010: 187). The tremendous support of increased irrigation projects is in contrast with the little work on environmental impacts of different irrigation projects. As one

Bolivian researcher noted, irrigation systems are constructed, and environmental impacts are considered afterwards. In the past few years, there has been a strong environmental discourse by the Bolivian government, headed by Evo Morales, however, environmental policy has not followed in kind and continues to be relatively weak.

Taken together, the inadequate scale of the Irrigation Law and the loss of dynamism of *usos y costumbres* put into question the use of the law as an instrument for change. The main challenge among communities appears to be how to manage water in a sustainable and equitable way in the face of the many challenges, such as urbanization, migration, climate change, all of which the law does not successfully address. The implications for the future of agriculture in Bolivia are tremendous. If you consider the investment projects in Bolivia, a mere 0.3% of investment is allocated to the agricultural sector in comparison to 22.2% for mining, 21.5% dedicated to hydrocarbons and 20.1% to electrical energy.⁴⁸ The agricultural sector seems to be a low priority. As the agricultural sector in Bolivia becomes increasingly vulnerable, the problem of unequal access to water resources remains.

CONCLUSION

This chapter outlines the potential ramifications of the Irrigation Law that does not address the issues related to differentiated access, but rather can reinforce this by complicating access, increasing competition and unequal decision-making. The law focuses on aiding irrigators, but pays little attention to those without access to irrigation. The findings bring to light the fragmented

⁴⁸ de la Fuente, Manuel. "The Bolivian Economy: An Historical Perspective." CESU-Universidad Mayor de San Simón, Cochabamba, Bolivia. 7 May 2010.

knowledge regarding the Irrigation Law, demonstrating its limited reach. On the one hand, a lack of awareness from official entities will limit the law's ability to protect and respect *usos y costumbres* as stipulated in the law. On the other hand, it is problematic that not all community members are aware of the need to register water sources in order to legally protect their water rights. The findings also demonstrate the strength of the narrative of *usos y costumbres* in that the Irrigation Law no. 2878 is viewed as a victory, even in the eyes of community members that risk encountering the adverse impacts of the law cited above. Overall, the Irrigation Law is symbolic of the power of the *usos y costumbres* narrative, but has not effected much material change as the status quo of unequal access is maintained.

CHAPTER 5: CONCLUSION

“Attractive slogans and a list of heroes and villains, good guys and bad guys, are hardly sufficient. Activist movements need an effective analysis of the complex and contradictory social realities they seek to transform. In a capitalist world, understanding class dynamics should always be a point of departure and a central element of such analysis.” - Bernstein (2010:123)

The Irrigation Law can be understood as a result of what Bustamante terms the ‘Water War effect’. It presents the continuance of the irrigators’ reaction to the threat that privatization posed to their existing water rights. The protection of *usos y costumbres* in legislation provided an assurance against the possibility of another concession in the context of a neoliberal government. The approval of Irrigation Law no. 2878 and its regulations marked a significant symbolic victory for the irrigators’ struggle against neoliberal policies. The irrigators’ demands became more prominent on a national level, with a national board, SENARI, to govern irrigation management that is dominated by FEDECOR members. At the local level, the irrigators gained more power vis-à-vis other community members as their access to water is protected through the law. For those who lack access, the Irrigation Law no. 2878 unfortunately acts as an additional barrier. The communities who have access to irrigation systems are in an advantageous position in the water scarce region of Cochabamba. As examined in Chapter 3, popular support for the irrigators’ cause was garnered through the discourse of *usos y costumbres* that places a central focus on the crucial role of water for all aspects of indigenous life: economic, social, and spiritual. However, uncovering the complexities of irrigation in the Cochabamba Valley, often masked by such discourse, reveals the potential consequence of the Irrigation Law of deepening societal cleavages, namely uneven access to

increasingly limited natural resources. This thesis confirms the importance of the analysis of social differentiation at the community level that can be absent in the debate of public versus private or overlooked in development planning.

In some regards, conducting research on the impacts of the Irrigation Law proved challenging due to some inaccessible information about the law's registrations and given its recent establishment. Nevertheless, I was able to draw some conclusions that reveal the shortcomings of the Irrigation Law that potentially acts to entrench the status quo of unequal power relations. As illustrated in Chapter 4, the Irrigation Law does not facilitate access to irrigation to the poorer residents of Cochabamba, but promotes irrigation for communities that already have access to irrigation systems. The registration of water sources as stipulated in the law can intensify conflict between communities that compete over the rights to that source.

Further, the decision-making capacity of oversight committee SENARI created through the law is seemingly biased towards the irrigators, who hold seven of thirteen positions on the board, thus forming a majority. One board member out of thirteen, a CSUTCB member, represents the interests of communities that do not already have access to water, amongst other groups. This becomes problematic in a situation of conflict resolution, where decisions could be slanted in the irrigators' favour. Interestingly, the problematic aspects of the Irrigation Law were not reiterated by the peasants in Punata without access to irrigation. In fact, they seemed to be in support of the law, or more accurately, in support of *usos y costumbres*, demonstrating how powerful the narrative has become. As it stands, the legal recognition of *usos y costumbres* within the Irrigation Law is seen as a way to right the historical wrongs of

colonialism and privatization, and is supported by indigenous communities even though it can entrench divisions.

Overall, the Irrigation Law can be viewed as an institutional tool that reinforces inequities that exist within agricultural communities. As livelihoods hinge on access to water, these inequities can have important implications for the future of agriculture in the region. During my fieldwork, the issue of extensive youth out-migration from rural areas emerged as a reoccurring theme. The Cochabamba Valley has long been known as the “breadbasket” of Bolivia. Yet what is the future of agriculture in the region as younger generations are squeezed out of the countryside? To address these issues would require a law that not only serves to protect existing water rights, but also focused on fair access and distribution to all residents.

Another issue that impacts water access is the sectorial nature of the Irrigation Law. Competing sectors stake claim to the scarce resource, and in the absence of a general water law, local water rights are not adequately protected. This raises the question whether the Irrigation Law is an effective tool for defending local water rights? A trend has emerged of integrating customary rights into the national law, policies, and development projects (Hoekema, 2010: 249). The Irrigation Law is an example of marginalized groups using the state and state institutions as a vehicle to protect local customs through formalized processes such as the registration of water sources. The motives behind state recognition are understandable given Bolivia’s long history of indigenous exclusion and discrimination, as seen in Chapter 2. Today through the Irrigation Law, the state recognizes and grants rights, whereas beforehand these rights existed without the necessity of the state. If, historically, communities could

maintain their water rights using multiple strategies, legal or otherwise, how efficient is it to institutionalize communal rights? This recognition creates space for the state to intervene at any moment on these rights, contradicting the indigenous fight for autonomous management of the land. With the current indigenous government “of social movements,” intervention or co-optation may be less evident than under a neoliberal rule. The ensuing discussion is whether to support autonomous self-management separate from the state, or to strengthen the state and its institutions to create a comprehensive, sustainable management of water resources.

What is clear is that indigenous rights have become a central focus in the institutional reform of the irrigation sector in Bolivia over the past decade, as demonstrated by the entrenchment of *usos y costumbres* in Irrigation Law no. 2878. From a political ecology stance, studies of the shifts in water governance need to contest power inequality at all political scales, without neglecting the power dynamics at the community level when analyzing the broader struggle.

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APPENDIX: INTERVIEW LIST

Name	Organization	Interview Date
Ardaya, Rafael	GTZ	26 May 2010
Bustamante, Rocio	Centro AGUA	13 May 2010
Choque, Beatriz	SENARI	25 May 2010
Copeticona, René	Vice Minister of Irrigation	25 May 2010
Cossio, Vladimir	Centro AGUA	13 May 2010
Crespo, Carlos	CESU-UMSS	1 June 2010
Gandarillas, Humberto	GTZ	19 June 2010
Guarachi Paco, Gabriel	SENARI	25 May 2010
Montaña, Carlos	GTZ	28 May 2010
Montaña, Hernán	GTZ	31 May 2010
Orrellana, Hernan	n/a	10 June 2010
Patiño, Abdel	Vice Minister of Irrigation	25 May 2010
Peredo, Carmen	FEDECOR	1 June 2010
Peredo Montaña, Rafael	SENARI	25 May 2010
President/Leader (former)	Punata Irrigators Association	10 June 2010
President/Leader	Punata Irrigators and Wells Association	12 June 2010
President/Leader	Association without Irrigation	15 June 2010
Regalsky, Pablo	CENDA	18 May 2010
Southerwood, Susan	n/a	10 May 2010