

Bolivian Water Regulation: Failures of Institutional Reform¹

By Sanford Berg² and Claudia Vargas³

July 20, 2009

Abstract

In a polarized political setting, public policy evolves in response to pressures on and from institutions. These institutions include broad social structures, formal organizations (such as regulatory agencies), and support systems (like civil service). This study uses water and sanitation policies in Bolivia to illustrate how institutional reform at all three levels lacked legitimacy in the eyes of many citizens. The subsequent rejection of neo-liberal policies reflects several failures in their implementation. This study examines why Morales' political agenda euthanized one set of formal organizations: regulatory agencies established in the earlier institutional reform.

Introduction

Social structures, formal organizations, and support systems can all be characterized as “institutions”. This study draws upon all three types of institution building in explaining the causes and consequences of institutional failure in Bolivia:

Social structures: Institutions can be defined as mechanisms that facilitate cooperation or mitigate conflicts among sets of individuals; such structures become part of the social order, setting rules and procedures for solving problems. As part of the cultural context for governance, institutions can also be customs and accepted patterns of behavior that facilitate the achievement of shared objectives. Hypothesis: When a large group has been excluded from playing a serious role in the political life of a nation, at some point the social order is likely to become destabilized—opening up the opportunity for regime-change.

Formal organizations: Institutions can be organizations, such as courts or regulatory commissions. Such entities are established to fulfill specific functions, as they emerge from complex sets of circumstances to address salient issues. Organizations generally have formal mandates, limited resources, and a culture that includes incentives, shared values, and a structure of decision-rights (Berg, 2000). Hypothesis: When new agencies are unable to engage all

¹ An earlier version of this paper focused on lessons for regulators—an instrumentalist approach. The authors are grateful to two anonymous reviewers who urged us to place the Bolivian experience into the context of broader institutional issues—a more analytical approach. Thus, this study is a significant revision of the initial paper, “Bolivian Utility Regulation: Lessons for a Water Sector Agency,” which was presented at the Association of Brazilian Regulators (ABAR) Congress, May, 2009.

² Distinguished Service Professor of Economics, University of Florida and Director of Water Studies, Public Utility Research Center.

³ MSc in Development Administration, University of Birmingham, UK. UN Habitat. Legal consultant and former legal advisor to SIRESE.

affected stakeholders in meaningful dialogues, the agencies become vulnerable when the political center of gravity shifts.

Support systems: Institutions can also be part of the scaffolding that supports formal organizations; for example, systems of political patronage or civil service systems both could provide the framework for information collection, analysis, advice, and policy implementation. Increased professionalism is generally viewed as contributing to the reform of broad social structures and as an input for increasing the effectiveness of formal organizations. Hypothesis: When civil service reforms are not inclusive and are perceived as rewarding technocrats, the initiatives risk reversal—leading to a return to a more politicized decision-support system.

The three hypotheses regarding institutional failure are consistent with the facts in Bolivia. Recent articles in this journal have used the first and third of these institutional concepts to shed light on government reform and democratization in Latin America. For example, Sonoja (2009) considers the role of institutions as broad social structures; the framework is applied to a single nation, Venezuela. Institutions are social structures that both establish constraints and provide platforms for political initiatives. According to Sonoja institutions “. . . synthesise complex power relations that are economically masked by seemingly non-controversial, beneficial rules, norms and procedures. Institutionalist scholars often portray institutions as the result of unintended consequences, a sedimentary accumulation of practices and ideas throughout time, which come to life or acquire different meaning depending on chance. This view of institutions hides a deeper, normative dimension, which when seen in the context of scarcity, highlights their value as a means for social control”. (p. 398) Sonoja then goes on to argue that the political change in Venezuela was the result of contradictions in the social structure that made the nation ripe for “old” ideas packaged in the ideology of Bolivarianism. The parallels for Bolivia are clear—where the historical exclusion of indigenous people and perceived failure of neo-liberal reforms to reduce poverty contributed to the election of Evo Morales.

At the more micro end of the spectrum, Ramió and Salvador (2008) examine how civil service reform affected agency performance; their cross-country study evaluated these decision-support systems in eight nations (including Venezuela and Bolivia). Reforms tended to be externally imposed or involved emulating systems from developed nations, usually without the support of a political consensus regarding the benefits of a more professional civil service. Historically, incoming governments have lacked confidence in the administrative support systems developed by previous governments. In addition, use of administrative positions for political patronage has characterized the region. In the case of Bolivia, it was probably unrealistic to expect administrative stability when the political system became unstable. Furthermore, one could argue that the new scheme resembled a “. . . closed technocratic learning system that [fed] on itself outside the [country’s] political, social, and economic realities. There is no real institutional learning dynamic, but a process of reaffirmation of a particular orientation that is conceptually armour-plated and gradually distances itself from the institutional realities it sets out to improve or resolve.” (Ramió and Salvador, 2008, p. 569)

These two studies illustrate the importance of citizen perceptions regarding institutional performance in the large (as a foundation for social cohesion) and in the small (as scaffolding that facilitates governmental decision-making). Between broad systemic outcomes and

underlying decision processes (civil service), are the agencies that implement public policy. These newly established (relatively) independent regulatory agencies are the focus of the current study. These agencies (one element of the so-called Washington Consensus) represented deliberate attempts at reducing the power of government ministries responsible for infrastructure. With some insulation from day-to-day political pressures, these new formal institutions were given authority to provide sector oversight, to promote transparency, and to establish incentives to improve sector performance. The agencies were supposed to recruit skilled professionals (or technocrats, depending on one's view) who could promote the long run sustainability of important infrastructure sectors.

This study explores this set of institutions “in the middle” by examining the reasons for their demise in Bolivia. In reforms more than a decade ago, Bolivia established its regulatory system (Sistema de Regulacion Sectorial, SIRESE), including a water regulatory office (Superintendencia de Saneamiento Basico, SISAB), with the main objective of promoting access to services for all the inhabitants in the country. Although in the second decade of the reform major cities experienced improvements, rural areas did not experience significant network expansion (Foster and Irusta, 2003). Although the regulatory commission had no resources to expand access to water, the perceived link between neo-liberal reforms and SISAB made the agency vulnerable to criticism from newly elected officials. The re-absorption of regulatory functions back into governmental ministries suited the political objectives of the new regime: rejection of formal institutions associated with the Washington Consensus and exercise of greater political control over infrastructure sectors.

It is important to incorporate all three types of institutional change into research directed at understanding the evolution of governmental processes in the region. This analysis of Bolivia bridges the social structures bringing about dramatic changes and the more micro initiatives reflected in attempts to reform civil service. Rather than focusing on institutions as social structures, we examine one set of formal organizations that were euthanized under Morales' political agenda: regulatory agencies designed as part of earlier reform initiatives. Others have thoughtfully addressed the circumstances leading to the Morales regime (Arce and Rice, 2009) as well as the impacts of neo-liberalism (Huber, 2004; Walton, 2004) so these topics are not examined in detail here.

Consequences of Institutional Fragility

Lessons are sometimes most vivid when the situation is extreme. The fragility of particular institutions and the lack of social cohesion complicate a society's willingness and ability to meet broad social objectives. Political leaders are unable to focus on long term investments and citizens become frustrated and/or despondent. When the social brew boils over in a state of crisis, institutions are altered and citizen expectations are raised—perhaps only to be frustrated again.

Now, Bolivia is undergoing major socio-economic, political, and institutional changes. Perceived institutional decay led to the loss of legitimacy of previous governmental structures: anti-elitist rhetoric resonated with those who felt marginalized and a new set of institutional structures is being erected in Bolivia. Public policies in infrastructure are now designed within a

participatory democracy model, with substantial state intervention and/or socialization of the productive sectors. This process economic turnabout began with the Hydrocarbons nationalization according to the popular mandate of the 2004 referendum (National consulting process). These socio-economic measures were included in the new Constitution (Gutierrez and Mokrani, 2006). However, approval of the Constitution has led to confrontations in the country. In 2008, four (geographic) departments claimed their autonomy from the central Government in the management of natural resources and services. These tense central-local relations had their worst moments in September 2008 with the deaths of 18 people in the northern department of Pando. As consequence, the Government declared the region to be in State of Emergency (UNASUR, 2008).

The political crisis is also reflected in delays in infrastructure investment. For example, Bolivia still faces major challenges associated with water service coverage, production efficiency, and service quality; particularly in rural areas. According to the PROAPAC (GTZ Programme), due to low investment, the country is unlikely to meet the MDG goals to halve the population without access to safe drinking water by 2015. Water services are deficient because of the financial weakness of operators, fragmentation of the sector (more than 28,000 providers in the country), a weak regulatory system, and low ability to pay for water service (www.proapac.org)

The 2007 Declaration of Cali included sanitation as a priority in the national plans; this Declaration also created an explicit agreement that requires large future investments for network expansion. However, sources of funds can only come from three groups: water consumers, taxpayers, or international investors and donors. Since prices are politically sensitive, current customers are not likely to accept responsibility for network expansion. Furthermore, price increases are problematic without immediate water quality improvements (in terms of continuity, pressure, and treatment). Taxes and other government revenues (as from royalties for resource extraction) have many potential claimants, including schools, hospitals, transportation systems, and other social services—so subsidization of water systems could occur, but other social investments benefit citizens as well. International groups could prefer funding projects in nations with different policies than those now espoused in Bolivia. In general, those not currently served are the main losers when funds are unavailable for network expansion.

In an inclusive and democratic nation, a primary goal should be universal access to water services because of its positive impact on human health and life. The new Constitution approved in January 2009 by 60% of the population in the National Consultation process, proposes a new water policy based on the principle “water for life” as a human right, emphasizing universal service. However, these principles are not accompanied with incentives for investment that are needed for service expansion. Private participation, including the domestic private initiatives, is forbidden and the State is planning to control the water co-operatives, the main water providers in the country (Proyecto de Nueva Constitución, 2008). Funds for network expansion will come from donor funding and the national budget.

These institutional changes are mainly politically driven; however, they are also a consequence of the low legitimacy of the regulatory system. In particular, as Albro (2005) emphasizes, the indigenous movement (headed by Morales) represents a backlash against decades of national neglect. The protests that brought his movement to power represented a reaction against historic

disenfranchisement and public policies that had not given priority to poverty reduction through access to social services (including education, health, and infrastructure).⁴ In such a fragile (and politically charged) atmosphere, some lessons can be drawn for water sector agencies in developing countries. First, unless agencies adopt policies that promote access to infrastructure services, they will lack credibility within the political arena. Second, unless citizens perceive improvements in sector performance, agencies will lose legitimacy: an agency needs the approval of those affected by its decisions.

The Bolivian Regulatory System: 1994-2008

Regulation is particularly challenging in developing countries where regulators have to deal not only with technical issues such as pricing and the quality of services but also with pressing social demands. This challenge has been particularly great in the Bolivian water sector with its variety of service providers and lack of regulatory traditions (Nickson and Vargas, 2001). Citizens had high expectations, but rapid progress was infeasible—given the availability of funds.

At the early stages of reform, stable institutional structures were seen as vital for future Bolivian infrastructure investment—whether by the state or through private participation. The National Regulatory System (SIRESE) set up in 1994, was created to regulate and provide oversight for the water, electricity, hydrocarbons, telecommunications and transport sectors. This system was designed to ensure that utilities would operate efficiently, contribute to economic development, and enable citizens to have access to these important services. Thus, in principle, the interests of users, companies, and the State were to be protected. Of course, “seeing is believing,” so without evidence of substantial improvements in infrastructure, citizens will not “see” progress. Similarly, “believing is seeing”: groups ideologically opposed to neo-liberal approaches for promoting capital investments and operational efficiencies were predisposed to give the reforms low marks.

The Water Regulatory Office (SISAB) operated since 1997 as part of SIRESE. Although the Water and Sanitation Law was approved in 2000, the secondary regulations (tariffs, water quality, consumer complaints, etc.) were not completed; this meant that the agency had an insufficient legal framework to obtain data and provide adequate regulatory oversight. In addition to city-owned systems and cooperatives, it faced one privately-owned regulated operator (Aguas del Illimani) which had been granted a concession to provide water services in the cities of La Paz and El Alto (SIRESE, 1998). SISAB had standard regulatory functions like tariff approval and the promotion of improved water services. Within its tool-kit, it was able to apply sanctions to water providers and attempted to promote efficiency in water service provision. Among its tools, SISAB was empowered to grant, extend or modify concessions and other water rights.

Barja and Urquiola (2001) argued that the early impact of capitalization was positive, attracting some foreign investment and improving access in urban areas (including low income citizens). However, little progress was made on rural network expansion. Although this negative outcome

⁴ In 1999, the richest ten percent received 43% of Bolivia’s income; the bottom ten percent had 0.3% (Tuchschneider, 2006). Such major social and economic inequalities sowed the seeds for the political tensions facing the nation today.

for indigenous groups was not due to regulation but to national investment priorities, the reform process did not meet citizen expectations. During ten years of regulation, SIRESE was unable to promote adequate coverage expansion, could not capture consumer's attention, and was unable to complete the development of regulatory frameworks that promoted public participation. In an attempt to overcome these problems, a New Regulation initiative was launched in 2004 promoting an active regulators role in universal service provision, designing new regulatory instruments, and establishing consumer-oriented policies (SIRESE, 2005).

However, this proactive regulatory role was “too little and too late” to give SIRESE legitimacy in the eyes of Bolivian citizens and opinion leaders. SIRESE could be characterized as having high technical skills (in terms of human resources) but did not seem to appreciate the impending national crisis—reflecting social conflicts in the country. The regulatory systems impact on universal service provision remained unknown to the majority of the population. The information was not easily accessible and was too technical to be appreciated by the indigenous population and the poorly educated public. The paradox is that in the current situation the information is more reduced for the population, particularly about water coverage and service quality.

Thus, by being perceived as advocates of privatized concessions in Bolivia, SIRESE and SISAB became de facto allies of private sector companies. Citizens did not view the regulatory system as being responsive to consumer demands. Thus who remained un-served (or who experienced poor service) did not feel truly protected by SIRESE and SISAB. In the water sector, these perceptions were reinforced by the failure of the Cochabamba concession in 2000 and the ending of the Aguas del Illimani contract in 2007. Weak regulatory capacity in the SISAB was identified as a factor that hampered the regulatory intervention in these conflicts. (Nickson and Vargas, 2001). A weak regulatory agency (SISAB) is unlikely to improve sector performance. (Brown, et al). For instance, in Cochabamba, the SISAB's credibility was undermined when it approved a new tariff structure with a 40% rate increase; that decision reflected a lack of political awareness. The price increase served as a trigger for the riots that lead to the “Water War” and the expulsion of the private company which had been granted the water concession.

In the Aguas del Illimani case, to avoid monthly tariff increases that would have been required for new investments, 200,000 inhabitants in the city of the El Alto—the poorest in the country—were left out in the concession expansion goals when the SISAB increased the connection fee from US \$190 to US \$400 in the 2001 tariff review. These regulatory decisions led to the termination of the concession contract with Aguas del Illimani that had lasted for ten years and had contributed to meeting universal access objectives. Again, greater sensitivity to political realities might have led to better management of citizen expectations.⁵

Both measures were based on technical analyses that met SISAB's objectives. The Central Government imposed decisions politically to avoid social conflicts triggered by the water tariffs. The period between 2001 and 2004 presented new challenges for infrastructure, as citizens (and opposition leaders) became increasingly critical of what was perceived to be “benign neglect” in

⁵ Casarin, Delfino and Delfino (2007) analyze the failure of the Buenos Aires's concession. They conclude that a number of the problems were attributable to a “weak and inexperienced” regulator. So South America has other examples of citizen unrest, contract disputes, lack of access, and affordability.

the area of infrastructure expansion. The SISAB faced a period of great instability in 2005 when three regulators were dismissed in a four month period.

Barja and Urquiola (2001) argued that the early impact of capitalization was positive, attracting some foreign investment and improving access in urban areas (including low income citizens). However, little progress was made on rural network expansion. Although this negative outcome for indigenous groups was not due to regulation but to national investment priorities, the reform process did not meet citizen expectations. During ten years of regulation, SIRESE was unable to promote adequate coverage expansion, could not capture consumer's attention, and was unable to complete the development of regulatory frameworks that promoted public participation. In an attempt to overcome these problems, a New Regulation initiative was launched in 2004 promoting an active regulatory role in universal service provision, designing new regulatory instruments, and establishing consumer-oriented policies (SIRESE, 2005).

However, this proactive regulatory role was “too little and too late” to give SIRESE legitimacy in the eyes of Bolivian citizens and opinion leaders. SIRESE could be characterized as having high technical skills (in terms of human resources) but did not seem to appreciate the impending national crisis—reflecting social conflicts in the country. The regulatory systems impact on universal service provision remained unknown to the majority of the population. The information was not easily accessible and was too technical to be appreciated by the indigenous population and the poorly educated public. The paradox is that in the current situation the information is more reduced for the population, particularly about water coverage and service quality.

Thus, by being perceived as advocates of privatized concessions in Bolivia, SIRESE and SISAB became de facto allies of private sector companies. Citizens did not view the regulatory system as being responsive to consumer demands. Thus who remained un-served (or who experienced poor service) did not feel truly protected by SIRESE and SISAB. In the water sector, these perceptions were reinforced by the failure of the Cochabamba concession in 2000 and the ending of the Aguas del Illimani contract in 2007. Weak regulatory capacity in the SISAB was identified as a factor that hampered the regulatory intervention in these conflicts. (Nickson and Vargas, 2001). A weak regulatory agency (SISAB) is unlikely to improve sector performance. (Brown, et al). For instance, in Cochabamba, the SISAB's credibility was undermined when it approved a new tariff structure with a 40% rate increase; that decision reflected a lack of political awareness. The price increase served as a trigger for the riots that led to the “Water War” and the expulsion of the private company which had been granted the water concession.

In the Aguas del Illimani case, to avoid monthly tariff increases that would have been required for new investments, 200,000 inhabitants in the city of the El Alto—the poorest in the country—were left out in the concession expansion goals when the SISAB increased the connection fee from US \$190 to US \$400 in the 2001 tariff review. These regulatory decisions led to the termination of the concession contract with Aguas del Illimani that had lasted for ten years and had contributed to meeting universal access objectives. Again, greater sensitivity to political realities might have led to better management of citizen expectations.⁶

⁶ Casarin, Delfino and Delfino (2007) analyze the failure of the Buenos Aires's concession. They conclude that a number of the problems were attributable to a “weak and inexperienced” regulator. So South America has other examples of citizen unrest, contract disputes, lack of access, and affordability.

Both measures were based on technical analyses that met SISAB's objectives. The Central Government imposed decisions politically to avoid social conflicts triggered by the water tariffs. The period between 2001 and 2004 presented new challenges for infrastructure, as citizens (and opposition leaders) became increasingly critical of what was perceived to be "benign neglect" in the area of infrastructure expansion. The SISAB faced a period of great instability in 2005 when three regulators were dismissed in a four month period.

After the Presidential election, SIRESE attempted to enhance civil society participation in the regulatory process. The agency began to become more responsive to new government priorities. However, the phasing out of independent regulation was reflected in a 40% reduction in the operational budget, with the elimination of many professionals with technical skills. Information on water system performance of the water systems has not been publically reported for several years. Before its demise, SISAB regulated twenty seven water providers through concession contracts and tried to gain legitimacy with consumers by taking social circumstances into account in the development of tariffs. However, the political damage seems to be irreversible. SISAB's independence was reduced with the political intervention in its decisions. Ultimately, the agency was eliminated.

Since SIRESE was created to complete the Second Generation structural reforms associated with the state-owned enterprises (SOEs) capitalization process, later, the agency was viewed (politically) as an expression of the neo-liberal economic model. The Bolivian population tends to equate regulation with the private participation processes in public services provision. The restructuring of the regulatory system will concentrate all the regulatory functions in the Ministries of State, currently in charge of the national and sectoral policies. The transfer of functions (if not personnel) to other entities concludes a significant chapter in the evolution of infrastructure policy in Bolivia.

Who Exercises Regulatory Functions?

The return of regulatory functions to ministries in the Central Government runs counter to international trends toward the creation of independent regulatory commissions for infrastructure sectors. Between 1990 and 2005, over 200 regulatory commissions were created around the world (Brown, Stern and Tenenbaum, 2006). The UK, Chile and Argentina were among the first nations to introduce such agencies as part of sector reform and privatization initiatives. Latin America as a region was very receptive to regulatory reforms in general and to the creation of autonomous regulatory agencies in particular (Jordana and Levi-Faur, 2005). The rationale behind the new organizations was straightforward: the concentration of regulatory and policy functions in the same institution could increase the risk of regulatory capture by operating companies. Furthermore, the concentration of decision-authority in government Ministries meant that those currently with political power were likely to use it to protect incumbents and provide benefits to those currently receiving infrastructure services. As Bartle and Vass (2007) note, while specialization and division of labor yields benefits, sector regulators still need to collaborate with social and environmental regulators to ensure that strategies are sustainable—from the standpoints of social acceptance and environmental stewardship. The creation of new agencies means that the legal framework has to be adjusted to facilitate institutional reforms.

Single suppliers who face no competitive pressures are likely to set relatively high prices and/or provide poor service. Under state-ownership, the tendency has been to under-price water services, partly to provide universal access. Furthermore, without investment funds from the state, network expansion is often slow and service quality has tended to be poor. Thus, the goal of providing service at “affordable prices” presents political leaders with a challenge. A ministry or regulatory agency will ultimately be responsible for a number of tasks: establishing incentives for cost-containment, promoting network expansion, determining prices that make utilities financially sustainable, and enforcing service quality standards. International experience suggests that a separate agency promotes continuity and professionalism in the implementation of public policies. The separation of policymaking from policy implementation insulates technical staff from undue political pressures—promoting consistency and predictability in regulatory rulings.

Morales’ institutional reforms eliminated agencies (SIRESE and SISAB, among others); however, their regulatory functions will need to be performed by professionals in some government bureau. We shall see whether ministries address issues in a transparent manner, solicit citizen input, and make decisions based on reality rather than rhetoric. Institutional reforms in infrastructure affect a diverse set of stakeholders: the companies and suppliers of services, the regulators that monitor and incentivize service provision and network expansion, and the Ministries that develop infrastructure policies. A vertically integrated organization (like a government ministry) could theoretically perform the tasks of monitoring and incentivizing water utilities, but an appropriate division of labor leads to a system where the strengths of different institutions can be mobilized and the limitations of those institutions are compensated for by giving particular responsibilities to other institutions.

Some functions, like human resource development and data analysis, are common and necessary for all the infrastructure actors. But the regulatory functions are mainly targeted to monitor utilities (data collection and analysis) and provide incentives to service providers. Technical staff develops uniform systems of accounts, produce benchmarking studies, and generate regulatory audits. The task is to promote efficiency and increase access to services at prices that ensure the financial sustainability of service providers. To reach very poor consumers, it will be necessary to obtain funds from national budgets, development banks, and donor groups. If the regulatory agency can document that service providers are efficiently using the funds they have, the likelihood increases for obtaining support from outside funding sources.

The Universal Access Challenge

The disadvantaged and powerless are generally the last ones to be served by infrastructure. When large groups in a society are left behind, they find ways to express their dissatisfaction. The current Bolivian government is attempting to address the legitimate concerns of the poor—expressed through a variety of organizations. Of course, moving beyond protest to performance presents a challenge. It requires those responsible to “listen” to those who have not been heard. A parallel obligation rests with citizens: they need to understand past trends and current performance in order to have a realistic view of prospects in the near future. Citizens need to be able to evaluate current utility services and to participate in the development of programs for funding and expanding water networks.

Therefore, universal access to water services should be a topic of primary attention for the State and also for all the other actors involved in infrastructure. The social objective is to make water services available to all citizens at an affordable price through piped connections or alternative systems in areas where networks are not feasible. These outcomes are very difficult to achieve in a country with high levels of poverty and population migration.

The 1994 SIRESE Law stated that universal access should be promoted by the regulators. The universal access to water services is mandatory in the 2000 Water and Sanitation Law. Consumers have to be served with household connections where water networks are available. The new Constitution goes further with a constitutional mandate for the universal and equitable access to water services for all people. The provision of basic services is the responsibility of the State through public entities, autonomous entities, public-private companies, cooperatives and community-based initiatives.

Bolivia is still far from the universal access in water services. The latest Regulation Report showed that in 2005, 86.4 % of the population had access to a water connection in urban areas, whereas in rural areas this number drops to 33.6 %. The sanitation situation is even worse, with national coverage of 39% (SIRESE, 2005). However, this is not far off the coverage for other South American nations.

The universal access in water services has become an issue of political leadership, along with associated technical or economic problems. The problems include poor planning of distribution networks, water resource limitations, poor management and unaccounted for water (involving leakage and theft). Three Bolivian principal Bolivian cities illustrate different problems that affect access to water services:

SAGUAPAC, the water cooperative in Santa Cruz, the most populated city in the country has met the universal access goal: 99% water coverage; the water is of high quality and available on a continuous basis. In 2004, SAGUAPAC had 812,816 consumers in the city. However, the concession area where SAGUAPAC operates is limited to the relatively well-off population, while the peri-urban areas are covered by ten other cooperatives that struggle to provide services to their low income consumers.

Meanwhile, in the cities of La Paz and El Alto, a temporary administration has taken over the obligation of service delivery. Although the new management model is not yet finalized, from 2006 to 2011, 33,000 new water connections are projected in isolated areas in El Alto (which has over 750,000 inhabitants). According to a former SAMAPA manager (municipal water company), these projections did not take into account the fact that El Alto doubles its water demand every 12 years. Given the low capacity of the water sources, limited treatment facilities, and quality and pressure standards, meeting those targets will be difficult. Today, due to the new expansions without accurate technical justification, many neighborhoods in El Alto receive piped water only few days a week. (Arroyo, 2008)

Continued water losses and poor management make universal access less likely. For example, based on the most recent data available, the city of Cochabamba, the third largest in the country,

had only 45.8 % water service coverage with 52% of its water unaccounted for (SISAB, 2005). Progress since the year of the Water War had not been significant. According to Driessen (2008) SEMAPA (the municipally owned water company) experiences a number of problems: political influence continues to drive managers and the majority of civil society remains marginalized.. The resulting local turf-wars have delayed investments in water networks. Unhappy, un-served citizens see a number of factors as contributing to the lack of progress: nepotism, corruption, poor internal incentives, and lack of management skills.

Financial Policies for Universal Access

An over-arching goal of any national government is to improve infrastructure performance—so access to water services is not only for those who are well-off, but also for those members of society who have lived on the fringes of society. Most would agree that all citizens deserve access to electricity, telecommunications, water, and transportation services. Reaching a consensus on how to pay for that access is another matter altogether. The funds to cover the operating costs and the huge investment requirements can only come from three sources: government (national, regional, or municipal), current customers, international banks and investors, or donor organizations. The government obtains funds from taxpayers or donor organizations so the financial sustainability of water utilities depends on matching resources with public commitments. Political leaders must make difficult choices—not an activity elected officials have proven to be good at in developed countries, let alone developing nations. Government also needs funds for education, health, road construction and other activities. Thus, the efficiency of infrastructure suppliers is essential if funds are to be used wisely. Managers need to be good stewards of the resources they have available.⁷

Despite international pronouncements and the urgent population needs, the total investment in water and sanitation in Bolivia dropped in the last decade, to an average of US\$ 80 million per year, with priority given to urban areas. It is important to note that approximately 65% of the total investment comes from international cooperation through soft credits and donations. It is estimated that Bolivia requires a total investment of US\$ 1.165 billion to achieve the Millennium Development Goals (Superintendencia General, 2005).

Under the 2649 Law, the EPSAS (water utility operators) could get resources from international donors to make investments in infrastructure. Nevertheless, system operators need to compete for the international funding by demonstrating efficient management, including actions that promote financial sustainability. But only a few utilities in Bolivia actually meet high standards of utility operations. High water losses in water systems and low billing collections characterize Bolivian water utilities. The cost recovery problems are a byproduct of political pressures and civil society's poor understanding of the costs involved in providing water services. Thus, those designing and implementing policy will need to reconcile fundamental economic sustainability with social objectives (low prices and network expansion). At the same time, they need to ensure that incentives reduce the likelihood that existent inefficiencies are reduced (limiting the need for tariff increases).

⁷ Wehinger and Rojas (2005) argue that small scale utilities often lack the financial and human resources for the cost-effective delivery of services, citizens do not understand the cost of access and politicians interfere in both tariff structures and investment decisions.

In 2004, a new financial policy was implemented in the water sector. The main objectives were to increase coverage, ensure financial sustainability and promote better water services delivery. If successful, the outcome involves institutional transformation of the EPSAS, leading to greater economic efficiency, more efficient management, and improvements in cash-flows. Recently, these policies were changed by the Government without an explanation. Financial policies are now directed to strengthen small municipal companies and community based organizations, increasing the atomization of water services providers. The initiatives in the early Morales years were viewed as too little, too late. In Bolivia, as in other Latin American countries, politicians had promised to expand access to water services, yet for the sake of affordability, often fixed prices lower than the real costs.

Another problem in developing affordable (and fair) prices structures involves impacts on demographic groups; even where distribution networks are already built, potential customers have difficulties paying connection fees and usage tariffs. The high poverty levels in peri-urban and rural areas required the regulator to develop innovative approaches to affordable prices and equitable tariffs. An advantage of having concession contracts with a private service provider was the capacity to replicate technologies and organizational incentives that had been successfully applied in other countries or regions. However, political pressures limited the impact of technical solutions.

Regulatory Instruments

Information is central to regulation. One problem with burying regulatory functions deep within a Ministry is that data never seem to see the light of day. Current political leaders are not in favor of releasing information that might be used against them. Their appointed bureaucrats maintain their status and power by protecting turf, limiting access to information. Citizens deserve better: democracy requires stakeholder participation in setting public priorities, information transparency, and accountability for all decision-makers—public or private. Benchmarking results have to be public to promote managerial accountability and citizen confidence in infrastructure services. When there are poor internal incentives, the performance of an entity is likely to be sub-standard. If customers (and un-served citizens) do not have data on comparable utilities, the citizens are in no position to put pressure on managers to improve performance. There is evidence that even rough comparisons can put pressure on political leaders to fulfill promises to provide funds for network expansion and on managers to deliver services at least-cost (Rossi and Ruzzier, 2000).

SISAB developed a benchmarking system for the regulated water companies with the technical support of ADERASA (Latin American Association of Water Regulators). The regional collaboration helped to publish a benchmarking of eight water utilities in the country. Data from this benchmarking initiative were published from 2003 to 2005. This benchmarking initiative then fell apart because of instability in the regulator's office, which led to the removal of data managers. Benchmarking of water regulated companies ceased to be applied by SISAB, restricting information to the general public about water company performance in the country. In a recent Regional Forum (CEPAL, 2008) the SISAB Superintendent informed participants that the office did not join the last ADERASA meetings and was likely to abandon the organization.

With data collection functions now folded into a ministry, it is unlikely that this retreat from international networking will be reversed in the near future.

This casualty of political disruption has a high cost: citizens, managers, and political leaders all lack information for making comparisons and learning what performance targets are reasonable. Accountability has suffered as well. If companies operate more efficiently, customers will benefit from lower prices and/or greater coverage and should continue to expect and receive high quality service. The resulting system is likely to be sustainable—promoting further network expansion and the adoption of best practice by most water utilities. Corton (2003) has identified features of Peru’s water utility benchmarking system that have promoted transparency and improved performance.

Concluding Observations

The independent regulatory system for Bolivia’s infrastructure has been completely eliminated, and the tasks of monitoring the sectors moved to Ministries. The new Bolivian approach represents a major shift from the previous (formal) emphasis on transparency, expertise, autonomy, and financial sustainability. Ultimately, the test of the dramatic reversals will be the performance of operators—in cost containment, service quality, and network expansion to reach populations ignored in the past. Given the almost total absence of published data on key indicators, we are not in a position to evaluate the new regime. Rather, the study provides evidence regarding the importance of creating (economically feasible) pro-poor strategies for the long term sustainability of regulatory systems. Part of the pro-poor approach involves recruiting and training professionals from underrepresented social groups. Those supporting Morales had little reason to view neo-liberal agencies as reflecting their interests.

This paper has drawn upon the Bolivian experience to find support for three hypotheses related to institutional reform:

Social Structures: When a large group has been excluded from playing a serious role in the political life of a nation, at some point the social order is likely to become destabilized—opening up the opportunity for regime-change. Citizen expectations are difficult to manage, especially when political leaders promise things that cannot be delivered. In the case of neo-liberal institutional reform, little seemed to be “trickling down” to the poor. In the high profile case of water, the costs of network expansion and service quality improvements were not widely recognized. In particular, the price of water was initially far below cost: citizens perceived private participation as the reason prices went up. Furthermore, inattention to rural areas and indigenous groups fanned the flames of social change.

Formal Organizations: When new agencies are unable to engage all affected stakeholders in meaningful dialogues, the agencies become vulnerable when the political center of gravity shifts. The functions of regulation include establishing incentives for good sector performance and communicating developments to all stakeholders. In the case of water utilities, SISAB lacked the legal mandate which would have enabled the agency to collect and analyze benchmarking data. Without a public understanding of trends and relative performance, the public remains unaware

of improvements. Again, the lack of attention to training indigenous professionals reflected a narrow view of the relevant stakeholder space.

Support Systems: When civil service reforms are not inclusive and are perceived as rewarding technocrats, the initiatives risk reversal—leading to a return to a more politicized decision-support system. Thus, technical skills are necessary but not sufficient for the sustainability of new agencies. Those in leadership positions needed to think politically without being political. In the case of water in Bolivia, professionals underestimated the symbolic importance of infrastructure services. Furthermore, the civil service reforms should have gone beyond recruiting professionals. In settings where significant portions of the population have been historically excluded from positions of authority, extra attention should be given to capacity-building for under-represented groups.

The support for these hypotheses is anecdotal at best. Yet, the case of Bolivia illustrates how the fracturing of institutional relationships at the macro, middle, and micro areas contributed to institutional failure and the creation of new institutions. The water sector agency has an essential role in promoting universal access, though it lacks the funds for necessary investment. Service expansion is not a typical regulatory function, but when regulators establish prices, they are also “signing off” new investments plans. However, the public is seldom fully aware of current water policies and rules.

Furthermore, when major social groups are left out of the process, the lack of political support for resuscitating the agency should be not surprise. Best practice regulatory institutions need to take an active role in educating the public and in communicating sector developments to all stakeholders. It is said that “the fewer the facts, the stronger the opinion.” One way to reduce the divisive role of rhetoric is to introduce information about the costs and benefits of different policy options. If the regulatory process is transparent, stakeholders (including political leaders) will understand the decisions of the water sector agencies. Ultimately, the legitimacy of the water sector agency depended on the acceptance and understanding of the regulatory process by the consumers and other stakeholders. That social acceptance could only be achieved on a record of accomplishments. SISAB did not present that record.

Based on this case, and others from the region, scholars should probably devote more attention to how institutions contribute to (or complicate) conflict resolution. This paper has addressed three questions in the context of Bolivian reform and the Morales counter-reformation:

How do social mechanisms promote collaboration and mitigate conflict?

To what extent do individual agencies facilitate public participation in the evaluation of sector performance, thus promoting the legitimacy of government?

How does the civil service contribute to inclusive and effective strategies for improving agency and sector performance?

A good understanding of these issues is essential if there is to be substantial progress in improving infrastructure performance in the region.

In principle, the political process sorts out diffuse and (often) divergent citizen preferences, with elections providing periodic opportunities for new initiatives to replace programs that are deemed unsuccessful. Citizens in all Latin American nations deserve serious national dialogues regarding how access to safe drinking water can be increased. These dialogues can build upon new agendas established by national governments and by municipalities. Policy analysts can benefit from watching the evolution of social structures, formal organizations, and support systems in Bolivia—torn by political conflict, yet united in a desire for improved infrastructure performance.

References

Albro, Robert (2005), “The Indigenous in the Plural in Bolivian Oppositional Politics,” *Bulletin of Latin American Research*, Volume 24, No. 4, 433-453.

Arce, Moisés and Roberta Rice (2009). “Societal Protest in Post-Stabilization Bolivia,” *Latin American Research Review*, 44 (1), 88-101

Arroyo, Guillermo (2008) “El Agua que se va” *La Prensa*, La Paz-Bolivia

Barja, Gover and Miguel Urquiola (2001). “Capitalization, Regulation and the Poor: Access to Basic Services in Bolivia,” World Institute for Development Economics Research (WIDER, United Nations University), Discussion Paper No. 2001/34. July.

Berg, Sanford (2000). “Sustainable Regulatory Systems: Laws, Resources, and Values,” *Utilities Policy*, Vol. 9, No. 4, 159-70.

Bartle, Ian and Peter Vass (2007). “Independent economic regulation: a reassessment of its role in sustainable Development,” *Utilities Policy* 15, 261-269.

Brown, Ashley, Jon Stern, and Bernard. Tenenbaum (2006). *Handbook for Evaluating Infrastructure Regulatory Systems*. Washington, DC: World Bank.

Casarin, Ariel A., Jose A. Delfino, and Maria Eugenia Delfino (2007). “Failures in water reform: Lessons from the Buenos Aires’s concession,” *Utilities Policy* 15, 234-247.

Corton, Maria Luisa (2003). "Benchmarking in the Latin American Water Sector: The Case of Peru." *Utilities Policy*, 11(3):133-42.

Driessen, Travis (2008).” Collective Management Strategies and Elite Resistance in Cochabamba, Bolivia”, Development 2008. Society for International Development.

Drees-Gross, Franz, Franz Rojas Ortuste, and Alejandro Tapia (2006) “Water and Sanitation—Serving People Better,” pp. 385-404. In *Bolivia: Public Policy Options for the Well-Being of All*, Vicente Fretes-Cibils, Marcelo Giugale, and Connie Luff, editors (World Bank).

Foster, Vivien and Osvaldo Irusta (2003). "Does Infrastructure Reform Work for the Poor? A Case Study on the Cities of La Paz and El Alto in Bolivia," World Bank Policy Research Working Paper 3177, December, 1-29.

Gutierrez, Raquel and Dunia Mokrani (2006). "Nationalization without Expropriation?" www.americas.irc-online.org/am/3309, June 12.

Huber, Evelyne (2004). "Successes and Failures of Neoliberalism," *Latin American Research Review*, 39 (3), 150-164.

Jordana, J., and D. Levi-Faur (2005). The diffusion of regulatory capitalism in Latin America: Sector and national channels in the making of a new order. *Annals of the American Academy of Political and Social Science* (March), 102-122,

McNeish, John-Andrew (2006). "Stones on the Road: The Politics of Participation and the Generation of Crisis in Bolivia," *Bulletin of Latin American Research*, Volume 25, No. 2, 220-240.

Nickson, Andrew and Claudia Vargas (2002). "The Limitations of Water Regulation: The Failure of the Cochabamba Concession in Bolivia," *Bulletin of Latin American Research*, Volume 21, No. 1, 99-120.

PROAPAC www.proapac.org

Ramió, Carlos and Miquel Salvador (2009). "Civil Service Reform in Latin America: External Referents Versus Own Capacities," *Bulletin of Latin American Research*. 27 (4), 554-573.

Rossi, Martin Antonio and Christian Alejandro Ruzzier (2000). "On the regulatory application of efficiency measures," *Utilities Policy*, 9, 81-92.

Sanoja, Pedro (2009). "Ideology, Institutions and Ideas: Explaining Political Change in Venezuela," *Bulletin of Latin American Research*. 28 (3), 394-410.

SIRESE (2005) "La Nueva Regulación. Informe de Gestión 2004-2005". La Paz-Bolivia.

Superintendencia General (2005). "Universalización de los Servicios Públicos. Roles y Desafíos". La Paz- Bolivia.

Tuchsneider, David (2006). "Social Inclusion of Indigenous Peoples," pp. 273-288. In *Bolivia: Public Policy Options for the Well-Being of All*, Vicente Fretes-Cibils, Marcelo Giugale, and Connie Luff, editors (World Bank).

UNASUR (2008) Informe de la Comisión de UNASUR sobre los sucesos de Pando, Noviembre, 2008.

Walton, Michael (2004). "Neoliberalism in Latin America: Good, Bad, or Incomplete?" *Latin American Research Review*, 39 (3), 165-183.

Wehinger, Michael and Franz Rojas (2005). "Bolivia: New approach in the WSS sector fosters Capacity Development at national and subnational levels," 2005 LENPA Forum Capacity Development Case Study.