

2012

Water Policy: The World's Most Important Resource Politicized

Ethan Gilbert
Claremont McKenna College

Recommended Citation

Gilbert, Ethan, "Water Policy: The World's Most Important Resource Politicized" (2012). *CMC Senior Theses*. Paper 520.
http://scholarship.claremont.edu/cmc_theses/520

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INTRODUCTION

Three little atoms. Three little atoms are all that it took to create the nursery for what would eventually become life on earth. The simple bonds of two hydrogen atoms with one oxygen have fostered the development of the world into what it is today. Of the Earth's surface 71% is covered by saltwater oceans. Of the total water on the planet only 2.5% is potable water held in lakes, rivers, and ice. Out of the total 2.5% of freshwater, 69% is captured in ice.¹ This resource in its desalinated form is pivotal in sustaining life on earth, not just for humans but also for the other plants and animals that inhabit our planet. With roughly 60% of the human body being comprised of water, access to clean sources of water is essential for sustaining life as humans cannot survive more than a couple of days without it.² The scarcity of water and its value to sustaining life has made it an issue for governments charged with securing its accessibility to the population.

Governments are expected to provide water to citizens. However, in addition to some regions' limited and declining water availability, as well as the limits of technology, some governments have been forced to deal with political issues when considering water distribution. The political question revolves, in part, around whether water resources are a basic human right or an economic good, i.e., a public good or a commodity. Also at stake is whether it is more important to provide water efficiently or

¹ Fraser Cain, "What Percent of Earth is Water?", Universe Today, May 31, 2010. <<http://www.universetoday.com/65588/what-percent-of-earth-is-water/>>

² "The water in you", U.S. Geological survey, U.S. Department of the Interior, updated October 31, 2012, accessed 11/5/12, <<http://ga.water.usgs.gov/edu/propertyyou.html>>

fairly, and how to prioritize water distribution in light of competing needs: industry, agriculture, and individuals' personal use. While most governments have maintained state-sponsored, natural monopolies to provide water utilities, others have chosen to increase private participation in water distribution. Roughly 7 percent of the urban populations of developing countries are served by private agents, and the main reasons for private sector involvement include financial assistance offered by private companies or international agents, managerial and development expertise held by the private sector, the ability of private companies to manage cost recovery through tariffs on water, and the expectation of a more efficient means of water allocation following public failure to meet their intended goals of universal access.³ The lack of private participation can be seen as a reflection of government's acknowledgement of water as a public good and the capital-intensive nature for water appropriation. Needless to say, some countries have chosen to include private operators or allocate private water rights because of the belief that it will increase the quality of the distributed resource for a larger quantity of consumers.

The political decisions made by governments are a reflection of the governments' ideals and their perception of their role in serving the populace. Two common styles of government influence are populist regimes and more capitalist focused states. The former see their role as expansive, with government responsibility for providing goods and services; the latter often see smaller government as more beneficial, with more market involvement in the distribution of resources. The amount of private sector involvement for water distribution depends on the ability of either the public or private sector to

³ Philippe Marin, "Public-Private Partnerships for Urban Water Utilities: A Review of Experiences in Developing Countries" The World Bank and Public-Private Infrastructure Advisory Facility (PPIAF), Trend and Policy Options No. 8, Washington D.C., 2009, <<http://www.ppiaf.org/sites/ppiaf.org/files/FINAL-PPPsforUrbanWaterUtilities-PhMarin.pdf>>

distribute resources, the government's ability to regulate, and their perception towards private sector allocation.⁴ Water rights and distribution policies tend to closely correlate to which kind of government is in place in a given state at any time. This is interesting because it reflects how even access to the most fundamental resource required for life is deeply politicized.

In terms of water policy, neither privatization nor public control has emerged as clearly superior and each has had its share of problems. Those in favor of public sector provision of the resource stress the government's responsibility for universal access of what is considered a public good. They believe that the government is best suited to finance the infrastructure, and that it is wrong for the citizens to have to pay any outside provider for such a basic human need. Public sector provision has faced its own difficulties in providing efficient access to water resources and universal coverage; however, primarily due to pressures from low-income families to keep prices below costs, governments have used subsidies to assist in keeping prices down, even if the poorest portions of the population have not felt the full benefits of these price subsidies.⁵ This is due to the fact that some of the poorest users of water are not registered customers or receive their water from the informal market because they cannot afford access to the government supply.

In response to government failures there has been an emphasis to include the private sector because of its ability to improve the efficiency and quality of the resource

⁴ *World Development Report 1994: Infrastructure for Development*, World Bank, New York: Oxford University Press, 1994, pg. 8, <http://www-wds.worldbank.org/external/default/WDSContentServer/IW3P/IB/2007/10/10/000011823_20071010172019/Rendered/PDF/13483.pdf>

⁵ Clive Harris, "Private Participation in Infrastructure in Developing Countries: Trends, Impacts, and Policy Lessons", World Bank Working Paper No. 5, 2003, pg. 3

provided, as well as the belief that the private sector can expand access. However, there have been cases, for example in Cochabamba, Bolivia in 2000, in which governments sought private sector participation in water distribution, but due to failures to improve water distribution, price increases, and public upheaval, they were forced to reestablish public control over the water system.⁶ Governments face the complicated situation of public pressure to provide what is considered by many to be a basic human right, coupled with the difficulty of ensuring access to the resource throughout the country and prioritizing its distribution in light of development and economic demands.

Interestingly, far from identifying a universally rational approach for ensuring fair and efficient water distribution policies, governments tend to choose the policy that is consistent with their general political and economic ideologies. This is because water policies and access to water as a basic resource reflect the balance of political and economic power in a state—so that when private interests rise to power, water will be privatized and when public forces assume control, it will be publically controlled. In other words the political and economic influences of a country tend to affect water policy more than recognition of the resource as a basic human right.

BACKGROUND

In a lot of ways water helped to cultivate civilization; humans' ability to harness nature allowed them to develop settlements and food surpluses, the basis of life beyond subsistence. Irrigation permitted humans to settle in regions that did not have consistent rainfall or were not directly next to an available water source. The main goal of early

⁶ Jennifer Naegele, "What Is Wrong With Full-Fledged Water Privatization?" *Journal of Law and Social Challenges*, Vol. 6, No. 1 (San Francisco: University of San Francisco, 2004), pg. 124

leadership was how to best consolidate power, and control of water was essential for domination over nature and a subservient population. The central authority of early civilizations was charged with organizing the citizenry to develop and maintain irrigation canals, and in most ancient civilizations—including ancient Chinese, Incan, and African communities—the populations were obligated to assist.⁷ Government control over water resources would continue as history progressed, but as private ownership of land increased, water rights faced a parallel development.

In most cases water rights were tied directly to land ownership, as was the case with the permit system used in ancient Rome; however, the actual resource was publically owned, with ultimate authority residing in the emperor.⁸ All captured lands were considered to be part of the public domain, thus for conquered users to obtain access to water rights, they had to submit to the authority of their new ruler and seek permits for rights that had previously belonged to them. This reinforced the power and authority of the empire, which during the establishment of these massive empires was essential for maintaining control. In Europe, the general policy of tying water rights to land ownership sustained throughout the feudal period, with control held by the powerful lords and kings. Around the end of the 18th century, as aristocratic rule began to give way to civil law, and the middle class/bourgeoisie emerged, the need for explicit water rights was necessary for privately owned land because leaders now faced populations with growing control and influence that sought more individual rights. France and the United Kingdom set the

⁷ Karl A. Wittfogel, *Oriental Despotism: A Comparative Study of Total Power* (New Haven: Yale University Press, 1957), pg. 25

⁸ Barbara van Koppen, “Dispossession at the Interface of Community-based Water Land and Permit Systems”, *Community-based Water Law and Water Resource Management Reform in Developing Countries*, edited by Barbara van Koppen, M. Giordano, and J. Butterworth, CAB International 2007, pg. 50

precedent for establishing water rights for private landowners protecting them from “state interference.”⁹ However, the property rights to water that were enjoyed by citizens in the home country were not shared with those taken during colonization.

In many of the lands conquered by these European powers, indigenous communities had established communal rights to water; but following conquest, they were forced to adopt the new system brought by the invaders. To maintain control over the conquered populations, the colonizers emphasized strict authoritarian rule over the land and other resources like water. The Spanish who took control over most of Latin America initially followed Pope Alexander VI’s Papal Bull of 1493 that granted the colonial powers authority over the land discovered through exploration, and the water therein for domestic and agricultural use.¹⁰ With the 1550 *Leyes de Indias*, the Spanish government made some concessions to allow greater communal use of water resources, after observing the benefits of indigenous practices. Control and designation of land by the colonial powers continued until the 19th century, when the growing presence of private rights within Europe (including the Napoleonic Code of 1804 in France), led to the adoption of policies for specifying private water rights, which again worked in the favor of the colonizers to legally deny natives access to water.¹¹ This is one of the earliest ways that water policy followed the evolution of economic rights, which increased emphasis for private property. Throughout the 19th century, agriculture remained the main user of water, but as people began to struggle in rural areas from lack of available resources urban cities were increasingly the destination for relocation.

⁹ Koppen, pg. 51

¹⁰ Koppen, pg. 52-53

¹¹ Koppen, pg. 53

As urbanization expanded in places like Europe and the United States during the latter part of the 19th century, there was a need for improved sanitation and water distribution to support the expanding populations in major cities, not only for domestic use, but also for public health and fire safety.¹² In some cases municipal governments took control over water systems, but there were private providers that supplied predominately to wealthier areas. The growth of wealth led to an emerging demand for more sophisticated water services, spurring private companies looking to meet the increased demand and serve those who could afford it. However, concern over the unequal distribution of water led to public outcry, especially in low income and rural communities. Another major factor for increased pressure on local governments to control water provision, were the health concerns related to the lack of adequate water distribution and sanitation, which had at the time resulted in outbreaks of cholera and typhoid. This burden to improve distribution, along with the lack of incentive for private companies to seek universal expansion to constituents who could not afford the necessary price increases, led local governments to take the lead in providing water resources to the larger portion of society. The advantages to establishing a natural monopoly/state sponsored provider included the ability to finance the major infrastructure costs for both freshwater and sanitation services through tax collection, provide subsidies to artificially keep prices down for low income consumers, and the option to acquire additional funds from the federal government if needed.¹³ By the end of the 19th century governments

¹² Karen Bakker, *Privatizing Water: Governance Failure and the World's Urban Water Crisis* (New York: Cornell University Press, 2010), pg. 83

¹³ Bakker, pg. 85

tended to control both the rights and distribution of water, with the exception of England and France who would later provide examples for private sector involvement.

Government management of water resources continued as governments increased their power and influence throughout the 20th century, but as the century drew to a close, municipal authorities would soon realize some of the same difficulties that their private sector counterparts had previously experienced. Some of the issues that the local providers faced were continued limited access—especially to the poor, costs that exceeded returns by tariffs, management issues including overstaffing, and crumbling infrastructure.¹⁴ The difficulty in providing universal access to water was felt by both developed and developing countries. Problems with the provision of many basic services to the population and general discontent, offered opportunities to many leftist governments seeking power and increased government influence.

With platforms focused on aiding the poor and decreasing income inequality, through projects like agrarian reform, socialist governments with populist leaders came to power in several countries, especially in Latin America (much to the concern of the United States). This shift to left-wing regimes led to several issues such as hyperinflation, stagnant or negative economic growth, and problems of debt. In some cases, these problems led to military takeovers of the government or a political shuffling of power, but in the period that followed, developing countries would have to appease the western, developed world and adopt neoliberal doctrine in order to receive much needed financial assistance.

¹⁴ Bakker, pg. 87

Developing countries that needed international investment to sustain their programs were now confronted with conditions on international financing, requiring economic and political liberalization. In what became known as the Washington Consensus developing countries were expected to implement certain measures: fiscal discipline, improved public expenditure priorities, tax reform, financial liberalization, floating exchange rates to improve exports, trade liberalization, increased foreign direct investment, privatization of state enterprises, removal of barriers to entry, a system to secure intellectual property rights, and reduced state involvement in the market.¹⁵ Under these guidelines some countries saw economic growth and increased involvement of the domestic and international private sector. Under one of the parameters, “privatization of state enterprises”, there was an increase in private sector investment in utilities and other infrastructure projects, and in some countries the allocation of water rights to private actors.

METHODS

When discussing water privatization it is important to differentiate between the privatization of water rights, and the privatization of water distribution. Establishing water rights or water markets, is a tool that has been shown to go all the way back to the permits that were granted by the Roman empire to private land owners. However, current trends have separated water rights and land rights, with the belief that water, “needs to be transferable and marketable for it to be used in an economically efficient way, producing

¹⁵ “Washington Consensus” The World Health Organization, accessed 10/15/2012, <<http://www.who.int/trade/glossary/story094/en/index.html>>

the highest possible marginal returns.”¹⁶ The most important aspect of water rights is that they serve as a reliable and secure asset that the private sector can control.

When the transfer and exchange of rights in a market is included in the definition of water rights there is a shift from considering water as a basic human right, to considering it as an economic good. At the International Conference on Water and the Environment, held in Dublin, Ireland on the 26-31 of January 1992, there was a discussion amongst 500 participants—including government designated experts from a hundred countries and representatives of eighty international organizations—regarding the current state of water use.¹⁷ From this conference arose one of the more controversial ideas that, “Water has an economic value in all of its competing uses and should be recognized as an economic good”.¹⁸ Part of the controversy is caused by the people that fail to address the additional conditions associated with this principle from the conference, which states, “it is vital to recognize first the basic right of all human beings to have access to clean water and sanitation at an affordable price.”¹⁹ While the Dublin Statement has usually been referenced to support the development of water markets or privatization, it still recognizes a human right to water, but stresses that the allocation of that right is done by the most efficient means available.

Ten years after the Dublin Statement, the UN released another document stressing the human right to water as a staple, “for leading a life of human dignity. It is a

¹⁶ Rutgerd Boelens and Margreet Zwarteveen, “Prices and Policies in Andean Water Reforms”, Institute of Social Studies (Malden: Blackwell Publishing, 2005), pg. 739

¹⁷ “The Dublin Statement on Water and Sustainable Development” UN Documents, Adopted January 31, 1992 in Dublin, Ireland, at the International Conference on Water and the Environment, <<http://www.un-documents.net/h2o-dub.htm>>

¹⁸ “The Dublin Statement”

¹⁹ “The Dublin Statement”

prerequisite for the realization of other human rights.”²⁰ This document has since led to standing within the UN General Assembly establishing water as a basic human right to be guaranteed by the state.²¹ Even though the state is responsible for ensuring a basic human right to water for its population, there is no specification for how to achieve that goal. Therefore, states that choose to use private sector participation in water distribution are within the limitation of the statute as long as the goal is for universal access to clean water and sanitation. There are several ways that states can include private companies in water distribution with varying degrees of divestiture to the private sector.

In large part the question facing countries has been to what extent should the state incorporate the private sector in addressing water allocation issues? The inclusion of the private sector has often come as a result of government failures to secure distribution, maintain quality, and support the necessary infrastructure that is so often capital intensive. The different forms of private sector involvement are demonstrated in the table below.²²

	Service contract	Management contract	Lease / affermage	Concession	BOT-type	Divestiture
Asset ownership	Public	Public	Public	Public	Private / public	Private
Capital investment	Public	Public	Public	Private	Private	Private
Commercial risk	Public	Public	Shared	Private	Private	Private
Operations/ maintenance	Private / public	Private	Private	Private	Private	Private
Contract duration	1–2 years	3–5 years	8–15 years	25–30 years	20–30 years	Indefinite

²⁰ “Substantive Issues Arising in the Implementation of the International Covenant on Economic, Social and Cultural Rights” General Comment No. 15, Committee on Economic, Social and Cultural Rights, Geneva, November 11-29, 2002, pg. 1-2

²¹ “64/292 The human right to water and sanitation”, Resolution Adopted by the UN General Assembly, 64th session, Agenda item 48, August 3, 2010, <http://www.un.org/ga/search/view_doc.asp?symbol=A/RES/64/292>

²² Jessica Budds and Gordon McGranahan, “Are the debates on water privatization missing the point? Experiences from Africa, Asia and Latin America”, Environment and Urbanization, Vol. 15 No. 2, 10/1/2003, pg. 89, <<http://eau.sagepub.com/content/15/2/87.full.pdf+html>>

The most basic relationship that a government can have with the private sector is through service, management and lease contracts. In all three cases the government is hiring the private company to assist in some aspect of the daily operation of water provision. Management and lease agreements are slightly more involved because they give more control to the private company than a service contract by putting the private company in charge of day-to-day services and not just specific tasks.²³ Lease agreements differentiate from management deals, because in addition the private company handles the collection of revenues. Also due to the short duration of these agreements there is increased competition for contracts, and depending on the agreed upon method of compensation, private companies are inclined to improve on the quantity and quality of the service it provides. This can be beneficial to a country that does not have the expertise or the budget to run facilities on its own. It can also be the preferred option for a government that is seeking to maintain greater control over water. From 1990-2011 there were 31 management or lease contracts in Latin America, with a total investment of five million dollars.²⁴ In other cases, governments choose to go with options where the private company helps to finance projects and maintain or build infrastructure.

Agreements between governments and private companies that require greater private investment fall into three categories: concession, Greenfield projects also known under various conditions as Build-Operate-Transfer (BOT) projects, and complete divesture. In all three cases the private company is asked to make an investment in

²³ Jennifer Baumert and Laura Bloodgood, "Private Sector Participatino in the Water and Wastewater Services Industry", U.S. International Trade Commission: Office of Industries, April 2004, pg. 24

²⁴ Private Participation in Infrastructure Database, "Regional Snapshots: Latin America and the Caribbean", The World Bank, updated July 2012, accessed 11/5/12, <http://ppi.worldbank.org/explore/ppi_exploreRegion.aspx?regionID=4>

maintaining or developing infrastructure for water distribution, thus the contracts tend to be longer to “to allow the operator to recoup its investment”²⁵. The difference is that in a concession contract, the company is only in charge of maintaining infrastructure and not for developing new systems. Greenfield and divesture projects can be a preferred option for countries that do not have the established infrastructure; this is predominantly the case with sanitation infrastructure. From 1990-2011 there were 137 concession contracts with a total investment of \$15.428 billion, 48 Greenfield projects with a total investment of \$3.429 billion, and 12 divesture agreements with a total investment of \$7.924 billion. The large numbers of concession contracts demonstrate how in a lot of cases the infrastructure is already in place, but there is a need for a provider to ensure its maintenance and management. From the data it can also be extrapolated that countries are hesitant to give up total control of a resource that is considered a basic human right. It would be expected that the countries that chose divesture would have a greater likelihood of developing water markets because it is granting control of the resource to a private provider, so private distribution of rights is likely. In all cases there has been a slowing of private investment since the late 1990’s and this can be attributed to the realization of difficulties in implementing private sector involvement and waning support for the Washington Consensus. Coincidentally in Latin America, there have been some governments that have seen power shifting away from more liberal governments to more nationalistic regimes.

In Latin America there have been both strong populist governments as well as pressures to liberalize economic and political policy—especially by international

²⁵ Budds, pg. 90

financiers. Geographically issues arise due to the conflict of apparent water abundance in certain regions, the world's longest mountain range, and also some of the driest places on the planet—the Atacama Desert in Chile receives roughly an inch of rainfall annually (some places have no record of precipitation).²⁶ The region has received support from many international agents seeking to help with development and looking to invest in the vast resources that the countries have to offer. The three countries of Chile, Mexico, and Uruguay, demonstrate the various policies that governments will choose when deciding how to allocate water distribution through the private or public sector, and their decisions are a reflection of their economic and political tendencies. Chile has led the region in privatization and economic liberalization since the military took over in 1973, with continued progress by the civilian government that took over power in 1990. Mexico had 75 years of single party rule under a strong federal government, but has opened up to economic liberalization in the last two decades due to economic pressure. Finally, Uruguay with its history as essentially a welfare state influenced global water policy when it chose to make the right to water a constitutional right in 2004. The proceeding chapters will show that for these three countries, their water policies are correlated to their economic and political direction.

²⁶ Stefan Anitei, "The Driest Place on Earth: The Atacama Desert", Softpedia, May 23rd, 2007, <<http://news.softpedia.com/news/The-Driest-Place-on-Earth-Atacama-Desert-55456.shtml>>

CHILE

Chile is a strong case for showing that water policy correlates with political and economic prerogatives, despite the resource's importance for sustaining human life. As the country has seen changes in political power towards more authoritarian and central influences, its water policy has reflected that and fallen under greater government control. However, as the government shifted its focus towards a decentralized state government and a dedication to economic privatization, water policy again followed with the development of water markets and private distribution of water. These changes exemplify how water policy has been more closely related to the influences of those in power than to what is considered the government's responsibility for serving the needs of the population.

On September 18, 1810 Chile declared independence from Spain. After several years of fighting, a new nation emerged under the leadership of Bernardo O'Higgins. The government under O'Higgins and all those that followed have had to contend with the powerful oligarchy, which established itself under Spanish rule. The power of the wealthy, and the income gap between the rich and the poor, has perpetually been an unresolved issue in the country. Another element that has been pivotal to Chile's economic success is its natural resources, which it has exported to world markets. The vast possibility for natural resource exploitation is a reflection of the dynamic geography exemplified in Chile, consisting of the driest desert in the world—the Atacama Desert in the North, massive glaciers and relative water abundance in the South, and the Andes

which stretch the length of this long, skinny country. These elements have influenced political and economic decisions throughout Chile's history and will continue into the future. The changes that the country has seen in its economy, and the different roles of the federal government, have played a crucial role in determining its water policy. The correlation of these changes makes Chile an ideal example to show that water policy is tied to the economic and political conditions within a country. The water policy of Chile has been the subject of extensive literature on the success of water privatization, but it has not necessarily been able to achieve all of the government's goals.

The Chilean political system has experienced periods of representative democracy as well as political turmoil and military takeovers. The policies that have been enacted by the various governments have been a reflection of Chile's position within the global market and the regimes that have been in power at the time. Furthermore, the economic and political conditions in the country have shaped the policies that have been established regarding water, and these policies have reflected the interests of those in power over other concerns. The first official document that had a focus on water was the 1855 Civil Code. This document specified particular rights to individuals and to the collective national interests. In doing so, it drew a distinction between public and private water rights. A small portion of water rights were administered to private individuals based on water within property boundaries and those flowing through manmade channels, which was intended to encourage private irrigation, but gave an advantage to wealthy landowners.²⁷ The remaining water was categorized "national property for public use"

²⁷ Carl J. Bauer, *Against the Current Privatization, Water Markets, and the State in Chile* (Norwell, MA: Kluwer Academic Publishers, 1998), pg. 37

granting access to all of the nation's citizens.²⁸ With control of water held by the public, certain concessions were made to grant private users rights to use the water, but final control was held by the state to modify the permit or cancel without compensating the user. This control by the state over water resources was a holdover from colonial rule where the crown or local governments were responsible for resources and their proliferation to individual users. The political tendency at the time continued to maintain considerable control in the central government, which also sought the expansion of natural resource trade with international powers. The export driven economic approach led Chile to specialize in several exports, one of the most significant being nitrate, which at the time was used for fertilizer. The country had a considerable advantage in exporting this resource following the War of the Pacific and the conquering of rich mineral lands formerly held by Peru and Bolivia. Due to this expansion in exports it experienced significant economic growth.

The nitrate boom lasted until the beginning of World War I, when artificial fertilizers were created, making nitrate an obsolete export, and forcing Chile to again revert to primarily exporting copper. The loss of nitrate exports and the Great Depression decimated the Chilean economy—the League of Nations labeled Chile as the hardest hit by the Great Depression.²⁹ In an effort aimed at recovery the country began the practice of Import Substitution Industrialization, to strengthen domestic markets and decrease dependence on foreign markets. Under this policy, the country experienced some economic growth and consolidated power in the central government once again. With a

²⁸ Bauer, pg. 37

²⁹ Barry P. Bosworth, Rudiger Dornbusch, Raúl Labán, *The Chilean Economy: Policy Lessons and Challenges* (Washington D.C.: Brookings Institution Press, 1994), pg. 383

more central role of the government, it created the 1951 Water Code to establish specific water rights.

Water was distributed in terms of “rights of advantageous use”, this required users to register for rights to use water with the Real Estate Title Offices, but once rights were established they were treated as private property.³⁰ The code also called for the creation of the General Water Directorate (DGA) to serve as the agency in charge of administering rights and keeping record (the DGA was not actually created until 1969). There were several conditions on these use rights including new use of the water resource required the approval by the DGA, rights were granted on a first-come-first-serve basis, and the failure to appropriately use the right for a period of five years would result in a cancelation of the right.³¹ The creation of this water code was a reflection of the growing belief in the importance of private property rights and that they should be protected by a strong central state. The protection of these rights by the federal government proved most beneficial to the wealthy that already had ownership of large land titles and limited access to the landless poor. However, when government policies failed to improve the economic problems faced by Chile’s lower class, leftist governments gained political favor by promising equality reform for the poor—especially in agriculture.

The failures of the government to address major economic issues, led to the mobilization of the rural and urban poor. The political response to this movement was the establishment of the Christian Democracy party as well as the resurgence of the communist and socialist parties. With the promise of agrarian reform aimed at helping the

³⁰ Bauer, pg. 38

³¹ Bauer, pg. 38

poor, Eduardo Frei Montalva of the Christian Democracy party came to power in 1964. The Agrarian Reform Law of 1967, which in turn led to the 1967 Water Code, had two primary objectives: to administer the redistribution of lands to the poor and improve irrigation efficiency. The new water code stipulated that all water—including those that had been distributed to private users under the previous laws—was “national property for public use”, allowing the government to confiscate the rights to water, without compensating the previous users, and redistribute them according to “standards of rational and beneficial use”.³²

Three years later the communist and socialist candidate, Salvador Allende, was elected president with the support of the Christian Democratic Party. Following the election, the new president oversaw an expansion in agrarian reform and major increases in fiscal spending to support welfare programs for the poor. In addition to the reforms established under Allende, there was massive nationalization of the country’s industries and utilities. In many conditions these takeovers were done without compensation to the foreign companies that had previously controlled them. These policies led to huge national debts and skyrocketing inflation that was highly unpopular within the middle and upper classes. The policy regarding water is clearly reflected in the political and economic direction that Allende was leading the country towards with central government control; however, this would not last long as the military was pressured by the middle and upper class to intervene and regain control of the government.

The military coup on September 11, 1973 led by General Augusto Pinochet established a military dictatorship that would run the country until it returned power to

³² Bauer, pg. 39

civilian authorities in 1990. During this 17-year period Chile saw a drastic transformation in its economic policy, which was dominated by privatization and neoliberal policies that were proposed by a group named “los Chicago Boys”—a group of students who studied at the University of Chicago under Milton Friedman and returned to Chile where they implemented neoliberal economic reform. By 1980 the military government had redrafted the constitution to reflect many of the policies towards increased privatization, especially in securing rights to private property and limiting government intervention. The following year the government enacted the Water Code of 1981 to reflect the market-oriented direction of the country.

The new water code established private use rights to water through strict specifications of private property under the belief that individual property rights would result in the creation of water markets and the open transfer of use rights, moving water to the highest value user. The intention of these policies was to encourage users to conserve water and distribute it in the most efficient way possible by establishing water as an economic good with commercial value. The establishment of this code directly correlated with the goal of the national economy and political direction of the country towards privatization. The neoliberal economists who had developed the new economic policies for neoliberal reforms were directly involved in the establishment of a laissez-faire system for water rights; however, it turned out to be less effective than anticipated.

The Chilean experience with water markets and water privatization has often been used as the example to follow for other countries considering or encouraged to seek water privatization. The explicit separation of water rights from property rights into commodities that can be traded, sold, and transferred, created a framework that has been

credited with the expansion of water services to almost all of the population, and improvements in water quality within Chile. Several elements that are considered essential to the effective use of water markets include transparency of the legal conditions pertaining to the market, definitive private property rights, minimum government intervention, and effective means for the transfer of rights.³³ In Chile the exchange of rights has predominately existed between agriculture users—in some cases as lease agreements for the temporary use of rights for agricultural cultivation, and from the agriculture sector to industrial users.

The establishment of water rights has also led to the specification of consumptive and non-consumptive rights. The consumptive rights are for irrigation, domestic, and industrial uses, while non-consumptive rights require the return of all water back to the source with the intention being to promote hydroelectric development, which is one of the highest generators of energy in the country.³⁴ One of the most significant benefits credited to the privatization of water rights, is the local improvement of some infrastructure and increases in private investment.³⁵ However, amid the presumed benefits associated with Chilean water rights and water markets, there are several experts who criticize the water code for failing to achieve its intended goals.

³³ Terrence R. Lee and Andrei S. Jouravlev, “Prices, Property and Markets in Water Allocation” (Santiago, Chile: United Nations: Economic Commission for Latin America and the Caribbean, 1998), pg. 10

³⁴ Robert R. Hearne and Guillermo Donoso, “Water institutional reforms in Chile”, *Water Policy* Vol. 7, No. 1(London: IWA Publishers, 2005), pg. 57

³⁵ Rutgerb Boelens and Margreet Zwartveen, “Prices and Politics in Andean Water Reforms”, *Development and Change*, Vol. 36, No. 4 (Oxford: Blackwell Publishing, 2005), pg. 739

One of the most common critiques of the Chilean water market is the limited activity of water rights transactions through the market.³⁶ The lack of initial data led many early researchers of the market method to call the developments in Chile a success, but later empirical research has shown that exchanges have been much less frequent than stated, or anticipated. Some of the proposed explanations for these limitations are geography, a lack of definitive records regarding ownership of rights, issues with farmers in terming water as a commodity, and inconsistency in price determination for the rights thus complicating the exchange.³⁷ Many water rights holders have not been inclined to transfer their rights because of the complications regarding price signals, as well as the lack of transfer mechanisms, and the option to speculate or hoard without consequence to prepare for droughts.³⁸

In addition to the lack of activity in the water market, the other problems that have arisen since the implementation of the Water Code in 1981 are failures to account for social, environmental and economic issues. One concern with the current system centers on the conflicts in river basins between both consumptive and non-consumptive uses, which have not been definitively resolved by either the DGA or the legal system.³⁹ There have been some developments to Chilean water policy since the establishment of the Water Code in 1981, addressing shortfalls within the water code, while at the same time

³⁶ Carl J. Bauer, "Results of Chilean water markets: Empirical research since 1990", *Water Resource Research*, Vol. 40 (Washington D.C.: American Geophysical Union, 2004), pg. 6

³⁷ Bauer (1998), pg. 60

³⁸ Hearne, pg. 64

³⁹ Carl J. Bauer, "The Experience of Chilean Water Markets", Unpublished working paper submitted to: Expo Zaragoza 2008 – Water Tribune, Thematic Week 7: Economics and Financing, The Role of Market Instruments in Integrated Water Management, July 28-31, 2008, pg. 5

increasing privatization and distribution of water to private companies, but they have not solved all of the indicated problems.

Following the plebiscite of 1988 and the resounding “No” that General Pinochet received from the people of Chile, the government transitioned into the control of the Concertación, which is a center-left coalition of political parties that formed to oppose the conservatives supported by the military in the transition to civilian control. The Concertación opposed several of the policies that were established under the military dictatorship, but has accepted the economic model out of fear of alternatives, and conditions put on the turnover of control established by the military government.⁴⁰ By maintaining the economic principles of neoliberalism the Concertación has overseen the privatization of the country’s largest water distribution and sanitation companies.

In many cases, the companies that were bought out by foreign investors were relatively strong and well established in their regions, but the influence of foreign capital for investment in maintenance and additional infrastructure enticed Chile to open these utilities providers to foreign management. The private sector has also participated in BOT and divestiture projects, especially to provide expanded sanitation services. The inclusion of these private companies has resulted in the increase of prices for water, which has angered those who believe that water is a basic human right that should be provided by the government at or below cost. In response the government has establishing a direct subsidy system for local utility companies to help support those families that are

⁴⁰ Bauer (1998), pg. 5

determined to have financial need and hold a Social Classification Card.⁴¹ The government has also provided subsidies for infrastructure projects, which shows that the implementation of privatization has not achieved its fully anticipated financial benefits.

Although Chile remains the example for other developing countries seeking to implement water privatization, there is growing evidence to show that the policy has not been as successful as planned. There are concerns regarding the environment and social impact of the policy, which remain issues in the country to this day. However, due to Chile's strong economic and political belief in market systems, it is unlikely that their policy towards water will change in the near future—no matter what political party is in power. For the purposes of demonstrating a correlation of water policy to economic and political tendencies, Chile is a good example because it has demonstrated changes at critical transitions in the government's direction. However, the changes to the water laws have not always proven to be the most beneficial to the society nor have they met all of the desired outcomes. Adhering to a neoliberal economic platform has led to the exclusion of some of the more vulnerable members of society, and dominance over water rights by more powerful private industries that use significant amounts of water for other projects; this is especially relevant for the mining sector. The influence of public and private interests in changing Chile's water policy to match their prescribed direction for the country have brought about some improvements to the water system, but there are still issues that remain in addressing the needs of the entire population.

⁴¹ Mary M. Shirley, Lixin Colin Xu, and Ana Maria Zuluaga, "Reforming Urban Water System in Santiago, Chile" World Bank Policy Research Working Paper No. 2294 (Washington D.C.: World Bank, 2002), pg. 68

MEXICO

The case of Mexico is probably the least effective in demonstrating the correlation of water policy to changes in government because authoritarian regimes have sustained control for large portions of the country's history. The changes that have occurred, like the other cases of Chile and Uruguay, have been influenced by economic influences outside of the country and government failures to provide a sustainable resource to the people. Mexico continues to have some of the worst water problems, despite its implementation of some private involvement. Additionally, its inability to financially support new or improved water systems has limited the government's involvement. Without a definitive policy and viable credit, the country will continue to deplete its fresh water resources through bad practices and deteriorating infrastructure.

Mexico has for a long time been an influential country in Latin America, in part due to the resources that it has exported to the international market, the historical legacy left behind by the Spanish, and its proximity to the U.S. Formerly known as "New Spain", Mexico was a critical piece of the Spanish empire because of its gold and silver deposits. Following the country's independence in 1810, its economy shifted to include a greater role for agriculture. Politically it has seen periods of turmoil, including a bloody civil war, and a long authoritarian rule by a single political party. Then near the end of the 20th century, Mexico, like many other Latin American countries, began to implement neoliberal adjustments. All of these conditions have affected the country's water policy. However, the physical characteristics in Mexico have further complicated water policy.

The northern and central portion of the country, which is home to 60% of the population and 70% of generated GDP, only receives 25% of the annual precipitation.⁴² This scarcity has made water an essential element of government policy, but at the same time it remains a highly undervalued resource within the country. Considering the developments within the federal government and its complimentary economic decisions, Mexico shows some of the same tendencies as Chile towards adjusting water policy to match changes in governance and economic focus; however, the long standing tradition of authoritarian control continues to influence policy, even as the government has adopted principles of decentralization, changing its water policy.

The history of Mexico demonstrates the adhesion to strong central control of water; even though prior to Spanish control indigenous groups established communal irrigation systems that were maintained outside of a central authority. These indigenous groups also held water in higher regard, with uses for religious and cultural ceremonies. However, once the Spanish took control, all water rights were taken by the crown and administered for use by the representatives of the Spanish royalty. After independence in 1821, control over water remained within the central government, and previously allocated water rights by “local governments and large landowners” remained unchanged.

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During the 50 years following independence, the country experienced extensive political unrest, until Porfirio Diaz, who ruled from 1876-1911, assumed control. Under

⁴² Naomi Adelson, “Mexico’s Water Woes” Mexconnect, March 11, 2000, accessed 10/19/12, pg. 1, <<http://www.mexconnect.com/articles/1789-mexico-s-water-woes>>

⁴³ Philippus Wester, “Shedding the Waters: Institutional Change and Water Control in the Lerma-Chapala Basin, Mexico” (Netherlands: Wageningen University, March 19, 2008), accessed 11/12/12, pg. 34, <edepot.wur.nl/16353>

his leadership, land was consolidated in the hands of the elite that supported Diaz, leaving 75% of the population landless.⁴⁴ The Diaz government also sought foreign investment and made concessions that appealed to the United States and other investors. An 1888 law placed lakes and rivers under the state's control, but opposition from the landholding elite led to the establishment of an 1894 statute that explicitly gave the government control to grant water use rights of the nationally held resource.⁴⁵ The water policies correlated with the political policy of authoritarian consolidation and the influence of wealthy landowners, while ignoring the needs of the large, landless population. This was an unsustainable policy, as the wealth and land holdings of a very small group inspired revolution by the impoverished majority in 1910.

After seven years of bloody conflict the revolution began to draw to a close and a new constitution was written. Within the constitution were several articles regarding water policy, in particular Article 27 that stated, "The Nation is owner of all water within its territory, with a few exceptions, and authorizes the government to administer these resources and grant 'concessions' for water use."⁴⁶ This policy was similar to the one prior because water authority remained within the central government; however, the constitution intended to break up the large landholdings of the elite and redistribute them to the poorer population, into what were called ejidos. The law would then grant the government authority to concede water rights to the poor living on the newly distributed land, but these intentions were not met until several years later.

⁴⁴ Wester, pg. 35

⁴⁵ Wester, pg. 35

⁴⁶ Hector Garduño "Lessons from Implementing Water Rights in Mexico" *Water Rights Reform: Lessons for Institutional Design*, ed. Bryan Randolph Bruns et al., (Washington D.C.: International Food Policy Research Institute, 2005), pg. 89

The new constitution established legal precedence for the improved social standing of the poor; however, when land distribution actually occurred, those most desperate and dependent were left out of the concessions. Instead the federal government granted the land rights to the developing middle class because it was presumed that they would make better use of it. Several years later, in 1926, government control over water provision was enhanced with the establishment of the Irrigation Law and subsequent Comisión Nacional de Irrigación (National Commission for Irrigation, CNI). This was a governmental organization created by President Calles dedicated to meeting the need for extended irrigation to the rural ejidos.⁴⁷ The continued dominance by the upper class and the authoritarian government ended up resulting in little real change for the majority of the population. This poor majority also saw a drastic increase in population, as thousands of Mexicans were forcefully deported from the United States following the Great Depression. It was not until 1934, under the leadership of President Cárdenas, that there was legitimate attention given to supporting the rural poor and granting them actual land rights through the ejido system.

The Cárdenas administration was the first to successfully provide the poor with rights to land as intended in the 1917 Constitution. By the end of his term as president, land controlled by ejidos increased from 16% to 60%.⁴⁸ Although there was no new law passed regarding water policy, Cárdenas was the first to implement the constitution for the betterment of the poor population and use the policies already in place to facilitate social benefits, which would require an expansion of water access. He achieved this by

⁴⁷ Wester, pg. 45

⁴⁸ Wester, pg. 47

appealing to the lower class on an extensive campaign, where he reached out to many poor citizens throughout the country. His populist regime was supported by those less fortunate within the country that wanted to see a government that would meet the needs of the people. Another influential policy that he implemented was the nationalization of Mexico's petroleum resources, which has been vital to the internal industrialization of the country.

Following the reforms of President Cárdenas, the middle of the 20th century saw control of water policy held in the government organization titled the Ministry of Water Resources. The ministry succeeded in implementing several policies regarding water. It established river basin agencies to control local resources, oversaw the creation of the Federal Waters Law in 1972, and developed the first National Water Plan in 1976.⁴⁹ Throughout this time period, control of water allocation and irrigation maintenance remained within the federal government's domain. Simultaneously Mexico was under the tight control of a single political party, the Partido Revolucionario Institucional (Institutional Revolutionary Party, PRI), which controlled elections and eliminated political opposition up until the 2000 election. The single control of this one party is a testament to the power held by the state, and this dominance was reflected in water policy as well.

Things would become more difficult in Mexico during the 1980's, when it and many other countries in the region, were hit by major economic decline and a regional debt crisis. As the economy worsened, the government increasingly lost the ability to fund irrigation projects. Coupled with this decline in available financing for new

⁴⁹ Garduño, pg. 89

projects—as well as repairs to old—there was a growing bureaucracy in control of water. The complications to water policy led to the decline in services and quality of the resource. Additionally, the government continued to miss the expectation of the population of increased water access. For a long time, the government had artificially kept the price of water low to help lower income families maintain access; however, the lack of cost recovery was a major influence for the divesture of irrigation development responsibility to local Water User Associations through a process called Irrigation Management Transfer (IMT) during the 80's and 90's.

The proposal of IMT sought to increase the involvement of local users by designating them in charge of their local irrigation systems, so they were now more thoroughly invested in its development and success. While control of irrigation was given to the water users themselves, or to the collective groups that used the resource, municipal governments were put in charge of “providing potable water services, treatment, and drainage.”⁵⁰ The divesture of control correlates with the growing economic trend within Mexico towards neoliberalization. As the country began to decentralize its economy, financial institutions and its northern neighbor, the United States, encouraged it to adopt policies like those stated in the Washington Consensus. The economic problems also spurred the growing influence of opposition parties against the PRI. As there was a decrease in government control, there was a consistent decentralization of water policy as well.

The next major water policy was the 1992 Ley de Aguas Nacionales (National Water Law), which continued the trend of decreased government involvement. This law

⁵⁰ Adelson, pg. 3

did several things, one of the first being that it redefined Article 27 of the constitution so that rural farmers involved in ejidos would have legal title to their land and could thus sell or rent it at their discretion, as well as leverage it for credit.⁵¹ The law established the National Water Commission (CONAGUA) as the administrator of water policy. It was charged with increasing access to clean water and sanitation, controlling the entire production and management of dams, and creating a registry for water use permits.⁵² These were different than those used in other countries due to the continued state influence and involvement in Mexican water rights, the duration of water rights being 30 years with government authority to take away the concession if it was demonstrated that the resource was not being put to good use, and the establishment of a specific consideration for not harming the environment.

This law also came about shortly after Mexico's agreement to join the GATT in 1986 and before further economic liberalization when Mexico joined NAFTA in 1994.⁵³ The increased competition brought on by free trade with the U.S. and Canada, forced Mexico to seek improvements to efficiency since agricultural products, especially corn from the US was subsidized and subsequently cheaper than locally grown alternatives. The 1992 change in water policy is in direct correlation to the continued shift in economic and political ideals of the Mexican government, which moved to a much more decentralized role and followed the guidance of economic neoliberalization.

⁵¹ Margaret Wilder, "Water Governance in Mexico: Political and Economic Aperatures and a Shifting State-Citizen Relationship" Resilience Alliance, 2010, accessed 11/13/12, pg. 4, <<http://www.ecologyandsociety.org./vol15/iss2/art22/>>

⁵² Wilder (2010), pg. 4

⁵³ Margaret Wilder and Patricia Romero Lankao, "Paradoxes of Decentralization: Water Reform and Social Implications in Mexico," *World Development* Vol. 34, No. 11, 2006, pg. 1979

Following these changes there have been some positive improvements in water distribution with an estimated 14 million gaining access to piped water and 16 million added to sanitation provision.⁵⁴ However, despite these seemingly impressive improvements to water services, there are serious issues that still exist regarding the effective distribution of clean and reliable water. The decentralization of irrigation control by the federal government occurred at a period in time when the systems of irrigation in the country needed serious improvements; it was estimated that half of the water supplied through irrigation systems never reached its target destination.⁵⁵ Furthermore, while there is evidence of an increase in access, it has not always been dependable or consistent, and the quality of water has had some serious health concerns. The IMT, which was intended to give greater control to local water users and have them personally invest in water projects, currently faces a dire need for federal financial support to improve irrigation systems and reduce water losses. Part of the problem with these irrigation districts is that they do not have sufficient cost recovery and tariff rates are too low to be efficient or attract private, outside financing.⁵⁶ There have been some cases of private participation, as well as concessions, BOT programs, and management contracts, but many of these initiatives have failed to be completed due to poor project planning, contractual ambiguity, and again the lack of available credit in these areas due to poor cost recovery.⁵⁷

⁵⁴ *Private Solutions for Infrastructure in Mexico*, World Bank and Public-Private Infrastructure Advisory Facility, 2003, accessed 11/18/12, pg. 48, <http://www.ppiaf.org/sites/ppiaf.org/files/publication/Mexico-CFR_0.pdf>

⁵⁵ Wilder (2006), pg. 1988

⁵⁶ *Private Solutions for Infrastructure in Mexico*, pg. 52

⁵⁷ *Private Solutions for Infrastructure in Mexico*, pg. 52

Mexico has the potential to develop and improve its water resource sector, but to do so will require continued increases in prices for a resource that many consider to be a public good. With about three quarters of water use still dedicated to agriculture, it is important changes be made to improve irrigation, as well as to provide a more reliable and higher quality product to all members of the growing population.⁵⁸ The historical tendency of water policy to follow the trends of economic and political policy could mean that improvements are hinged upon changes in governance. However, for the government to make strides in reaching its goals of better serving the population, it will likely need to initially increase involvement in the system that it largely sought to remove itself from with the adoption of water laws in the late 80's and 90's. There is a need for change, and it remains to be seen who will be responsible for implementing it. Mexico demonstrates how economic and political influences helped to sway water policy to a more decentralized role after a legacy of authoritarian control. However, there has not been as profound a change in policy as was seen in Chile. The change remains subtler because the government in Mexico continues to maintain a central influence on policy, and that can be attested to the legacy of a powerful central government. Yet, even with the sustained government influence in water distribution, lingering problems raise the question whether divesture would help to facilitate improvements, or would lead to further exclusion of those who cannot afford increases in water prices to cover costs.

⁵⁸ Adelson, pg. 1

URUGUAY

Uruguay is a strong case to support the correlation of water policy to political and economic conditions within the country. The federal government has been the central provider of goods and services within the country and only during times of outside influence and economic pressure has it sought to change its role. With the influential role of the government in overseeing the needs of the population, the country's water policy long remained unchanged with central control of the resource. However, when the country faced economic pressure to reduce the government's role, there was a complimentary shift in water policy, allowing for private provision. The inclusion of private companies in distributing water was unpopular amongst most of the population, and they have since sought to eliminate any private involvement in water utilities. From these changes it is evident how water policy has correlated with economic and political shifts within the country.

Uruguay is the second smallest country in South America and has a climate that has been ideal for sustaining an economy based in agriculture and animal husbandry, under which the country saw early periods of strong economic growth. Following the selection of the first president of the country, there have been two dominant political parties, the Colorados and the Blancos—with some other parties developing later. The political dichotomy of these two parties has led to several conflicts between them, which have resulted in some violent outbreaks, but usually concluded with mutual agreements

and power sharing.⁵⁹ The central role of the government has played a pivotal role in ensuring rights and services for its citizens, even earning the title the “Switzerland of Latin America”.⁶⁰ Throughout Uruguay’s history the state has been responsible for providing for the needs of the people, and that can be seen in the country’s water policy.

Based on this connection of water policy to governance, when the role of the government has changed there has been a corresponding change in the water policy, thus making Uruguay a good example of the correlation of water policy to government ideology. The citizens of Uruguay have grown accustomed to and developed an expectation that the state will provide for them basic necessities including water, so when that has changed, the people have usually not supported the departure from government allocation of water.

There have been some changes to water policy as a result of economic and political pressure from outsiders, but predominantly the people of Uruguay have enjoyed state control over water resources. This state provision has benefited the largely agricultural based economy, which primarily focuses on animal husbandry and some agricultural products including rice, soybeans, and cellulose from timber. The country’s dedication to these exports can be seen in its allocation of water resources, where in 2000, 87% of water use was directed for agriculture.⁶¹ Support for agriculture dates back

⁵⁹ Jeffrey Cason, “Electoral Reform, Institutional Change, and Party Adaption in Uruguay,” *Latin American Politics and Society*, Vol. 44, No. 3, Blackwell Publishing on behalf of the Center for Latin American Studies at the University of Miami, 2002, accessed 11/25/12, pg. 92, <<http://www.raularagon.com.ar/biblioteca/bibliografianacion/Cason%20-%20Electoral%20Reform.pdf>>

⁶⁰ Jeffrey Cason, “Electoral Reform and Stability in Uruguay,” *Journal of Democracy*, Vol. 11, No. 2, Johns Hopkins University Press, April 2000, accessed 11/25/12, pg. 86, <<http://muse.jhu.edu/journals/jod/summary/v011/11.2cason.html>>

⁶¹ *Uruguay: Country Fact Sheet*, Food and Agriculture Organization of the United Nations, Aquastat, Nov 12, 2012, <http://www.fao.org/nr/water/aquastat/data/factsheets/aquastat_fact_sheet_ury_en.pdf>

to 50 years after the country's independence with the adoption of the Código Rural (Rural Code) in 1875.

The Código Rural in 1875 was the first time that there was an explicit mention of water in Uruguayan law. The Rural Code roughly stipulated that water use was tied to land use.⁶² The law was left intentionally vague because at the time there were not many needs for explicit regulations of water use due to the relative abundance of water, and limited exclusionary uses by one user over another since it was a small population that had relative ease in accessing land. The lack of water scarcity, in conjunction with the social welfare provisions, provided predominantly by the Colorado party, led to little need for major changes to water policy. The government supported the water needs of the people, establishing the expectation for government provision of resources. However, poor economic growth and increased political conflict, escalated by problems of droughts and flooding, led to a rise of leftist political groups and civil unrest, culminating in a military coup in 1973.^{63/64}

Instead of allowing the leftist political groups to establish control or let the country fall into disarray, the military implemented greater government control. The increased role of the government reinforced the country's policy of resource management with the creation of the Código de Agua (Water Code) in 1975. Article three of the code established the federal government as the authority in charge of water as it pertained to formulating a national plan for water, designating uses for water by private and public

⁶² Adolfo Gelsi Bidart, "El recurso natural agua en la Legislación Positiva Agraria", 1984, accessed 11/25/12, <<http://documentos.aeu.org.uy/070/070-1-22-56.pdf>>

⁶³ Cason (2000), pg. 87

⁶⁴ "Uruguay", *The Washington Post: Country Guides*, The Columbia Electronic Encyclopedia (New York: Columbia University Press, 2012), History section

users, creating priorities for certain regions to gain access to water, mandating the right of the state to revoke rights to water in cases of drought, and finally to determine fees for water use in irrigation or by industry.⁶⁵ These regulations for water were a reflection of the increased role that the military sought for the government. The rule of the military government lasted for 13 years until civil power returned in 1986, under President Julio María Sanguinetti, and this corresponded with a decrease in central government authority, as well as the divestiture of water services in two important water departments.

While the return to civil government was a success for Uruguayan democracy, the timing was less than ideal, as most of Latin America and Uruguay had fallen into a major financial debt crisis. Seeking the aid of industrialized nations and other international finance institutions, countries were required to implement conditions provided by the Washington Consensus—including privatization. The successive governments that followed the military dictatorship in Uruguay were charged with the difficult task of having to adopt these neoliberal reforms to receive financial support from abroad, which led to changes in its water policy.

In 1992 water privatization began in the wealthiest of the 19 water regions, the Maldonado Department.⁶⁶ That same year a Uruguayan labor movement developed a referendum to voice public opinion against privatization; the plebiscite received support from 70-80% of the population.⁶⁷ However, in spite of the public's outspoken disapproval

⁶⁵ *Código de Aguas*, Republica Oriental del Uruguay, Poder Legislativo, <<http://200.40.229.134/htmlstat/pl/codigos/codigoaguas/1990/tc.htm#Art3>>

⁶⁶ Morgan McDonald, "Assessing the New Wave: Transaction Costs of Water Law Reform in Latin America" *Southwestern Journal of International Law*, Vol. 17, Southwestern University, 2011, <http://www.swlaw.edu/pdfs/lawjournal/17_1mcdonald.pdf>

⁶⁷ There is some discrepancy between the accounts of Adrian Marquisio, "The Planetary Vision", *Changing the Flow: Water Movements in Latin America*, by the Food and Water Watch et al., 2009, pg. 4, <<http://www.tni.org/sites/www.tni.org/archives/reports/pubserv/changingtheflow.pdf>>; and Maude Barlow

of privatizing water, the government continued to seek out private partnerships for water distribution. The dominant multinational corporations that were involved in water provision were Aguas de la Costa, which was controlled by the colossal French company Suez under its subsidiary Aguas de Barcelona, and Uragua, which was a subsidiary of the Spanish company Aguas de Bilbao.⁶⁸ The majority of water in Uruguay was still provided by the state owned water company, Obras Sanitarias del Estado (OSE), but the granting of concessions to private providers was a direct result of economic pressure by international financial agencies to incorporate neoliberal principles, despite the fact that they led to more problems than benefits. Even though the population did not support these policies, nor were they necessarily in the best interests of the citizenry, they remained the option chosen by the government during the 90's and the beginning of the 21st century.

The 1994 and 1999 presidential elections saw the growing influence of the leftist political party Frente Amplio (Broad Front) in response to continued economic failures under the dominant parties, which were escalated by economic problems in Brazil and Argentina. The increased support for the Broad Front party was sparked by the reduction in services provided by the state, which was seeking neoliberal reforms and a decentralization of the government's role in allocating civil services. In terms of water policy, the private companies that had taken over control of water services in two of the country's provinces were failing to meet the conditions agreed upon in their contracts.

and Tony Clarke, *Blue Gold: The Fight to Stop the Corporate Theft of the World's Water*, The New Press, New York, 2002, pg. 189

⁶⁸ Carlos Santos, "Suez Leaves Uruguay; Government Tampers With Constitution", Food & Water Watch, <<http://www.foodandwaterwatch.org/global/latin-america/uruguay/suez-leaves-uruguay-government-tampers-with-constitution/>>

Rather than meeting contractual deadlines for service improvements or paying fees to the state, the companies revised their contracts so that the state was paying for losses incurred by the private firms.⁶⁹ Additionally, many customers lost access to water because of their inability to pay the increased tariffs associated with the private sector distribution.⁷⁰ Prior to private control, the public water company had developed communal taps to grant access to drinking water for those who could not afford a connection to their homes in certain parts of the Maldonado Department. However, the private companies that had taken over water services in this area removed these communal faucets because they wanted to increase their customer base, despite the fact that many people could not afford the connection costs.⁷¹ Further problems arose from the private sector control when there was an announcement by the state water company (OSE) in 2002 that the people of Maldonado should, “boil the water distributed by the Spanish firm (Uragua/Agua de Bilbao) before drinking it, as fecal e-coli bacteria had been detected in the water.”⁷² Failing to recognize the problems associated with privatization, the federal government sent a note to the IMF that same year seeking additional funding, provided that they continued to increase private sector participation in services like water and sanitation.⁷³ This letter of intent served as the catalyst for the

⁶⁹ Carlos Santos and Alberto Villareal, “Uruguay: Victorious Struggle for Water”, *Reclaiming Public Water*, Edited by Belén Balanyá, et al., Second Edition, March 2005, pg. 174, <<http://www.tni.org/sites/www.tni.org/archives/books/publicwater.pdf>>

⁷⁰ McDonald, pg. 123-124

⁷¹ Santos (2005), pg. 175

⁷² Raúl Pierri, “Uruguay: Referendum Gives Resounding ‘No’ to the Privatisation of Water”, Inter Press Service News Agency, Montevideo, November 1, 2004, accessed 11/13/12, <<http://www.ipsnews.net/2004/11/uruguay-referendum-gives-resounding-no-to-the-privatisation-of-water/>>

⁷³ “Uruguay—Letter of Intent, Memorandum of Economic Policies, and Technical Memorandum of Understanding” Sent to the IMF by the Uruguayan government, Montevideo, August 4, 2002, accessed 11/25/12, <<http://www.imf.org/external/np/loi/2002/ury/03/index.htm>>

creation of the Comisión Nacional en Defensa del Agua y de la Vida (National Commission in Defense of Water and Life, CNDAV), which then sought to put an end to water privatization in Uruguay.⁷⁴

One year before the next national election, the CNDAV submitted to the national legislature the 283,000 signatures necessary to have a constitutional referendum against water privatization included on the 2004 ballot.⁷⁵ Then on October 31, 2004, 64.7% of the people in Uruguay voted to amend Article 47 of the constitution stating, “Water is a natural resource essential to life. The access to potable water and the access to sanitation constitute fundamental human rights.”⁷⁶ This measure of direct democracy was accompanied by the first election of a leftist president, Tabaré Vázquez of the Broad Front party. These two results were part of a movement by the people of Uruguay to adopt social improvements through new forms of governance. The election of Vázquez and constitutional amendment that resulted from the 2004 election is a demonstration of a shift away from the neoliberal and private influences that had gained significance in the last two decades in Uruguay, and a resurgence of the role of the central government.

The constitutional amendment guaranteeing access to water for the public can be seen as a return to the welfare initiatives that dominated early Uruguayan political policy. As the country experienced increased pressure from international finance institutions to

⁷⁴ Carlos Santos and Alberto Villareal, “Uruguay: Direct Democracy in Defense of the Right to Water”, *Reclaiming Public Water*, July 2006, pg. 1, <<http://www.tni.org/sites/www.tni.org/archives/books/wateruruguayrev.pdf>>

Updating Carlos Santos and Alberto Villareal, “Uruguay: Victorious Struggle for Water”, *Reclaiming Public Water*, Edited by Belén Balanyá, et al., Second Edition, March 2005, <<http://www.tni.org/sites/www.tni.org/archives/books/publicwater.pdf>>

⁷⁵ Santos (2006), pg. 2

⁷⁶ *Latin American Health Watch: Alternative Latin American Health Report*, Edited by Jaime Breilh of the Center for Health Research and Advisor (CEAS), Global Health Watch et al., 2005, accessed 11/12/12, pg. 130, <<http://cis.org/files/lahr.pdf#page=124>>

divest services and resources to the private sector, the water policy was shown to follow with the privatization of water services in two provinces. However, as the private sector failed to improve conditions, and in fact made them worse, the public rallied to remove the private sector from the distribution of this resource, which they constituted to be a basic human right. The state has been able to increase access to piped water to 98% (OSE assessment from company website) and with the support of the World Bank and International Bank for Reconstruction and Development it is working to improve access to sanitation as well.⁷⁷ In the words of David Hall et al., the policy to constitutionalize the right to water shows, “that social considerations take priority over economic considerations in water policies.”⁷⁸ This is important because despite the pressure to adopt decentralized forms of government by the international community, the people of Uruguay have instead decided to rely on the state. Furthermore, they have ushered in government leaders and policies to that effect.

⁷⁷ “Uruguay: Modernizing Public Water Services (2010)” The World Bank, April 2010, accessed 11/12/12, <<http://siteresources.worldbank.org/NEWS/Resources/uruguaywaterservices4-12-10.pdf>>

⁷⁸ David Hall, Emanuele Lobina, and Robin de la Motte, “Making water privatization illegal: -new laws in Netherlands and Uruguay”, Public Services International Research Unit, November 31, 2004, pg. 2

CONCLUSION

Water policy is a contentious issue because of the difficulty in assigning a monetary value to something that is quintessential to life. However, throughout the world just under a billion people still struggle from lack of access to clean water, and even more from a lack of access to sanitation.⁷⁹ In 1992, following the Dublin Announcement, there was a global recognition of the economic value of water, but since then there has been increasing support to instead recognize water as a basic human right fundamental to “the full enjoyment of the right to life”.⁸⁰ Despite the declarations by the UN, there is still pressure for developing countries to implement privatization of many of their utilities, including the provision of water and sanitation.

The literature on privatization of water policy is split between those that stress the economic value of water and those who oppose commoditizing such a vital resource needed for sustaining human life. There are many who speak out in general, in favor of one direction over the other, and often cite the countries used in this document. The three countries are a strong source of perspective for the different outcomes that have resulted from increased private involvement in water policy and show how the changes to policy are a reflection of the political and economic circumstances in the country, and not so much about the role that water plays as a vital resource for life. From the examples of

⁷⁹ “Millennium Development Goal drinking water target met, Sanitation target still lagging far behind”, UNICEF Joint Press Release, New York/Geneva, March 6, 2012, accessed 11/30/12, <http://www.unicef.org/media/media_61922.html>

⁸⁰ “UN declares clean water a ‘fundamental human right’, The UN has declared that access to clean water and sanitation is a fundamental human right”, BBC News: US & Canada, July 28, 2010, accessed 11/30/12, <<http://www.bbc.co.uk/news/world-us-canada-10797988>>

Chile, Mexico and Uruguay, the relationship of water policy and conditions within the government can be seen to varying degrees with different outcomes in each case.

The case of Chile is one of the most widely recognized as a success of privatization of water rights and services. Privatization came about as a shift away from the policies of the leftist regime led by President Salvador Allende in the early 1970's, and the economic philosophy of neoliberalism implemented by "Los Chicago Boys". Despite the argument that water should be provided by the state as a public good because it is a basic human right, the Chilean government has established private control over water rights and services with the goal that it would lead to increased efficiency and the best use of the resource.

This policy has resulted in almost universal access to the resource with increases in sanitation access. However, the water market that was supposed to follow from the establishment of private water rights, has not been as profound as anticipated and has led to owners of these rights to hoard and speculate for personal gain. Furthermore, the increases in prices for services have led to some families not being able to afford access to water, which have been met by attempts to address this issue through subsidies for families demonstrating financial need. The changes to the water policy make it a good example of the correlation of policy to economic and political pursuits; however, it does not necessarily mean that it has been the most beneficial policy for all of Chilean society.

Mexico presents a less concrete example of the correlation of water policy to political and economic influences, and this is primarily the result of the extensive role that the central government has played throughout the country's history dating all the way back to colonization by the Spanish. Most early water policies were a reflection of

increases in the state's power and its growing control over the country's resources. The vast disparity between the rich and the poor has pressured the government to provide certain concessions in favor of the lower class, but it still maintained authority over water resources. For a long period the government provided water to the people at a rate that was below cost to help ensure access for the lower class.

This unsustainable policy began to crumble as the country found itself increasing unable to finance improvements to existing water systems or new ones. These water systems were essential for rural irrigation, which the government had established the need for by distributing land to the poorer population. Lacking the financial capital to maintain these projects, the government began to turn over control to private users and seek additional support from international lending agencies. However, it was not able to establish sustainable credit because of the lack of cost recovery within the existing framework. The country continues to face major issues with its water policy as its capital sinks from depletion of groundwater and it struggles to provide a reliable and clean product to the citizenry. The current policy of central authority within the federal government with some private participation has not solved the country's problems and it will need to find solutions before the country exhausts its depleting resources of freshwater.

In the Uruguay case, there has been a tradition of federal support in providing resources and services to meet the needs of the people. Additionally, it has not faced some of the major problems associated with a scarcity of water because the country is relatively water abundant. Without the dire need to implement policies to control water

use and its equal dispersal, the country has mostly implemented laws to support governmental authority over water.

The government legacy of acting essentially as a welfare state has caused the country to experience several periods of economic decline and unsustainable debt. It has also been economically dependent on its neighbors, so when they have experienced economic hardships, they have also been felt in Uruguay. The economic issues within the country have motivated changes to the country's water policy, especially during the latter part of the 20th century as most of Latin America was also in economic turmoil and began implementing neoliberal principles. However, the population, which had grown accustomed to the benefits provided by the state, has been outspoken against efforts to increase privatization of water and other utilities.

When the government did allow private firms to provide water services, it proved to be at a detriment to the country, and the citizens responded by developing legislation to establish water as a constitutional right. This was a monumental moment in water policy because it was the first time that a government recognized water as an essential human right, and outlawed private allocation. Since enacting the amendment, the country has benefited from an increase in water services to almost the entire population and is receiving support from international financiers to continue to increase access to sanitation. There is concern regarding self-regulation of the state owned water company, but if the country continues to experience progress with this policy, it may set the precedent for others to follow.

All three of these cases could benefit from additional studies looking at the changes that have resulted from implementing different policies, especially Uruguay to

see if its amendment to the constitution serves as a good example for other developing countries that have had issues with increased private participation. Additionally, the inclusion of more cases would shed greater light on the importance of political and economic conditions in establishing correlating water policies. Latin America presented a strong focus area because it has received so much private investment in utilities and other services. In general these three case studies demonstrate the complexity of the issue and the different responses to water policy that can be seen by governments with different prerogatives.

The highly politicized nature of water policy is due to the conflict of considering the economic value of the resource and its value to sustaining human life. Without water we would not survive so it is important for countries to ensure access to the resource, but the conflicting uses for the depleting resources of freshwater require that certain uses take precedence over others and that water be recognized for its value. For those that argue that water should be a public good provided by the state at prices that are below cost, there is a compelling counterargument presented by Jamie Linton regarding the import and export of water, which can be interpreted for the general public provision of water,

“Perhaps the strongest argument against [commercial] water export is that it would only perpetuate the basic problem that has caused the ‘water crisis’ in the first place—the presumption that people’s growing demands for water can and should always be met by furnishing an increase in supply.”⁸¹

If you interpret what he is saying about the commercial export and import of water, to the public provision of the resource, those in favor of increased private

⁸¹ Maude Barlow and Tony Clarke, *Blue Gold: The Fight to Stop the Corporate Theft of the World’s Water* (New York: The New Press, 2002), pg. 214

influence could argue that it is the inefficient public provision of water that has led to the problems of scarcity that countries face today. Thus, unless there is an economic value associated to the resource people will continue to abuse it and use it without consideration for improving efficiency or conservation. On the contrary those opposed to privatization stress the fact of water's importance to sustaining life, and insist that imposing prices limit access, especially to impoverished members of the population.

Components of both the system in Uruguay and Chile probably present the best solution to this issue. When Uruguay constitutionally recognized water as a basic human right, it was a crucial development in water policy because it ensured that the government was responsible for improving access to the resource for the entire population and made private involvement illegal. However, many governments lack the financial ability and technical knowledge that many private companies can provide, so excluding them entirely could be detrimental. Furthermore, both countries recognized the need for a fair price of the resource to recover costs from developing infrastructure and delivering the resource, as well as removing the waste. To assist in serving the poor the use of focused subsidies, as are used in Chile, could be critical to helping the most vulnerable members of society maintain access. Without a clear best practice for the distribution of water, it will continue to remain a highly politicized issue with different approaches taken by different governments across the globe.

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