



Stakeholder relations and Public participation in peri-urban Water and Sanitary Management

A case study on NGOs and CPR-management in Cochabamba, Bolivia

Master of Science Thesis in Infrastructure and Environmental Engineering

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Department of Civil and Environmental Engineering

Division of Water Environment Technology

CHALMERS UNIVERSITY OF TECHNOLOGY

Gothenburg, Sweden, 2014

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Cover: Water cistern in Ichocullo, district 9 in Cochabamba, Bolivia (Photo: Sima Abdollahi, 2014)

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Abstract

During the reform process of the 1990's, NGOs emerged as alternative actors to address the spread of decentralized water and sanitary solutions in Bolivia. This case study attempts to identify the stakeholder dynamics between NGOs, decentralized community associations, public and private actors active in the sector of water and sanitary management of the peri-urban areas of Cochabamba city, from the 1990's to present. The study shows that there is a correlation in the evolution of the sample set of NGOs in the case study and the evolution of the national and regional water sector. The NGOs active in the anti-privatization movement in the beginning of the 21st century have gradually changed focus from policy making for extended water rights to implement pragmatic solutions for improved institutional capacity and effective resource management – a trend that coincides with the institutional reform process of the national water sector. The institutional reform processes has created a set of new institutions and a constitution (2009) that recognizes water as a human right, a public good. Despite that privatization of water is prohibited; private water provision is still possible through Public Private Partnerships, a collaboration model that has grown during the 21st century. In recent years, small-scale providers, without former juridical recognition, have enrolled into a system of licenses and registries for water uptake and distribution, implicating that there is, no guarantee of non-exclusiveness or environmentally consciousness. The study concludes that conflicts, at cross-scale, have emerged in recent years over the management of land-and water resources in Cochabamba, which is likely to impact the role and action space of NGOs in the sector. NGOs could theoretically address conflict resolution by virtue of linking between different interests, although this could implicate high transaction costs and hamper negotiations. NGOs could capacity build institutions by leaving methodologies based on legislation, this pre-requisite that the legislative framework for water governance is strong. Stable solutions for Common Pool Resource management pre-requisites that NGOs are regarded as equitable stakeholders that are able to bind collective agreements, sanction and survey partners. The power relations between NGOs and other local actors with authority will reflect their ability to perform in between interest groups but also to act independently. Donors could potentially put pressure on NGOs to improve their coordination of activities and information, on the condition that they are open for collective surveillance and sanctioning. The increasing urbanization to Cochabamba can further amplify the need of knowledge building on citizen rights for migrants. Further policy making to implement well-defined principles for resource management is also crucial.

Key words: NGOs, Water, Sanitation, Stakeholders, Conflicts, Commons, Relations.

Relación con actores locales y participación pública en la gestión de servicios de agua y saneamiento Periurbano.

Caso de estudio de las ONGs y la gestión de recursos locales en Cochabamba, Bolivia

Tesis de Maestría en Ciencias en Infraestructura e Ingeniería Ambiental

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Resumen

Durante el proceso de reforma de la década de 1990, las ONGs surgieron como alternativas entre los actores para la gestión de agua descentralizada y servicios sanitarios en Bolivia. Este estudio de caso trata de identificar la dinámica de interacción entre las ONGs, asociaciones comunitarias y de barrios descentralizadas, actores públicos y privados activos en la gestión de servicios de agua y saneamiento en las áreas periurbanas de la ciudad de Cochabamba, desde la década de 1990 hasta la actualidad. El estudio muestra que hay una correlación en la evolución del conjunto de la muestra de las ONGs en el estudio de caso y la evolución del sector nacional y regional del agua. Las ONGs activas en el movimiento contra la privatización apoyaron en la formulación de políticas para los derechos de agua creados en Cochabamba a inicios del siglo XXI. Ellos ahora progresivamente están enfocándose en la implementación de prácticas para la mejora de la capacidad institucional y la gestión eficaz de los recursos - Una tendencia que coincide con el proceso de reforma institucional del sector nacional del agua. Los procesos de reforma institucional han creado un conjunto de nuevas instituciones y una nueva Constitución ha sido establecida (2009) para reconocer el agua como un derecho humano y un bien común. A pesar de que la privatización del agua está prohibida; el suministro de agua privado sigue siendo posible a través de asociaciones público-privadas, un modelo de colaboración que ha crecido durante el siglo XXI. En los últimos años, los proveedores de pequeña escala, sin reconocimiento jurídico, se han inscrito en un sistema de licencias y registros para la captación y distribución de agua, lo que implica que no existe, no hay garantía de no-exclusividad o de la conciencia con el medio ambiente. El estudio llega a la conclusión de que los conflictos, a gran escala, han surgido en los últimos años más sobre la gestión de los recursos de tierras y agua en Cochabamba, que es probable que haya un impacto en el rol y el espacio de acción de las ONGs en el sector. Las ONGs podrían, en teoría, apoyar en la resolución de conflictos, en virtud de la vinculación entre los distintos intereses, aunque esto podría implicar a expensas de las negociaciones obstaculizadas. Así mismo, las ONG podrían mejorar la capacidad institucional dejando metodologías basadas en la normativa. El pre-requisito de que el marco legislativo para la gobernabilidad del agua es fuerte. Para las soluciones estables de la gestión de recursos comunes también es un pre-requisito que las ONGs sean consideradas como entidades equitativas, capaces de unir los convenios colectivos, sanción y los socios. Las relaciones de poder entre las organizaciones no gubernamentales y actores locales con autoridad, reflejaran no solo su capacidad de desarrollo entre los grupos de interés, sino también la de actuar de forma independiente... El aumento de la urbanización a Cochabamba puede ampliar aún más la necesidad de la construcción de conocimiento sobre los derechos ciudadanos de los migrantes. La formulación de más políticas para poner en práctica los principios bien definidos para la gestión de recursos también es crucial.

Palabras de clave: ONG, agua, saneamiento, actores locales, conflictos, generalidades, relaciones.

Contents

1.1.1	.....	I
Acknowledgements	.....	I
Abstract	.....	III
Resumen	.....	IV
List of abbreviations	.....	X
1	Introduction	1
1.2	Aim	2
1.3	Research questions	2
1.4	Goal	3
1.5	Qualitative Research Method	3
1.5.1	Constituents of the qualitative research design;	3
1.5.2	External validity /Replication	5
1.5.3	Objectivity	5
2	Background	6
2.1	Geography Bolivia	6
2.1.1	Water and sanitation	6
2.2	Review of 20th and 21st century Governance	7
2.2.1	20 th century governance	7
2.2.2	21 st century governance	10
3.1	The MAS-Government	12
3.1.2	The social housing programs of MAS: PVSS	15
3.1.3	Adequate housing according to the constitution (2009)	16
3.1.4	The MAS-government Water and Sanitary Programs	16
3.2	Regional data for Cochabamba	17
3.2.1	Geography and demography	17
3.2.2	Water Provision in Cochabamba	19
3.3	Public Drinking Water and Distribution post-water war Cochabamba	20
3.3.1	Public Drinking water distribution post water-war	20
3.3.2	The Misicuni Project	20
3.4	Water and sanitary management in peri-urban districts Cochabamba	23
3.4.1	Water and sanitation	23
3.4.2	District 14	23
3.4.3	District 9	23
3.4.4	District 8	23

4	Methodology and Theoretical framework	24
4.1	Case study design; Research themes	25
4.1.1	Changing roles and relationships of NGOs active in the community based water management in peri-urban Cochabamba	25
4.1.2	The changing relationships for a set of NGOs in the community based water management of peri-urban Cochabamba and approach to public participation	25
4.2	Data needed	25
4.2.1	<i>Key informants</i>	26
4.3	Data collection.....	26
4.3.1	Semi structured interviews	26
4.3.2	Archival records.....	26
4.4	Analysis methods	27
4.5	Limitations.....	27
4.5.1	Explanation building.....	29
4.5.2	The initial proposition	29
4.5.3	Comparing the findings of the initial proposition against a statement or case..	29
4.5.4	Revising the statement or proposition.....	29
4.5.5	Compare other details of the case against the final revision.....	29
4.5.6	Abduction	30
5	Theoretical framework.....	31
5.1	Capacity development	31
5.2	Public participation	31
5.3	Integrated Water Resource Management	31
5.4	Commons and common pool resources (CPRs)	32
5.4.1	Tragedy of the commons	32
5.4.2	Formative moments	33
5.4.3	The institutional right to water	33
5.4.4	Institutional regulation policies.....	33
5.4.5	Models of collaboration in local water management	35
5.4.6	Community participation in local water management	36
6	Stakeholders of importance to the study	38
6.1	New Public institutions.....	38
6.1.1	Ministry of water and environment	38
6.1.2	Senasba	38
6.1.3	SENARI	38

6.2	Swedish government and the Swedish international development agency (SIDA)....	39
6.3	Peri-urban community organizations.....	40
6.3.1	OTB.....	40
6.3.2	Water committees	40
6.3.3	ASICASUDD-EPSAS.....	40
6.3.4	Neighborhood councils/General assemblies.....	41
7	Key Informants of the study.....	42
7.1	Key informant group 1; Public/private actors.....	42
7.1.1	Ciudadania.....	42
7.1.2	CEDIB (The Centre for Information and Documentation in Bolivia)	42
7.1.3	Swisscontact.....	43
7.1.4	The Regional Department of Basic Services of Cochabamba.....	43
7.1.5	The faculty of Agricultural, Forestry and animal sciences (Centro de agua) – U.M.S.S	44
7.1.6	Centre for superior studies – (CESU) U.M.S.S	44
7.1.7	Center of water and environment (CASA)-U.M.S.S.....	44
7.1.8	Carlos Oropeza- secretary of ASICA SUUD	45
7.1.9	Roberto Prada –Ex Director of SEMAPA.....	45
7.1.10	Elizabeth Landaeta	45
7.2	Key informant group 2: NGOs of the case study.....	46
7.2.1	NGOs working with cross-institutional policy impact on water rights and strengthening of small scale providers	46
7.2.2	NGOs working with adequate housing.....	50
7.2.3	NGOs working with physical spread of water and sanitation	54
7.2.4	Water for people	54
7.2.5	Aguatuya	55
7.3	Community based organizations and Districts 14, 8, 9.....	57
7.3.1	A.P.A.A.S, water association in District 14	57
7.3.2	Community water associations in the neighborhood of Barrios Unidos, district 14	57
7.3.3	Drinking Water Association, San Miguel D8.....	58
7.3.4	Water organizations Los Pinos and Ichocullo district 9.....	58
8	Results	59
8.1	Transitions in behavior of public sector and community providers	59
8.1.1	Public investments (2009-2014).....	59
8.1.2	Autonomous governance (2002-2014)	59

8.1.3	Water resource management and democratization.....	60
8.1.4	Emerging conflicts and separations	62
8.1.5	The Misicuni project.....	63
8.1.6	Generic impact of sector on NGOs.....	64
8.2	Transitions in stakeholder relations and approach to public participation among NGOs working with water and sanitation	66
8.2.1	Transitions in relationships Fundacion abril, CeVi and Agua sustentable	66
8.2.2	Comparison of public participation on behalf of CeVi, Agua Sustentable and Fundacion abril.....	69
8.2.3	Transitions in public and private relations between NGOs working with social housing and their approach to Public participation.....	71
8.2.4	Comparison on community participation NGOs working with social housing ...	73
8.2.5	Transitions in public and private relations between NGOs working with physical spread of water and sanitation and through PPP	76
8.2.6	Comparison on public participation NGOs working with physical spread of water and sanitation.....	77
8.3	Key informant perspectives on challenges and opportunities for NGOs working to address water and sanitation in peri-urban Cochabamba.....	79
8.3.1	Perspectives from public/private actors on generic challenges and opportunities	79
8.3.2	NGOs	80
8.3.3	Community associations perspectives in D9, D14, D8	81
9	Analysis.....	83
9.1	Evaluation Public Participation and organization building of the NGOs.....	83
9.1.1	NGOs policy making and strengthening community associations	83
9.1.2	NGOs working with social housing.....	85
9.1.3	NGOs physical spread of water and sanitation and PPP	87
9.2	Internal validation of results	89
9.2.1	Conflict resolution	89
9.2.2	Power relations	90
9.2.3	Transitions in relationships and interventions.....	91
9.2.4	Community development	93
9.3	External Validation of results	94
9.4	ASICA-SUUD and peri-urban community associations.....	94
9.5	Conflict scenarios in peri-urban communities and NGO coordination	94
10	Discussion.....	96
10.1	Formative moments.....	96

10.2	Autonomy and conflicts over scale	96
10.3	Public institutions and resource management	97
10.4	Well defined stakeholder roles	97
10.5	NGOs future roles in addressing upgrading peri-urban water and sanitation.....	98
11	Conclusion	99
12	Recommendations	100
13	Bibliography	101
Appendix		110
I Questionnaire public actors		110
II Questionnaire NGOs.....		110
III Questionnaire beneficiaries		110
IV Mapping public investment		110
V Mapping Autonomous governance community organizations		110
VI Mapping Transitions in Resource management and stakeholder relations		110
VII Mapping targets water and sanitation		110
VIII Mapping Conflicts		110
IX Mapping impact on NGOs		110
X Mapping Transitions in relationships NGOs policy making.....		110
XI Mapping Transitions in relationships NGOs social housing		110
XII Mapping Transitions in relationships NGOs working with physical spread of water and sanitation.....		110

List of abbreviations

CBO – Community based organization

CEDIB - The Centre for Information and Documentation in Bolivia

CPR-Common Pool Resource

DWO – Drinking water organization

IWRM – Integrated Water Resource Management

LAD – Law of Administrative Decentralization

LPP –Law of Public Participation

MAS – *Movimiento al Socialismo* = Movement towards Socialism

MMAYA – Ministry of Water and Environment

NGO – Non Governmental Organization

OTB – Territorial Base Organizations

U.M.S.S – *Universidad Mayor de San Simon*= University of San Simon

WFP – Water for People

PPP – Public Private Partnership

1 Introduction

Bolivia is, after Chile, the country in South America where the austerity programs of IMF and the World Banks in the 1980's resulted in the most radical transitions to privatized reforms in the infrastructure sector in the 1990s. Government interventions have to a large extent addressed formalized property rights as solution to improve access to urban housing and infrastructure services (Lall, et al., 2009). The mining industry in the 1980s collapsed, resulting in a relocation of 20 000 miners, of which many migrated to urban areas (Walnycki, 2013, p. 89). During this process, Non-Governmental Organizations (NGOs) emerged as alternatives to public sector by virtue of consolidating political linkages between social sectors, due to decreased governmental expenditures on social services (Arellano-Lopez & Petras, 1994).

In Cochabamba, the third largest city of Bolivia, migration has resulted in increasing urban rate the past 20 years. The southern region of the city zona sur, is reported to have the least access to water supply services and is also affected by the highest increase in population growth (Marston, 2013). The northern parts of the city have an abundance of water resources and the public network could transport sufficient amount of water from the north to the south, but deliverance is hampered by the ancient network owned by the municipal company SEMAPA.

The private company Aguas del Tunari signed a service contract for 40 years with the public company SEMAPA in 1998. The agreement entitled Aguas del Tunari control of the network, water rights in the area and a guaranteed return of investment. A price increase of 200% was registered whereupon widespread protest emerged, resulting in cancellation of the concession in 2000. This event is referred to as the Cochabamba water war.

During the 1990s, a decentralization reform was announced in 1994 to stabilize the economy of the country (Fauget, 2002, p. 868). The political administration changed in Bolivia and NGOs grew as actors in support of the newly formalized territorial base organizations (OTB) in small scale development projects. Other local grass root movements increasingly called for equitable juridical and economic control of decentralized water and sanitary systems in the peri-urban activities (Bustamante, 2004). The demands were amplified after the water war, were initiatives from public water company to make amends with small scale provider were initiated. Resource management institutions and grass root movements were policy making against privatization and for expanded water rights (ibid).

With the rise of the MAS-government in 2006, new institutions have been installed to capacitate and regulate the water sector. The new constitution of 2009 adopted the paradigm of human right to water and adequate housing. Since then, community-and small scale providers have enrolled in to a system of licenses and registries (Walnycki, 2013, p. 201). However, the city is facing water scarcity and it is anticipated that 70 % of the city will cover the groundwater aquifer in 2036 (Ledo, 2013). A big dam construction project that has attracted the interest of stakeholders at cross-scale since 1990s is by the municipality anticipated to cover 68% of the city's drinking water demand, once it opens (Municipio de Cochabamba, 2012). The project has been protracted several times and is now expected to open in 2015¹.

Meanwhile, the national water and sanitation programs 2008-2015 of the government have been accused of being extensive in administration with assistance from foreign donors, target-oriented and prioritizing water over sanitation and irrigation (Spronk, 2013). In this context, the

¹ Crespo, Carlos [20140404]

generic role of NGOs, working with basic services and water is studied with the attempt to understand stakeholder dynamics between its beneficiaries and the public authorities.

1.2 Aim

The aim of the study is to identify stakeholder relations and dynamics between NGOs, public/private actors and community based organizations in water and sanitary management of peri-urban areas in Cochabamba-Bolivia. The study attempts to analyze the role of NGOs in the theoretical context of CPR-management, applied to the conditions in Cochabamba. The intention is to understand the *impact* of administrative and legislative changes over time on the behaviour of NGOs and their partnering stakeholders in the decentralized water and sanitary management of Cochabamba, Bolivia. The study also aims at studying NGOs purpose of public participation and how they legitimize their beneficiary groups. Limited attention is given to study and analyze the economic capacity of the NGOs, due to mainly two reasons;

- Unspecific responses on administrative or economic capacity from semi structured interviews in addition with difficulty on accessing annual report from all key informants
- The study emphasizes on key informants qualitative perspectives on *preferable relationships and interventions*,

1.3 Research questions

The research questions that constitute the study are following;

-What is the role of different NGOs in addressing spread of water and sanitary solutions in peri-urban areas of Cochabamba?

-How is this reflected in a cross-sectorial perspective?

How has the role of the NGOs changed over the years in at local and institutional level in Cochabamba?

What are the challenges and opportunities facing the NGOs?

How are different NGOs working to achieve improved coverage of water and sanitation?

-How are the NGOs interacting and coordinating their work with the community organization, public actors and other NGOs?

-What are the target groups and beneficiaries?

-How are the NGOs addressing capacity development and community participation?

-What strategies and policies are practiced and promoted by the NGOs and why?

-How are NGOs addressing social integration and inclusion of indigenous and women?

What are the factors than can improve the relations between the NGOs and:

-Their beneficiaries (community based organizations and/or community members)?

-Public/private actors?

1.4 Goal

The goal of the case study is to identify *correlated activities* among a sample of NGOs active in Cochabamba, given the background of institutional, demographic and administrative processes during modern time with impact on the behaviour of NGOs. Another goal of the case study is to find *indicators* for stable CPR-management between NGOs and other stakeholders, i.e. to identify *how* NGOs possibly can establish stable relationships with community associations, members and authorities in Cochabamba. The analysis and conclusion will be based on *correlated observations* from key informants and the theory of CPR-and Integrated Water Resource management.

1.5 Qualitative Research Method

Qualitative research can benefit from the possibility of conducting deep-studies in a broad range of subjects for simplistic real life situations (Yin, 2009). The target is to describe events and tendencies with the help of multiple sources. The aspiration is to retail these events with the assistance of existing or emerging notions. According to (Yin, 2009), it's favourable to characterize the essence of qualitative research with certain specifics, rather than using a single definition. What characterizes this kind of research is the attempt to;

- Study the meaning that can be ascribed to the lives of people and real situations
- Retail the opinions and views of people involved in the study
- Encompass the context and emerging circumstances that people live in
- Give insight on current and emerging notions that could describe social and cultural tendencies
- Strive for multiple use of sources instead of one single source (ibid)

The main goal for qualitative research is to obtain generalizable knowledge about the research objects or events based on the discovery of variations, structures and processes among them (Svensson & Starrin, 2000). The qualitative research serves for interaction between two or more entities in a study that can lead to certain result meanwhile different events of the study need to be analyzed in its individual context (ibid).

1.5.1 Constituents of the qualitative research design;

In this chapter some of the basic and generic constituents to construct a qualitative research design are presented.

1.5.1.1 Validity and reliability

Validation refers to what the researcher assess as relevant for the context of the study, meanwhile reliability is associated with the authenticity of measurements of the study (Gunnarsson, 2002). The researcher's task is to target high reliability and validity. Validity is associated with using right measures in an accurate context. Reliability refers to what conclusions that can be made based on the measures that are processed from the studied samples. Two characteristic rules are fundamental to understand the structuring of validity and reliability:

- High reliability does not guarantee high validity
- High validity presupposes high reliability (ibid).

1.5.1.2 Internal validity

Intern validity is a process in which the researcher can assure causality between different events, thus respond to:

- Are all explanations considered?
- Is the evidence convergent?
- Does the discovery correlate well with what was initially aimed at finding?
- Have different entities been assessed in an accurate manner? (Yin, 2009).

According to Gunnarsson (2002), following constituents are of concern to obtain internal validity of a study;

1.5.1.2.1 Communicative validity/explanation building

This reflects researcher's ability to communicate how the research process impact on the validity of the results. The communicative validity consists of;

1.5.1.2.2 Description of data collection

Description of how the collection of data has been performed, what samples that have been collected, under what circumstances and for how long is described

1.5.1.2.3 Description of the sampling process

Descriptions of the selection of key informants are presented

1.5.1.2.4 Description of the analysis process

A detailed description of occurrences during the analysis process is presented. *Abduction and Explanation building* is performed at the end of the study to assess what conclusions that have been made and how this was motivated (Gunnarsson, 2002).

1.5.1.3 *Abduction*

Abduction refers to conclusion making as a potential solution based on incomplete facts in order to solve a research dilemma (Johansson, 2000). Based on the researchers view on different concepts, the past and the present and how this is shaped in the study, abduction indicates what the formation process for the studied objects could be. The literature indicates that abduction occurs with support from intuition that actualizes a presumption of phenomenon's that cannot be expressed but utilized. Abduction implicates moments of guesses that can range from being qualified to unqualified depending on the researchers knowledge and background (ibid).

1.5.1.4 *Explanation building*

In the case study research, an explanation intends to act as an answer to a specific research question. Depending on the interest of the researcher, what is valued as an explanation is variable (2010 SAGE Publications, 2010). In this context, *Contrastive explanation* is useful to identify the reasons for the explanatory outputs of the study, or to identify why the explanation of a given event is more acceptable than the alternative (ibid).

1.5.1.5 *Participant control*

If the key informants of a study can scrutinize and adjust misconceptions and misreading, it is beneficial for the validity of the study (Gunnarsson, 2002).

1.5.1.6 *Triangulation*

Triangulation refers to addressing problems from different perspectives (Gunnarsson, 2002). Triangulation can be performed by using key informants with different professional and socio-economic backgrounds, i.e. with different relations to the study object. In the analysis process, the material can be approached from both relativistic perspectives and world-perspective significations to perform theory triangulation, i.e. to implement analysis based on different paradigms (ibid).

1.5.2 External validity /Replication

In the qualitative research methodology, the researcher presents its findings at the end of the study whereupon the reader can assess how generic and replicable the results are (Gunnarsson, 2002). The range of application for the outputs is dependent on if the essence of the results can transcend its own horizon, i.e. can respond to where, what, how and to whom the outputs are replicable and under which circumstances (ibid).

1.5.3 Objectivity

Objectivity relates to the researchers ability to stay neutral and prevent attributing the data with presumptions. The researcher needs to refer any statements, measures and figures to relevant extern sources, in order to prevent biased assertions. In addition with abduction, this enhances the validity of the results.

The methodology is further presented in chapter 3.

2 Background

In this chapter a review of the geography, political administration and institutional reform processes and the water sector of Cochabamba and Bolivia during the 20th- to the 21st century, is presented to give context to the case study.

2.1 Geography Bolivia

Bolivia is a country situated in the Latin American & Caribbean Region, between Argentina, Brazil, Chile and Peru (National Geographics, 2014). It has a total land-area of 1,084,390 square kilometres. In 2012, the population was estimated at 10.67 million people (National Geographics, 2014). The climate varies between humid and tropical to cold and semiarid. The administrative capital is Sucre. In 2011, the national GDP amounted to 4.88 US dollars per capital. Bolivia is a former Spanish Colony that was declared dependence in 1825.



Figure 1 - Map over Bolivia

The official language is Spanish, although many people in rural areas and peri-urban areas speak indigenous languages such as Quechua and Aymara (National Geographics, 2014). In 2012 the country was ranked 107th out of 170 countries in average per capita income, with an average income level of 11 USD each month. About 60% of the population live below the poverty line (ibid).

From 1950 to 2012, the Bolivian population had increased with 2.7 million since 1950 (INE, 2013). The Bolivian population is relatively young. 40 percentage of the population is below the age of 15 and the age group above 65 % comprise only five percentages of the population. The urbanization process in Bolivia is reported to have emerged relatively lately (González, 2011, p. 14). Until 1969 approximately 68.5 % of the population was rural and La Paz was the only city with a population of more than 500 000 inhabitants. In 1992, the urban proportion of the population surpassed the rural (ibid).

2.1.1 Water and sanitation

In the water and sanitary sector, there is broad range of different access to services depending on the type of residence (Eder, et al., 2012). According to a case study from 2010, the MDG targets that aim to ensure environmental sustainability have to a large extent focused on improving access to potable water in Bolivia (Overseas Development institute, 2010). The proportion of the population with access to potable water went from 57.5% in 1992 to 72% in 2001 and 75.5% in 2007. According to the National Water and Sanitation program (2008-2015), Bolivia's MDG target for 2015 is to rate a coverage of 82 percentages of the population having access to water (Ministerio de Medio Ambiente y Agua, 2009). The percentage of the Bolivian population with access to this basic services rose from 28% in 1992 to 40.7% in 2001 and 46.8% in 2007. The MDG target for 2015 is to increase coverage of sanitation services to 64% of the population (ibid).

2.2 Review of 20th and 21st century Governance

In this chapter, political, institutional and legislative events and information with impact on the Bolivian water sector and the emergence of NGOs is presented.

2.2.1 20th century governance

Bolivia is the poorest country in South America (Government of Canada, 2014). Improvements in trade and exports in addition to macroeconomic policies have, according to the International Monetary Fund (IMF), resulted in positive macroeconomic results during the past years (International Monetary Fund, 2012). However, social inclusion and higher mid-term growth in Bolivia is addressed in the 2012 country report. This should accordingly meet infrastructure and development needs by means of reduced uncertainties in the microeconomic sectors and transfer programs (ibid).

The neo-liberal restructuring process in Bolivia, was after Chile, the most radical transposition to market liberalization at the same time as political democratization, constitutional tensions and disparities increased (Kohl, 2006). The reconstruction associated with market liberalization is by Kohl (2006) referred to entail three phases. The first phase was beginning with the structural adjustment program of 1985 designed on behalf of the World Bank and the IMF to address a halt to one of the highest inflations in the world at that time. The second phase is associated with the adoption of the national development program *Plan de Todos* of 1993 on behalf of the conservative administration of Goni. In accordance with the plan, 20 % of national revenues were decentralized to municipal governments. The water war of Cochabamba in the year of 2000 is by Kohl referred to be the turning point of the second era and the beginning of the third political phase (ibid).

The decentralization reform of 1994 was announced to deal with fifteen years of almost no economic increase (Fauget, 2002, p. 868). The reform was stipulated in two laws; The Law of Public Participation in 1994 and the Law of Administrative Decentralization in 1995 (ibid).

2.2.1.1.1 The Law of Public Participation

The law of Public Participation encompassed four points;

- Resource allocation ; funds were devolved to municipalities and doubled to 20 percent of all national tax revenues
- Responsibility for public services to municipalities including infrastructure, health, irrigation sports and culture
- Oversight committees. These committees were established to provide an alternative channel for representing popular demand in the policy making processes and participation
- Municipalization – Suburbs and surrounding rural areas were added to the new definition, creating 198 new municipalities (ibid).

This has resulted in;

- Consolidation of processes of popular participation, articulated in rural, indigenous communities and urban life legal, political and economic country.
- Legal Recognition of Territorially Based Organizations (OTBs) in urban and rural areas.

- Provincial section as juridical territory for municipalities to amplify municipal competence for educative services, health, sports, infrastructure and micro-irrigation for township
- Additionally distributed resources based on taxation is shared, based on number of inhabitants (Castellanos & Salvatierra, 2010, p. 342)

Prior to the decentralization reforms of 1994, the government invested in transport, hydrocarbons and energy (Fauget, 2012, p. 7) After the decentralization reforms local governments invested mainly in infrastructure with urban development accounting for 79 % of municipal investment (ibid).

The change in political administration in Bolivia after the implementation of the Law of Public Participation and the Law of Decentralization is illustrated in figure 2 as follows;

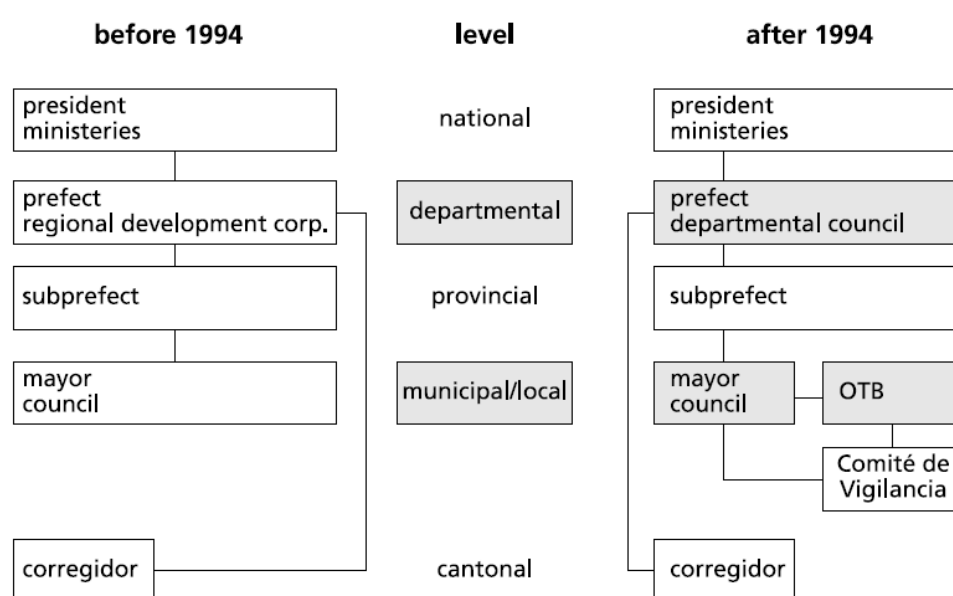


Figure 2-Political administrative structure in Bolivia before and after 1994

2.2.1.1.2 Waves in aid governance Bolivia

In the Latin American region, Bolivia is the country where the highest volume of aid per capita is allocated, where a large proportion are administered to and through NGOs working with health, development and poverty reduction (Galway, et al., 2012). The majority are receiving international funding, where bilateral aid comprises 50 % of all Official Development Assistance (OECD, 2013). The International Development Bank is currently the largest donor, funding approximately 196 million USD in 2012. The European Union with its 57 million dollar was targeting the next biggest amount of development assistance in 2012. The Swedish government was ranked number 9 in bilateral development assistance for Bolivia in 2012. According to a case study from 2013, the evolution of foreign aid has followed four different waves, from practically non-existing in 1970s, to exponentially increase to the number of 600 organizations by the end of the 20th century, It is stressed that the occurrence of NGOs in Bolivia has decreased the past decade (Galway, et al., 2012).

2.2.1.2 NGOs in Bolivia

According to a case study from 2013, the evolution of foreign aid has followed four different waves, from practically non-existing in 1970s to exponentially increase to the number of 600

Non-Governmental organizations by the end of the 20th century, with the highest increase between 1985 and 1995 (Galway, et al., 2012). During the 1990s, in the aftermath of the World Bank's structural adjustment programs, NGOs expanded throughout Latin America as alternatives to state agency functions, in capacity of addressing poverty reduction and promoting development (Arellano-Lopez & Petras, 1994). The democratization process of the 1980's, consolidated political linkages between social sectors, decreased governmental expenditures on social services due to economic debt. Under the impact of the reformation policies, NGOs in Bolivia were proliferating in two major activities. Their action evolved from supporting local movements in the 1970's, to initiate and run development projects at the benefit of national government and development agencies. Prior to 1980, about few NGOs were known to be established in Bolivia. This approach was supported by the recommendations given on behalf of The World Bank, addressing that the governments should carry out preventive rather than curative health programming. Decades later, multidisciplinary teams with staff of technocratic expertise have proliferated to take on the role as development projects actors.

With respect to institutional strengthening, NGOs are reported to have a key function in the training of OTBs after the application of the Law of Public Participation in 1994 (Nijenhuis, 2002, p. 157). In 1995 the National Network of Human Settlements (RENASEH) -A coalition of NGOs that combine housing advocacy, development and organization for rights to social housing in Bolivia, was formed. From RENASEH's perspective, social housing should focus on construction and remodelling of units relying on individual and collective self-help, progressive micro-credit loans and finance forms that are attributed with creative solutions and no mortgages (ibid).

The NGOs existence in Latin America has reportedly been central in the transformative politics of extractive and social movements of the 21st century (Gustafson, 2013). In the case of Bolivia, NGOs working in the area of indigenous and human rights have also played a significant role in supporting the rise of Evo Morales to presidency in 2006. It is stressed, however, that some NGOs linked to American entities such as USAID have faced difficulties in developing. Critique over foreign intervention has emerged recent years, associated with U.S government's intentions to weaken the Morales government. In 2013 USAID was expelled from Bolivia (ibid).

2.2.2 21st century governance

In this chapter some crucial political, institutional and legislative processes are presented to frame the context of the case study.

2.2.2.1 *Structural institutional and cultural changes in Bolivia 1990-2008*

The political game of Bolivia has during 1990-2008 been characterized by intentions to increase the legitimacy of institutions, reduce volatility, actions and subjects capable of hindering the implementation of policies according to the scholar (Blum & Eguívar, 2008, p. 47)

In the 1989 election the congress allowed Jaime Paz as a president of the republic, although he was ranked third place in the popular votes with a proportion of 21.5 % of the votes. The National Electoral Court, comprised by representatives of party politicians, had annulled the vote in several polls in the country (Blum & Eguívar, 2008, p. 51). Evo Morales won the election with 53,7 % in 2005 in a time where the Electoral Court was composed by citizens without party affiliation, proclaiming him as a president without entering parliamentary negotiations (ibid)

Blum & Eguívar (2008) argue that a general orientation can be observed for the reforms in between 1990-2008, in the intention of giving higher legitimacy to the institutions and to increase their efficiency;

1991-2000 The domination of the political class; In the aftermath of the 1989 election the National Electoral Court was restructured to make way for the adoption of mixed electoral system. Constitutional justice was introduced by virtue of passing the Law of Public Participation to the legislation.

2000-2005 The rise of the political class; this era is associated with responses from the political class against the demands from mobilized groups of the population on monopolization of political representation.

2006-2008 The reaction from the political class; this era is associated with changes emerging after the rise of the MAS regime and the election of Evo Morales as a president. The call for new institutionalism according to the founders of the nation state, i.e. departmental autonomy is observed. New civic actors have accordingly, apart from indigenous and peasant movements, emerged to join the dispute about the political discourse and action policies (Blum & Eguívar, 2008, p. 51).

Blum. & Eguivar (2008) argue that studies on the legitimacy of democratic institutions in between 1996-2008 show that the political tolerance and right to object among the population tend to increase between 2004 and 2008, although Bolivia in 2008 was the country with the lowest level of political tolerance among all countries of America (Blum & Eguívar, 2008, pp. 52-53). Given that the legitimacy of institutions of the incumbent governments, in terms of effectiveness and satisfactory performances, increased after the election, it is argued that the *perceived legitimacy* of the central institutions of the state also increased, (see figure 3, p. 11)

(ibid).

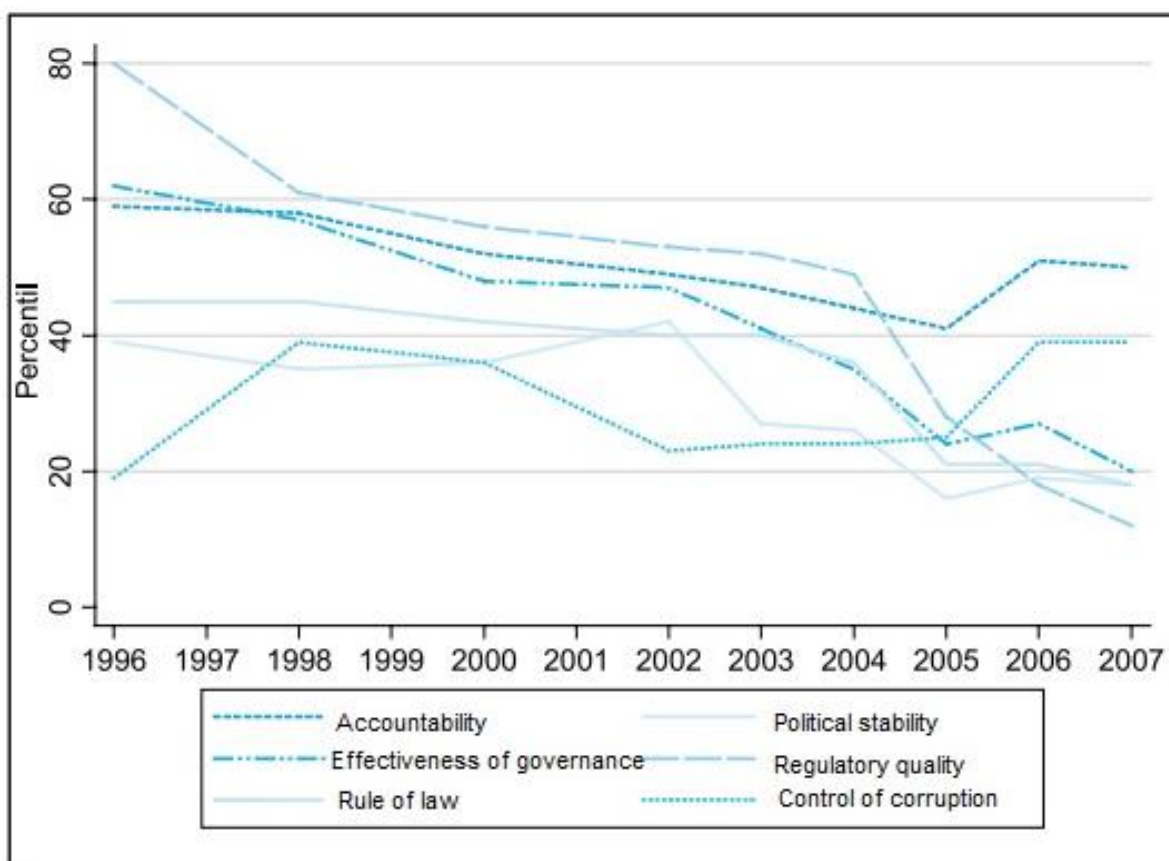


Figure 3 - Transition in the legitimacy of the institutions 1996-2008

3.1 The MAS-Government

The national water-and housing sector, as well as the legislation for water and adequate housing in Bolivia, has gone through an extensive reform process since the rise of the MAS-government in 2006. Some of the most important processes are presented in the following chapters

3.1.1.1 *Evo Morales elected as president*

In 1995 an alliance was made between unionized peasant organizations of CSUTB, *Cocaleros* and *Colonizadores* to form the Movement for Socialism party (MAS) (Vacaflor-Schilling, 2011, p. 7). In the presidential elections of 1997, the parties with focus on indigenous identity campaigned for the first time at national level, whereupon an increasing number of indigenous, aka *campesino* representatives emerged in to state politics. The MAS party and its front man, Evo Morales, won the presidential election of 2005, with almost 54 % of the vote. This happened in the aftermath of the social protests in Cochabamba, the water war of 2000, and in El Alto; the gas war of 2003 (ibid).

Morales had lost the 2003 election and MAS were on the trajectory of winning ground in a time of growing concerns and manifestations. The international press initially proclaimed the election as a revolutionary milestone in line with the path of electoral development in Latin America (Walnycki, 2013, p. 94). Postero (2010) claims however, that neither Morales nor the MAS were involved in the uprisings of the grassroots movement during turbulent years from 2000-2003. (Postero, 2010, p. 24).

In the 2005 electoral campaign three commitments were laid out by Morales as of particular importance for the political agenda of MAS;

1. Turning Bolivia to a participatory state by means of including social movements, mainly representing indigenous Bolivians, to make up the foundation of the new government
2. Preventing neoliberal policies, as it was argued to be the fundamental source of suffering among Bolivians
3. Promoting national sovereignty liberated from economic structures imposed by neoliberal capitalism

Since the rise of the MAS regime, intentions to create a new institutionalism have been observed (Blum & Eguívar, 2008, p. 59). A constituent assembly was established by law in 2006 with the attempt to reform the political design of Bolivia. The recognition of autonomous regions according to the 2009 constitution, *La nueva Constitución Política del Estado*, has been associated with an aspiration to re-establish the plurinational nation-state of 1952. The referendum that was established in the second round, excluded the possibility for parliamentary politicians to elect the president (ibid)

3.1.1.2 The Legislative framework of autonomy and decentralization (2009)

In February 2009, the new state Constitution was enacted which introduced a new political system consisting of four autonomous constituents;

4. Autonomous Departments
5. Autonomous Regions
6. Autonomous Municipalities
7. Autonomous Indigenous peasants

These entities characterize the important processes of decentralization (Käss, 2010). In July 2010, the Plurinational Legislative Assembly of Bolivia passed a Framework of the Law on Autonomy, *Ley de Marco de Autonomia*, to the legislation that comprise the legal framework for the implementation of autonomous processes. The framework was outlined based on the premise that state power is closer to the population in decentralized societies with sub-national administrative units that allow political participation more directly. This is based on the assumption of increased efficiency of public administration with the municipality at the centre of political decision to perform direct democracy. In between the distribution of power over different levels of the government, the principle of subsidiarity governs; problems addressed are to be solved as close as possible to the source of its manifestation. Municipalities are thus in charge of performing all tasks to orient themselves towards citizens and meet their demands. The logic is designed as a string between the governmental entities (ibid)

In 2009, Bolivia was, after Venezuela and Ecuador, the third Latin American country to legislate a new constitution within a time frame of ten years (Vacaflor-Schilling, 2011, p. 16). The set of new fundamental laws are jointly comprised by constituent assemblies and adopted in referendums. The new Bolivian constitution calls for re-strengthening of state governance, social emphasis on human rights and higher degree of participatory democracy. New spaces for participation and social control is invoked at all state levers in Bolivia by virtue of inscribing mechanisms for direct democracy such as the citizen's legislative initiative, recall referendum and referendums for constitutional change (ibid)

Based on empirical studies of municipalized investment since the implementation of LPP, the scholar Castellano argues that the Legal framework of Autonomy establishes a revenue base on prefectures where municipalities increasingly rely on transfers (Castellanos & Salvatierra, 2010, p. 347). These tendencies are associated with a risk of reduced accountability of local government for fiscal decisions that subsequently can have adverse impact on fiscal effort. The increase in transfers is argued to generate a decline in the tax effort of local governments receiving transfers, likely to obtain more resources without satisfactory effort (ibid).

3.1.1.3 The Legislative framework for water governance

Proposals from social movements in opposition to the privatization of water in Cochabamba were recognized by virtue of addressing access to water as a fundamental right in the 2009 constitutional referendum (Harris & Roa-Garcia, 2013, p. 24). The referendum declared the state as the responsible provider and protector of water. Subsequently, it is clarified that potable water and sanitation cannot be subject to registries and licenses. Harris & Roa-Garcia (2013), argue that the paradigm of human right to water is in conflict with entities of several other laws, such as the land reform law and exports law with encompassing priorities and allocation schemes. The Participatory movements, calling for equitable rights to water, and the formation of Institutional Water Council CONIAG, have been attributed as drivers for the paradigm shift in water policies during the 21st century. The law of potable water and sanitation (law 2066),

integrates a function to recognize indigenous traditional ways of managing water resources. The elements of this law and law 2704 that prohibits water exports, are projected to be adjusted to be conform with the text of the 2009 water law although the procedure is yet unclear (ibid)

3.1.1.3.1 Ambiguous legislation

In line with the adoption of human right to water in 2009, privatization of water has been prohibited meanwhile privatization of provision itself has not been restricted (Harris & Roa-Garcia, 2013, p. 26). The vague definition of private i.e. common goods has created incitement for public private partnerships (PPP) to grow; a development that is proposed by the international cooperation agencies such as the Inter-American Development Bank and the German Development Bank GIZ. These two are identified as two major funders for bilateral support of potable water and irrigation projects in the country (ibid).

The authors stress that there are disjunctions between some of the elements of the constitution, such as the right to water, and policies to extract natural resources for economic purposes (Harris & Roa-Garcia, 2013, p. 26). Hindery (2013) further argues that the constitution ascribes all forms of energy and strategic resources as commodities that the state is entitled to extract to enable development of the country (Hindery, 2013, p. 170). Mining, hydrocarbons and hydroelectricity are sectors that represent large water consumer and that could put vulnerable parts of the population, presumably intended beneficiaries of the human right to water principles, at risk of not accessing water. The priority of the governmental plan for 2010-2015 is targeted at benefits from natural resource exploitation in order to finance welfare politics (Vacaflor-Schilling, 2011, p. 15). However, the rapid rate of which extraction of oil and minerals are occurring are pointed to have created dissidents on the new left (Harris & Roa-Garcia, 2013, p. 26).

After three years of negotiations, it was declared in May 2014 that a new mining law will be passed to the legislation (Achtenberg & Currents, 2014). The new law seeks to make the mining sector conform to the 2009 constitution and with a decree issued in 2007 by President Evo Morales, announcing Bolivia's mineral wealth to be a patrimony of the state. The law has been subjected to controversy since grass-root organizations representing irrigators, farmers and indigenous sectors argue that it favours water rights to mining operators and restricting consultation by affected communities. Popular organizations are reported to have been excluded from negotiations (ibid).

The so called "*neo-extractivism*" is held out as a hinder to deviate from neoliberal policies (Walnycki, 2013, p. 96). The paradigms of *Buen Vivir* (living well) and *El Gran Salto Industrial* (The great industrial leap) that have prevailed since the MAS government came to power, is held out as contradictory (ibid).

3.1.1.3.2 Developing paradigms

In relation to its predecessor, the 2009 constitution support human rights, specifically economic, social and cultural right by addressing underprivileged groups such as women, children and persons with disabilities. Women's right to equally participate is invoked as a mechanism to supplement already legal procedures for the implementation of human rights (Vacaflor-Schilling, 2011, p. 10).

The notion of *Buen Vivir* has been developed based on the assumption of living well as opposed to living better, i.e. anti-capitalist Andean development paradigm that refer to indigenous principles of living in harmony with nature (Walnycki, 2013, p. 96). The paradigm of *Buen vivir* aligns with the states commitment to defend indigenous rights and communal forms of natural

resource management, including the rights of indigenous communities to participate in local development incentives. Bolivia has, accordingly, been subjected to depletion of resources throughout history, thus lack of capacity to resist foreign intervention such as the current regional development program enforced by Brazil (ibid).

3.1.1.4 *Review of water law and Institutional reform process*

The first water law in Bolivia is a domain act on water use dated back in 1879 and passed to legislation in 1906 (Bustamante, 2002, p. 45). It was repealed numerous times during the 20th century for various different areas of water resource management. From the 1970s resource management institutions have been working on legislative proposals to supplement the void of the pre-existing law from 1906. In the aftermath of the water wars in Cochabamba in 2000, Resource management institutions- and organizations were putting pressure on the State government to prepare an alternative temporary law that would amend rules with attempts to recognize peasant rights, indigenous and urban settlers. Given this background Law no. 2066 was approved in April 2000. It was thereupon concluded to abolish the law and management domain from 1906. Two years since the agreements were set much, Bustamante argues that much progress was not obtained to generate permits and grants for new water rights (ibid).

In 2006 a reform process begun in the national water sector with processes to formalize water rights, create institutional frameworks and implementing a new constitution (2009) (Bustamante, 2008). Resource-oriented water rights were formulated for water resources for irrigation and human consumption (registries and authorization). The utility-oriented rights were formulated for rights to manage utilities and water provision (drinking water and sanitation). These rights are referring to registries, licenses and concessions. Bustamante has raised some concerns related to the reform and licensing processes. It is argued that;

- there is an over confidence in efficiency of customary norms
- legalization can implicate inequities in relation to class, gender or age
- customary services are not necessarily environmentally conscious
- Management of watersheds and basins are accordingly not considered in the framework
- Limited mechanisms for consensus and accountability for social participation(ibid)

Bustamante has also raised some inquiries related to the licensing processes (Bustamante, 2008). It is argued that the mechanisms to concentrate rights are in charge of those who already have access to water. It is further argued that the registries are permanent thus cannot be modified unless land is subjected to complete urbanization. Bustamante further claims that irrigators with little financial capacity and interest groups that lack of ownership also lack of social representation in the institutional framework for water resource management (ibid).

3.1.2 *The social housing programs of MAS: PVSS*

The Program for Social & Solidarity Housing (PVSS) was announced in 2007, promising to provide at least 14500 new units by the end of the year (Achtenberg, 2009). It was projected to cover up Bolivia's 300 000 unit deficits in housing to be reduced by 5 % and completely eliminated within 10-20 years. Under the new program, direct loans on favourable terms are provided to enable hirers with limited capacity to construct or afford first new homes in urban or peri-urban areas. In rural areas beneficiaries would receive direct grants. In urban areas, governmental loans were set to be available for 100 % of the land and construction costs with a baseline of 20 years. Interest rates of zero percentage were set for houses in the lowest categories. An urban family, earning a minimum wage of 83 dollars per month, could accordingly afford a 5000 dollar house with a monthly payment of 21 dollars at 25 % of income.

Departments and municipalities were promoted to institute one third of the national governments costs. In 2008, a year after the social housing program of PVSS started, material costs were reported to double meanwhile labour costs increased due to capital flight of skilled labour to other working sectors or abroad. In addition, land costs are reported to have risen and generated an increasing demand for social housing (Achtenberg, 2009).

3.1.3 Adequate housing according to the constitution (2009)

Article 19 of the 2009 constitution has stated that every Bolivian's entitled to have a decent, adequate home and living environment that gives dignity to families and communities (Achtenberg, 2009). The government's responsibility is invoked at all state levels to progress social housing programs, including adequate financing, targeting groups with limited resources and biggest need. Initially, a part of the constitution guaranteed private and collective ownership of properties, after negotiations with opposition parties in Congress 2009, it was emphasized that urban real estate should not be subjected to confiscation (Achtenberg, 2009).

3.1.4 The MAS-government Water and Sanitary Programs

Spronk (2013) reports that there has been a transition in public administration that relates to water and sanitary infrastructure under the governing rule of MAS (Spronk, 2013). Public investment is argued to be appropriated in sectors with "strategic" approaches, 80 % of the public investments during the years of 2006 to 2009 were allocated to mining, hydrocarbons and transportation infrastructure. By proportion, 1.2 percentages is reported to have been invested in water and sanitation during the same time and 0.3 percentages in irrigation and dam projects. Public investment is associated with a priority of extractive industries over investment in improved basic services. During the restructuring process of the 90s, 58 percentages of investments were financed by extern donors, mainly the Inter-American Development Bank, the World Bank, the Japanese and German aid agencies, 17 % by municipal governments and 8 % by the private sector (ibid).

The national infrastructure investment program "*Evo Cumple*" (Evo Keeps his Promises) has been financed by foreign development assistance. Funded by the countries of the ALBA-TCP (Mostly Venezuela) the "*Evo Cumple*" program invested an estimated USD 290 million between January 2007 and April 2010, although only 8 percentages of the total was estimated to have gone to basic sanitation and 3 percentages to irrigation (Spronk, 2013). In 2010 President Morales announced the initiation of a new, similar program "*Mi Agua*" (My Water), which focused more explicitly on water and sanitation than irrigation. This program, which has been funded by a loan to the tune of USD 100 million, has attempted to deliver USD 300,000 to each of Bolivia's 327 municipalities. Each municipality was expected to deliver 15% independently to the project. The water and sanitary sector is thus argued to be reliant on extern funding (ibid).

In 2013 The MAS-government announced that Bolivia will meet its overall Millennium Development Goal for access to safe drinking water three years ahead of schedule, with 88% overall coverage achieved in 2010 (Currents, 2013). Access to potable water in rural and peri-urban areas rate (71%) which is reported to be more underdeveloped those for urban areas (96%), and among the lowest in Latin America. The same source announced that a proportion of 27% of Bolivians have adequate sanitation facilities (ibid)

3.2 Regional data for Cochabamba

To understand the geographic and hydrologic conditions, this chapter attempts to present some of the characteristics of Cochabamba region and city.

3.2.1 Geography and demography

Cochabamba city is the fourth largest city in Bolivia and is situated at 2,558 meters above sea level. It is the capital of the department Cochabamba and located exactly in the heart of Bolivia. The city's population roughly estimates at 600,000 people. The city is located in a valley surrounded by Andean mountains. The metropolitan area of Cochabamba has seven local municipalities that together constitute the largest departmental largest urban concentration (90%), which is due to high urban growth (Ledo, 2013, pp. 14-15). The region is attached to the watershed Caine - Large, which is constituted by six sub-basins, one of these, the la Rocha – Maylanco lies within the seven municipalities which form the metropolitan area, (see picture 4 p. 18). According to Ledo, the aquifer has a surface area of about 49 000 hectares, on which 18 900 hectares were covered by urban areas in 2012. The urban migration is spreading horizontally, it covers 40 % of the aquifer and is expected to cover 70% of the aquifer in 2036, thus minimize sustainability of growth (ibid).

Given these circumstances the city of Cochabamba is facing major water problems and is ranked as one of the driest cities in Bolivia (Ledo, 2013, p. 15). The rainfall ranges from 400 to 500 mm / year for a period of 70 rainy days, whereby the water is considered to be a scarce resource in Cochabamba. The horizontally oriented urban sprawl and expansion, is creating problems for water supply. The growing urban water demand also reduces opportunities for expansion and deepening of its historic agricultural potential thus reduces availability of water for irrigation to ensure crop sustainably in the region (ibid).

In 1994 the city of Cochabamba was divided in to 14 districts (Marston, 2013). The southern regions of the city; 5, 6, 7, 8, 9 and 14, are reported to have the least access to water supply services and is also affected by the highest increase in population growth. In some district a proportion of 22.2 % of a total population of 250 000 residents are connected to the public water network (ibid).

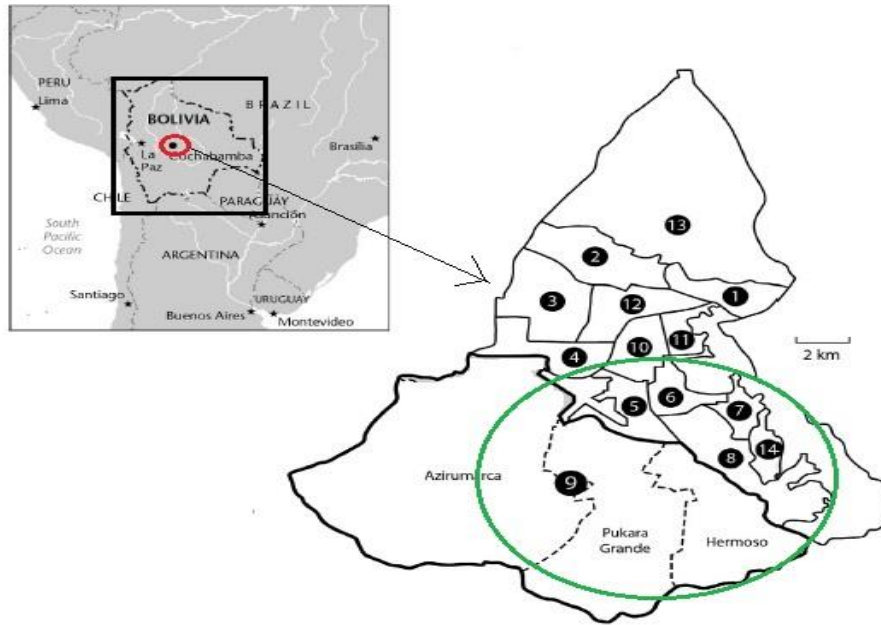


Figure 4 - A map over the 14 districts of Cochabamba city

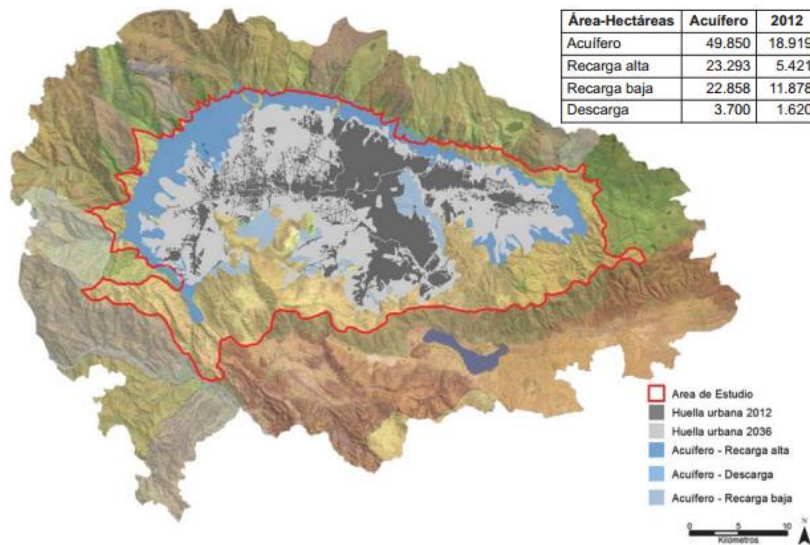


Figure 5 -A map over the valley and the aquifer in the region

3.2.2 Water Provision in Cochabamba

In the following chapters, public water provision in the city of Cochabamba from middle of the 20th century to the 21st century is presented.

3.2.2.1 Public provision 20th century

Between 1967 and 1999 a municipal company SEMAPA was in charge of the provision of water and sanitary services in Cochabamba (Justo, 2013, p. 15). The system was claimed to be affected by poor performance and low degree of coverage. A proportion of 57 % of the residents in the city were not connected to the network services in 1997, for which services were available once to twice a week. In 1998, The World Bank supplied with a loan of 25 million dollars targeted for improvements in water infrastructure on the condition that a system delivery reformation would take place that complied with private sector involvement. The lawsuit resulted in a privatization process for which the company Aguas del Tunari signed a service contract for 40 years. The agreement entitled Aguas del Tunari control of the network, water rights in the area and a guaranteed return of investment. The company committed to water provision for existing customers, expanded the system to comply with regulatory guiding principles of achieving accessibility, efficiency and equity. The water rates were based on the principles of cost recovery, lead to a 35% increase in water tariff which resulted in an increase in price of 200% for some consumers. According to another source, the minimum charges came to represent 22 % percent of the minimum wage (Castro, 2007, p. 764).

Soon after the contract between Aguas del Tunari and SEMAPA was signed, an act (no 2029 on Provision of Drinking water and Sewage services) was approved (Bustamante, 2004, p. 9). It was a national set of rules set to regulate the sector, the act granted special privileges to companies and cooperatives. This act created the legal framework for Public Private Partnerships in Bolivia (UNDP, 2012). As a result of the high prices from the privatization reform, widespread protests and indignation followed on the streets and civil movements and the Municipal government cancelled the contract in the year of 2000 (Justo, 2013, p. 15).

3.2.2.2 Post water-war era debate

After the concession was ended, a regulation to the law (no. 2066) was prepared that took into account the demands on improved water rights from social organizations (Bustamante, 2004, p. 9). The discourse following the water war was heavily influenced by the demand to guarantee social control or “legal security” for different community based associations and grass root movements (Bustamante, 2008). Grass root movements, NGOs and resource management institutions called upon regulations that could guarantee formalization of water rights to be defended against privatization and transnational interests (ibid).

With the development of new institutions in 2006-, to capacitate and regulate the water sector, community-and small scale providers have enrolled in to a system of licenses and registries (Walnycki, 2013, p. 201). However, state sanctioned common rights for community organizations can, per se, also implicate exclusiveness of adjacent communities’ abilities to appropriate water. This is argued to be an unintended form of privatization form of water (ibid).

3.3 Public Drinking Water and Distribution post-water war Cochabamba

Some regional events of importance and information on the spread and transformations of public water and sanitary provision in Cochabamba are presented in following chapters.

3.3.1 Public Drinking water distribution post water-war

The Municipality of Cochabamba is responsible for the provision of water and sanitation to the population in Cochabamba (Ledo, 2011, p. 23). The water consumption is estimated at approximately 50 liters per day in the districts 10, 11 and 12 of the city; areas that are connected to the public network. The public company SEMAPA is at present drawing water from groundwater-and surface water, with surface water constituting 40% of the utility's demands. Two dams and facilities store surface water that is delivered in the northern and central areas of the city. Four sets of wells are situated to the west of the city and deliver water to the central and southern regions (Marston, 2013). In the peri-urban areas of the city, a high proportion of the dwellings either lack public connections or get insufficient quantities of water. The northern parts of the city have an abundance of water resources and the public network could transport sufficient amount of water from the north to the south, but deliverance is hampered by the ancient network of pipes that reportedly have major water losses. In some districts the water losses amounted to nearly 50 % of water volumes, of which a large proportion is believed to derive from illegal connections (ibid).

About 50% of the drinking water in the southern districts is reported to be distributed by water committees (Walnycki, 2013, p. 158). Some communities are not recognized by the state, thus cannot access decentralized funds.

3.3.1.1 Municipal plan

The Municipal plan of Cochabamba 2013-2036 states that the estimated population of the metropolitan areas is 1.54 million people of whom some 200,000 people lack access to water and about 1.20 million (78%) consume water without disinfection (Municipio de Cochabamba, 2012, p. 45). The sanitation situation is regarded as more critical, some 760,000 people (50%) lack sanitary sewer and that only 16% of collected wastewater is treated which generates a negative environmental impacts (ibid).

The Municipal Plan argues the coverage for waste water supply services is blatantly insufficient. The aim is to increase the coverage from 51% of 2012 to 100 % in the metropolitan area by the year of 2036. (Municipio de Cochabamba, 2012, p. 25) The waste water treatment plan of Alba Rancho only serves 238 899 habitants in the centre of the city and that the other municipalities are discharging their majority of waste water effluents in local drainages, the adequate waste water coverage is estimated at 15,5 % (ibid).

3.3.2 The Misicuni Project

The Misicuni River is stretching along the valley of Cochabamba, 3700 meters above sea level (Inter-American Development Bank, 2013). In 1996, the construction of the Misicuni dam began, as a result of a regional project initiated in the 1960's for multiple purposes (Marston, 2013). The first phase of the project is projected to be completed by 2016 and the second phase by 2021. The project has been engaged for the purpose of producing hydroelectricity and irrigation water, although it has been anticipated not to have capacity to meet irrigation demands. It has, during its life span, been subjected to many plans by various key stakeholders in the Cochabamba Region (ibid)

During the construction of the first phase, a tunnel was connected to a pressure pipe leading water from a fall of 1000 meter to a powerhouse for electric power generation, whereupon it will be led to a reservoir for water distribution from the central valley (Inter-American Development Bank, 2013). According to the Inter-American Development Bank, it is estimated that once the dam reaches the height of 120 m, the reservoirs can store 185 million cubic meters of water. The reservoirs have capacity to generate working volumes of 154 million cubic meters and are engaging an area that amounts to 460 hectares. Water flows of 2 m³/ sec are projected to supply the water treatment plant to provide municipal drinking water network of SEMAPA, and other municipalities to project and expand potable water provision for their population (ibid).

According to the Municipal plan, the Misicuni dam will have capacity to supply with 68 % of domestic water use in the Metropolitan Area of Cochabamba after completion. (Municipio de Cochabamba, 2012, p. 13). The water resources are drawn from the basins of Misicuni, *Viscaxhas* and *Putucuni* rivers. A map over the municipalities that are stakeholders in the project and the location of the dam is presented in the following figure (Figure 6).



Figure 6- Catchment area and location of treatment plant for Misicuni project

3.3.2.1 SEMAPA and Misicuni

In 2002 a concession agreement was established between the predeceasing agency of SENASBA and AAPS, on provision in an area of 5192 hectares that was further expanded in 2003 (Senasba, 2011, p. 41). The service to the area was reported to be poor and coverage never exceeded 50 percent. SEMAPA decided upon addressing the high unaccounted water losses in the older districts of the city. SEMAPA has in recent years decided upon linking future projects for water supply systems and sewerage to the Master plan of 2013, and adapt to the legal framework for concessions on contracts and licenses to peri-urban community associations. 172 million dollars were invested from 2008-2012 for improved services. It was also announced in 2012 that SEMAPA would launch a program for institutional strengthening, in order to improve the business management capacity of the company for service delivery. A system of selling water in “bulks”, a form not provided within the regular tariff structure, was processed with reliance on the opening of the Misicuni project as the main water source. Once Misicuni dam project is ready for opening, it will be transformed in to a company, where water will be sold

in “bulks” through agreements with SEMAPA and the municipality. The project was anticipated to be complete in 2013 to solve the water shortage in the city. Projections expected Misicuni to deliver 500 liters of water per second through a treatment plant situated in *Molle Molle*, and another 500 liters per second of raw water for another treatment plant situated in *Cala Cala*. The actual costs today for water sold in bulks is reported to not cover costs of treatment, thus reflect an insufficient financial reality of the institution (Senasba, 2011, p. 44) .

3.3.2.2 SEMAPA and community based small-scale providers

In the program of Agua para todos (Water for all), running between year 2004 to 2010, SEMAPA has had cross-sectorial arrangements to expand decentralized networks for drinking water and basic sanitation in peri-urban areas (Senasba, 2011, p. 30). SEMAPA has been providing drinking tanks and expected future possibilities to connect networks directly to the company. Another arrangement on behalf of SEMAPA has been the provision of bulk water, which implicates that OTBs seek support through the semi-private-public company/NGO Aguaturya, the Municipality and SEMAPA. Aguaturya build decentralized systems, the municipality monitors and manages revenues and share funds with SEMAPA. This program has been extensive in districts 14 and 9 where provision is mainly delivered in cisterns. After implementation, the small scale providers can go through capacity building, following the municipal management guidelines of DESCOM, to address sustainable resource management. Since 2011, years the self-help program has been promoted. The difference in this program is that the municipality allocates resources but is no longer is part of an agreement, it occurs only between the small-scale providers and SEMAPA. SEMAPA elaborates designs for a project, controls and provides service. SEMAPA administrates with a flat fee for two years. The same source reports that an alliance between ASICASUUD, SEMAPA and Misicuni would be announced for future projections to set prizes for water bulks (ibid).

3.4 Water and sanitary management in peri-urban districts Cochabamba

The southern districts together comprise 64 % of the area in the municipality (Dúran, 2007, p. 110). In the peri-urban districts 7, 8, 9 and 14, (see Figure 4 on p. 18), it is estimated that 23.9 % of the houses are supplied with private networks or cisterns (Dúran, 2007, p. 130). 59 % percent of the drinking water is provided by private vendors. The 5th and 6th districts are the only zones that have connections to the public company SEMAPA's drinking network (Walnycki, 2013, p. 158).

3.4.1 Water and sanitation

About 50% of the drinking water in the southern districts is reported to be distributed by water committees (Walnycki, 2013, p. 158). Some communities are not recognized by the state, thus cannot access decentralized funds. According to Walnycki (2013), the recognition, per se, hasn't guaranteed capacity for a community based associations to develop water systems, due to water scarcity and difficult topography. The systems are often characterized by two wells and a pipeline that have been implemented with help from NGOs and the local church. The population density, scarcity of water resources and presence of pollution from industrial and domestic sources add up to the decline of the ground water table and the contamination of the source (ibid).

3.4.2 District 14

District 14 of peri-urban Cochabamba is more publically known as Villa (Sebastián) Pagador. It is a district that was founded 37 years ago by migrants mainly from Oruro (Zibechi, 2009). The literacy rate in the district is the lowest in the city and together with district 9, 14 have the highest incidences of child mortality (CEDIB, 2006, pp. 4-6). According to CEDIB, approximately 75 % of the households in Villa Pagador have deficit water services and 80% deficit sanitary services (ibid).

3.4.3 District 9

District 9 was incorporated into the municipal territory in 1983 and comprises 48 percent of the total municipal area of Cochabamba with its land area of 16 000 hectares (Bustamante & Médieu, 2012). The 9th district is characterized by semi-rural and agrarian landscape that gradually has gone through a rapid transformation with an expansion of informal settlements. The settlers are mainly organized either through urban forms of associations or peasant organizations (Dúran, 2007, p. 140). In district 9, people mainly buy water from water vendors or get supplied through cisterns implemented with help from NGOs and local churches. A cubic meter of water costs approximately 20-30 Bolivianos. Approximately 20 % of the families in the district are reported to have access to basic sanitary services.

3.4.4 District 8

According to figures from 2007, 12 % of the population has access to potable water and SEMAPA is projecting to expand the municipal network mainly in the northern parts of the district (Universidad de San Simon, 2007, p. 37). One third of the dwellings in the district are connected to septic tanks. 25 % of the households have latrines. It is estimated that 50 % of the households in the district practice open defecation. Due to the poor sanitary services of the district, the rate of infant mortality in the district is estimated at 33 % for the low income families (Universidad de San Simon, 2007, p. 61).

4 Methodology and Theoretical framework

This thesis was conducted as a multidisciplinary research project. It is combining methods from social science and engineering, with the attempt to comprehend the development of decentralized water and sanitary management in peri-urban Cochabamba. The research project is a partnership between the Division of Water Environment and Technology at Chalmers University of Technology in Gothenburg, Sweden, Centre of Water and Environment at the Universidad Mayor de San Simon in Cochabamba, and the partnering organization Procasha Foundation in Cochabamba. The study was initiated in the fall of 2013 and presented in the fall of 2014.

Initially, a schedule of the research design is presented to determine what components are essential for the methodology. In order to outline this procedure, the prevailing research question of this study is presented;

-What is the role of NGOs that are working with water and sanitation in Cochabamba, and how has that changed over the years?

Table 1 represents how the case study design will be performed to respond to the research question.

Research question	Data needed	Appropriated Research design	Data collection	Data analysis
1. What is the role of NGOs working with water and sanitation in the peri-urban areas of Cochabamba?	Descriptive theory; organizational theory, social theories and explanatory data	Case study	Semi-structured interviews and archival records, observations	Explanation building, abduction
2. How has that role changed over the years?	Explanatory data about public/private and community relations	Case study	Semi-structured interviews (archival records*) ²	Explanation building, abduction

Table 1 Research design properties

² * (archival records will be used only for one key informant group; NGOs working with physical spread of water and sanitation where there is a lack of data)

4.1 Case study design; Research themes

In order to identify the information that is needed for the study, the study will elaborate the research questions in two ways;

- *The generic changing institutional roles and relationships of NGOs active in the community based water management of peri-urban Cochabamba*
- *The changing relationships for a sample of NGOs active in the community based water and sanitary management of peri -urban Cochabamba at cross-scale, and their approaches to community participation*

4.1.1 Changing roles and relationships of NGOs active in the community based water management in peri-urban Cochabamba

This theme of the study seeks to study how the context in which NGOs working with decentralized water and sanitary services and how it has changed over time. Societal, behavioural and economic processes that are associated with certain paradigms or events by key informants of the study are studied. The literature refers to these events as so called *formative moments*, i.e. events that put actors on a certain path of development (Esaiaasson, et al., 2012). This theme is approached from a cross-scale perspective and seeks to identify the *dynamic role* of NGOs in relation to structural transitions at national and regional level in Bolivia from the 1990s on to 2014. The information will serve as a base to assess possible paths of development for the NGOs to address water and sanitation in peri-urban Cochabamba in the future as a part of the case study analysis.

4.1.2 The changing relationships for a set of NGOs in the community based water management of peri -urban Cochabamba and approach to public participation

This theme is addressed by studying a study sampling of NGOs working with water and sanitation divided in the three following categories:

1. Policy making and cross-institutional capacitation for water rights and strengthening of small-scale systems
2. Adequate housing including basic services at household and community level
3. Physical spread of drinking water and sanitary solutions through Public Private Partnerships, at community and household level

The NGOs of each category are compared internally in terms of their dynamic relationships with other stakeholders with help from the methodology of process tracking.

A second methodology is used for the studied samples of NGOs where they are internally compared in approach to public participation by means of; *capacity, influence, gender/indigenous inclusivity and communication* as well as its purpose. These theoretical concepts are defined in the theoretical framework chapter. The analysis serve as a base to assess potential paths of development for the specific categories of NGOs to address water and sanitation in peri- urban Cochabamba in the future, as well as understanding how well their objectives for public participation is reflected in their strategies.

4.2 Data needed

To address the first theme of the study, explanatory data will be needed, i. e data that seek to explain how, why, when the generic role of NGOs as an actor in the water sector go through a transition in impact and relations to other public/private and community associations. The key informants for this particulate matter are comprised by public and private actors and community

associations operating in peri-urban Cochabamba. Descriptive data on societal theories, as quantitative census on health, wealth and accessibility measures will also be included to enable a holistic perspective on the subject.

To address the second theme, explanatory data will also be used to map the specific transitions in relationships between NGOs of a certain category listed above, based on the studied objects of the case study. For the second theme, NGOs are compared in terms of approach and impact on community participation. This requires explanatory data from NGOs included in the case study, as well as descriptive data on organization theory.

4.2.1 Key informants

Three key informant groups are identified for this study with numbered categories;

- 11 representatives of public and private research institutes, departments and foundations
- 12 representatives from 8 different NGOs addressing water and sanitation in peri-urban Cochabamba
- 5 different Community-based organizations in districts 9, 14 and 8.

The actors interviewed in the case study are presented in chapter 7. The sample set for of NGOs is a result of the three different categories that the study is covering, the range of contacts that helped to introduce the author to them, supervision, partnering institution Center of environment and the Faculty of Agronomy at the University of San Simon, Cochabamba and contacts that were made in field together with assisting transcriber and friend living in Villa Pagador of district 14. Interviews were carried out with electronic sound recorder, and interviews have been were transcribed for data processing by five different interpreters.

4.3 Data collection

The case study has been performed through semi-structured interviews at site and pre- and post-studies of archival records. This approach enables taking into account multiple aspects and to adjust the objective of each interview depending on the conditions at site (Yin, 2009).

4.3.1 Semi structured interviews

Field studies were carried out from February 2014 to late march 2014 in Cochabamba, Bolivia to perform interviews and collect local data. The questionnaires have been written based on the needed data that has been adapted for the three different key informant groups. The questionnaires that address the first study theme are addressed to the public/private actors. To formulate questions for the selected NGOs, organization theory is applied according to the notion of Integrated Water Resource Management (IWRM) and CPR-management. The questions for the beneficiary group, i.e. members of parental community associations have been addressed as anonymous and the questions they were subjected are referring to their individual perspectives, i.e. world-perspective signification on NGO performances. The emphasis on interviews is reflected on the NGOs of the case study. Questions were formulated to be open, hence enable replies to how, what and why- NGOs act and intervene as they do.

The semi-structured interviews serve for identification of eventual causal relationships between key informants on the role and impact of NGOs, processed in the analysis of the study. The interview guides are attached to Appendix I-III.

4.3.2 Archival records

The archival records encompass documents and information retrieved from the websites of specific NGOs studied in the thesis and are supplemented with more specific and qualitative

data from site, such as observations, project evaluations, diagnostics and annual reports. Archival documents encompass; Organization theory conform to IWRM, Foreign aid policies, Bolivian economy, history and legislation, census data and other cases studies of significance for peri-urban water management in Cochabamba.

The archival records will, as oppose to the semi structured interviews, not serve as secondary evidence, only cases where specific time references are missing, which will be notified. The archival records will however be applied as extern validation of the study. One potential weakness with semi structured interview is the risk of having biased outcomes due to poorly formulated questions or abduction (Yin, 2009). The tactic of archival records can also lack accessibility to information due to privacy reasons (ibid)

4.4 Analysis methods

In this subchapter, the methodologies according to which the case study's results are presented and analysed are described.

4.4.1.1 Process tracking

The methodology applied in the case study analysis to understand the dynamic role of NGOs at institutional and organizational level. Process tracking is used in the case analysis to study the causes of effects, rather than the effects of causes (Esaiasson, et al., 2012, pp. 193-194). In this context, it will be essential to identify eventual correlating views between the three key informants groups on the performance of the NGOs in terms of;

- Transitions in relationships with public/private sector and community organizations
- Transitions in interventions
- Challenges and opportunities to intervene in the future

4.4.1.2 Comparison of Community Participation

Comparisons of NGOs within specific categories of water and sanitary management are covered in the case study and are compared in terms of their approach to community participation. This is done to understand how different objectives of water and sanitary management are reflected in NGOs ability to intervene and relate to; the parental organization of a community, clients or members, of a community. The information is based on key informants of studied NGOs. The evaluation follows the logic of Wilson & Wilde's framework; *Benchmarks for community participation* (2003) categorize and analyze public participation within communities. Community participation is in this context associated with NGOs ability to address; *influence, capacity, inclusivity and communication* based on the principles and objectives that the organizations are representing. The concept from Arnstein's ladder of participation is also used to supplement Wilson and Wilde's framework to assess the degree of participation for individual, ranging from manipulation to delegated power. The participatory governance on behalf of the NGOs is qualitatively analysed and compared according to theories of common pool resource management, to identify barriers according to NGO agendas and potential solutions for the future.

4.5 Limitations

The stakeholder chain studied in this case study (see figure 7, p.28), is merely covering NGOs, public institutions and community organizations working in Cochabamba. Some attention is given to waves in water governance in Bolivia since the 1980s and the major foreign donors that are active in the support of Bolivian water and sanitary projects. Specific attention is given to

Sweden's role as a foreign donor for environmental projects on behalf of Swedish Government and the Swedish International Development Agency, since they are supporters of the very research project that this case study is a part of. The study focuses on key processes in the development of water resource management and the behaviour of different actors to highlight the context in which NGOs act and how it is impacting them relation wise. Due to limited time to carry out the field study (2 months) and some language barriers, the collected data is marginal to conclude *evidential* solutions, but helps to identify important observations on the transitions in the stakeholder dynamics between NGOs and other local organisations in addressing the peri-urban water and sanitary management of Cochabamba. Due to limited pre-existing research done on the sample set of NGOs, some sources produced in recent years are applied frequently in order to validate, give background to results and to further analyze the results.

Interviews carried out with two of the NGOs; AguaTuya and Water for People, were due to the circumstances of limited time and stress, not successfully carried out in terms of having reference in time, thus have been supplemented with information from archival records.

During four interview occasions with external actors, I realized I had posed a question that was directed, thus could produce biased results. The question follows;

How has the role of the NGOs changed taking into account changing discourses at national and international level?

This question and its corresponding answers have been removed from the sampling result of the thesis. To enhance the reliability, questions and responses that followed this question in two of the interviewing occasions (Roberto Prada and Rocio Bustamente), were removed from the sampling set of results. In the interviewed cases with (1) Gonzalo Vargas and (2) Carlos Crespo, I included two questions that followed the above mentioned question, however they are not thought of having manipulated the answers.

According to organization theory, factors such as group size, level of dependence between actors and educational level are significant factors that characterize stable CPR-organizations, which in this case study unfortunately are not analysed to depth due to lack of sample data and the labour intensive work it would have implicated.

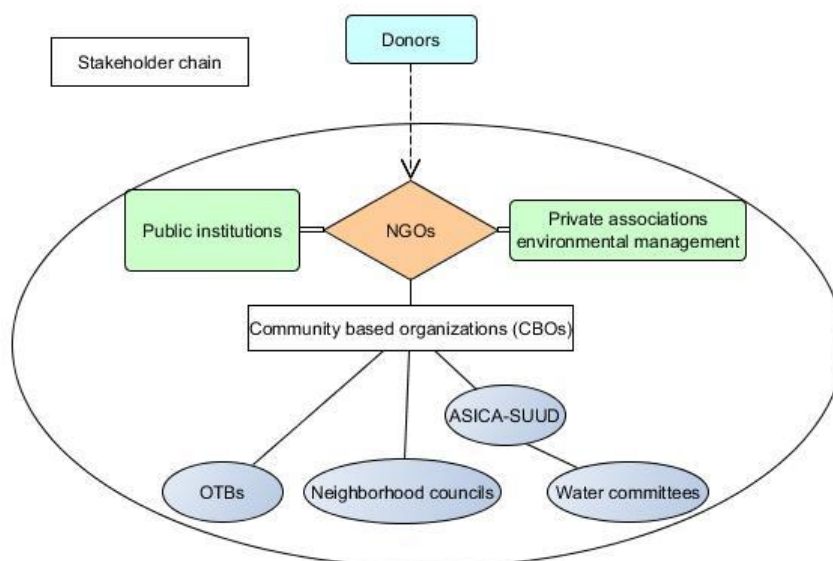


Figure 7-Stakeholder chain of the study

4.5.1 Explanation building

Hereby, the working process is accounted to describe initial propositions and revisions in compliance with the iteration steps of explanation building.

4.5.2 The initial proposition

Archival studies were performed from September 2013 to November 2013 to understand foreign aid policies, modern Bolivian and Latin American history and politics, census data and national water program. Organization theory, theoretical frameworks, manuals were studied to grasp concepts of capacity building, public participation, equity management and public/private relationships. This served as a base for the questionnaires and research questions. Four NGOs had responded positively to be included, and these were studied. In this initial phase, key informant group 1; Public sector was not included. The initial aim was to find correlating responses on specific NGOs performances based on beneficiary-and NGO perspectives.

4.5.3 Comparing the findings of the initial proposition against a statement or case

At arrival in Bolivia, I increasingly realized that the initial approach would be difficult to grasp in the short time frame I was planning to stay. Through consultancy with my supervisor, there was an agreement to change the approach to include other perspectives on the NGOs role as a water actor in Cochabamba, by interviewing several public institutions, professionals and private non-profit associations that work with different aspects of interventions and research related to water management, knowledge building, social development and environmental management in Cochabamba. This was done to understand the cross-institutional role of NGOs and their impact as actors in water and sanitary management and how it has altered over time. 11 interviews with this key group were carried out and made used for in the study. These were supplemented with another four interviews carried out in 2012 and the spring of 2014 by my supervisor Ida Hellegren and friend Carl Södersten.

4.5.4 Revising the statement or proposition

In the processing of collected data, I decided upon choosing the methodology of process tracking to study the dynamic role of NGOs as water actors in relation to certain historical and institutional events of importance that are thought to have influenced their course of programming and cross-sectorial relationships. Another dimension was to apply this methodology to the sample set of NGOs studied in the project to assess if there is a correlation between their roles and the more generic view that the public/private key informants expressed. During this stage it came to my knowledge that the third key informant group; a sample of the community organizations and community members I had interviewed in Cochabamba could only serve to give some perspectives on the work that some of the NGOs had done, but not as secondary evidence. The chapter 7.3 describe some associations that have worked with some of the NGOs of which I found the information to be relevant to include, given that they were be subjected to various contextual factors that can put pressure on small-scale water and sanitary system in an arbitrary per-urban area such as; migration, geography, institutional capacity, water scarcity etc.

4.5.5 Compare other details of the case against the final revision

My findings are, due to the short amount of time spent in Cochabamba, quite generic but resulted in identification of some correlated processes and events between different key informant groups. The methodology of process tracking is reported to be a bit controversial, thus can't be used to confirm *proof*. There is however validity in my observations; internally correlated events give some causality to the results. Several of my results have high validity by confirmation from theory on CPR-theory as well as from several external case studies on peri-

urban water management in Cochabamba done in recent years. It is however suggested that the results should be regarded as generic processes in the behaviour of stakeholders and development of the water sector, that have emerged from *interrelated causes*, thus effects and processes shall not be regarded as *isolated formative events*.

4.5.6 Abduction

Some words frequently used in the literature and among the key informants and in the popular discourse, has been scrutinized and treated with some scepticism.

Need and *demand* were two words that key informants used to address certain stakeholders, as well as *poverty*. These words reflect a power relation and perceptions of some beneficiaries belonging to a certain income level or social status. The stakeholders with lack of access to water and sanitation could be attributed to be in *need* or being *vulnerable*, meanwhile stakeholders with some sort of social and economic assets are referred to having a *demand for services*.

Neo-liberalism is also a concept that is frequently used in some archival records to describe the economic restructuring process in Latin America after the 1980s in that can be analysed with some scepticism.

When approaching the qualitative research methodology, since it was new to me, I might have formulated interview questions in a manner that already confirmed some presumptions, or that were poorly formulated due to language barriers. Overall, the archival sources for this study are perceived as relevant and genuine in presenting the water and sanitary solutions of Cochabamba. Multiple sources were used with similar reviews of historic and political processes, which creates reliability for the background of the study and the external validation.

5 Theoretical framework

In this chapter, definitions and descriptions on the theories and notions of importance to this case study are presented.

5.1 Capacity development

According to OECD, capacity building reflects a process where an institution, organization or an individual can unleash, strengthen, create, adapt and maintain knowledge, information and changed attitudes over time (Sustainable Sanitation Alliance , 2012). This means that;

- Individuals have personal abilities, attributes or competencies that contribute to the performance of an organization.
- Organizations or broader entities have capabilities to do something that builds up institutional capacity
- Organizations and entities try to connect competencies and capabilities into a comprehensive combination of system that allows them to perform (ibid)

5.2 Public participation

Public participation is based on the presumptions that those who are affected by a decision are entitled to be involved in decision-making process (André & Enserink, 2006). Public participation is the process by which an organization consults with stakeholders, i.e. interested-or affected individuals, organizations and government entities before making a decision. Public participation is, by principle promoting *two-way communication* and *collaborative* problem solving with the goal of achieving better and more acceptable decisions (ibid).

5.3 Integrated Water Resource Management

The notion of Integrated Water Resource Management (IWRM) refers to a systematic process for sustainable process, allocation and monitoring of water resources (UNDP, 2006, p. 9). The concept and its inherent principles were formulated at the International Conference on Water and Environment held in Dublin in 1992. IWRM addresses a cross-sectorial and multidisciplinary view of water management with regards to the competitive demands for freshwater supplies globally. The approach attempts to endorse coordinated development of water, land and related resources in order to maximize economic as well as social welfare of mankind without putting environmental systems at risk. To approach IWRM, policy makers, analysts, international organizations and governments have defined principles to set guidelines of priorities and initiatives. The key principles are defined as follows:

- “Water should be treated as an economic, social, and environmental good.
- • Water policies should focus on the management of water as a whole and not just on the provision of water.
- • Governments should facilitate and enable the sustainable development of water resources by the provision of integrated water policies and regulatory frameworks.
- • Water resources should be managed at the lowest appropriate level.
- • Women should be recognized as central to the provision, management and safeguarding of water “ (UNDP, 2006)

The application of IWRM as a philosophy, policy, and implementation guideline can assist to address:

- *“Need for improved water governance and for increased coordination among various water sectors, such as drinking water supply and sanitation, irrigation, and ecosystem maintenance.*
- *Potential competition and conflicts among different stakeholders from all sectors and among individuals, communities, and governments.*
- *Environmental degradation that is threatening all life on the planet.*
- *Gender and social inequalities in terms of equitable access to and control over resources, benefits, costs, and decision making between women and men.*
- *Need for sustainable water resources development as a key to poverty eradication”* (UNDP, 2006, p. 9)

5.4 Commons and common pool resources (CPRs)

The commons is a notion that reflects shared resources in a context where each stakeholder has equal interests (Ostrom, 1990). The term common pool resources is associated with natural- or human-made resources where the individual can use/ claim the use from another individual, and where it is necessary, but difficult and costly, to create exclusive conditions for the use and appropriation of the resource. Any group of individuals attempting to manage a common resource for optimal use must solve a set of problems to create stable institutions for collective action. People are trapped by the *Prisoner’s Dilemma*, i.e. become subjected to over-depletion, scarcity, conflicts, price-volatility etc., if they become *prisoners* to strategies that lock them into behaviours with sub-optimal outcomes (ibid).

5.4.1 Tragedy of the commons

The tragedy of commons is a dilemma first introduced in 1968 to describe when multiple users driven by self-interest will ultimately deplete a common resource (Hardin, 2008)

“Therein is the tragedy. Each man is locked into a system that compels him to increase his herd without limit - in a world that is limited. Ruin is the destination toward which all men rush, each pursuing his own interest in a society that believes in the freedom of the commons (Young, 2014)

Given that actors involved in water management system have well defined preferences towards the acquirement of a resource, the actors are assumed to be driven by *self-interest* in its action towards other actors (Lundqvist, 2004, pp. 22-23). If this notion prevails, the actors are assumed to have unlimited ability to gain knowledge for processing and reformation to action strategies that can maximize the utility of their self-interest. If there are well defined regulations and institutions with mechanisms to exchange information, it can improve the ability to anticipate the actions of involved actors (ibid).

According to the scholar Elinor Ostrom, the likelihood for actors to rationally action for the appropriation of a resource is dependent on following factors;

- The degree of acquirement and level of dependence on the common resource among stakeholders
- Occurrence of mutual dependencies between stakeholders that makes self-interest a fruitless behaviour
- Low number of actors acquiring a mutual resource
- Low transaction costs in decision making processes
- Level of knowledge among stakeholders (Ostrom, 2009, pp. 9-10)

5.4.2 Formative moments

From theoretical perspective of historical institutionalism, interest conflicts are not viewed as sources of conflicts over resources, per se, but as processes from which they can emerge (Lundqvist, 2004, p. 29).

The methodology of process tracking seeks to trace the causes of certain effects, to events that put actors and institutions on a certain path of development (Esaiasson, et al., 2012). This theory is presuming that institutional frames govern individuals towards an appropriate behaviour that is related to dynamic interactions between technical, cultural, economic development in a society and its comprehensive order of institutions (ibid).

5.4.3 The institutional right to water

To specify institutional policies, procedures and organizational arrangements that effect the performance of actors and stakeholders involved in the management of water resources, the notion of order, can be used (Lundqvist, 2004, p. 30). These orders can ascribe certain obligations from actors, their rights and roles in relation to each other and to the object of which stakeholders subject their interests. Specific resource regimes are generally either constituting institutional regimes or constituted partially by institutional regimes. The order of water resource used in a catchment area is thus a part of the cohesion between societal institutions that regulate environmental and resource policies and its sectorial and functional administrative units. The institutional core is comprised by beneficiaries and stakeholders possibilities to appropriate a resource. The most important rights are related to;

- Property right
- Usufruct

The aspects of property right are further comprised by specific entities as follows;

- Protection of tenancy; security measure towards repealing the property of the owner. Through legislation on expropriation of resources, this law can be surpassed
- Disposition of freedom; The ability of selling or assigning whole entities or parts of a property
- Right of use; the right to use parts or the whole entity of commons. The right of use can either be categorized into collectives and private rights, depending on the degree of appropriation of the common. What categorizes the collective right to use is the disability to exclude any stakeholder to acquire use of the common.

Property right and usufruct together constitute a fundamental part of the institutional order of resource utilization. They address how stakeholders, institutionally, are entitled to gain access to a resource and their degree of freedom to appropriate it (ibid).

5.4.4 Institutional regulation policies

The administrative set of rules and norms that are targeted for the qualities and quantities of a resource can effect and set conditions of utility in terms of scope, direction and intensity (Lundqvist, 2004, p. 33). Conflicts can emerge as a result of an institutional regime that is *afflicted* (Ostrom, 1990).

Water resources can thus be divided in *resource oriented* versus *utility oriented* norms and policies (Lundqvist, 2004, p. 32). *Resource oriented* rules are comprised by rules that regulate acceptable limits for objectively controllable environmental conditions, such as highest acceptable emissions of chemicals. *Utility oriented* rules address the owners and stakeholders

possibilities to appropriate resources. These rules can be set to regulate the disposition of freedom to engage water by stakeholders, to prevent overharvesting, pollution and conflicts. Stakeholders engaged in agriculture and, industry etc. that are not directly working in contact with water, can nevertheless affect the quality and quantity of resources by means of their activities, thus can be limited in their disposition of freedom(ibid).

5.4.4.1 *User agreements and stable CPR institutions*

The actors that are directly concerned by conflicts emerging from resource interests need to initiate and drive through negotiations to enable consensus on principal agreements (Lundqvist, 2004, pp. 63-64) A functioning regulatory system prerequisite that several conditions should be fulfilled to generate solutions distributes higher wealth to all included parties, that, according to Ostrom's principles follows;

- Mutual surveillance of involved actors
- Trustworthy commitment among participants and collective agreements
- Higher tier governing bodies that serve to recognize and distribute action space to collectively Community based organizations(ibid)
- Other design principles that characterize stable CPR-institutions are;
- Clearly defined boundaries for resource appropriation and utility
- Sanctioning mechanisms
- Congruence between local conditions and normative legislation
- A legislative framework that seek to collect all laws for appropriation, distribution, surveillance and practice of rules
- System of collective choices to adjust rules (Ostrom, 2009, p. 139)

5.4.4.2 *Conflict management*

In this subchapter, different conflict management resolutions are defined.

5.4.4.2.1 External solutions

The political power can address conflicts from two positions, one of which is Elinor Ostrom's eight design principle; *organized activities for the use of resources from local eco-systems that are associated with a hierarchy of different entities, comprehending several levels that include possibilities to govern over lower levels* (Lundqvist, 2004, pp. 39-40). The second position is associated with the notion of a regime; a fully equipped water regime that subdivides laws and regulations in a framework comprised by following constituents;

- Procedures for solving specific resource conflicts
- Enabling conditions for public participation
- Principles for balancing between interest's claims
- Conditions and frames to regulate the actual use of resources
- Sanctions against the actors that do not follow the regulatory system

The first two points reflect how the state should set up rules for conflict mediation, meanwhile staying neutral to the content of the solutions. The following points impacts the content of the solutions by virtue of permitting, forbidding and make conditions for activities where resources are used. The common attribute among all external solutions is that an actor from outside is making decisions that links the interests of different claims for a common resource through, principally, three different methods;

- Binding solutions through a third party agreement
- Administrative/juridical decisions based on law and regulations that through authorization/permissions, prohibition and conditions design the resource use
- Court rulings of similar content

External solutions are proposed for situations that include a large number of interests and that implicate, geographically, large amount of resource-oriented conflicts. Formal rules and criteria's for the position of different actors are important, to delineate the relationship between different actors (ibid).

5.4.4.2.2 Mediation

In recent decades, solutions have emerged where participation is assessed as a volunteering mechanism to address conflicts through different forms of negotiation processes (Lundqvist, 2004, p. 42). The procedures are not legally binding and participants can set up rules. The alternative models are used to determine disputes between parties through neutral external individuals or groups of individuals. Participation, in this context, refers to:

- Volunteerism
- Equitable stalemating
- Informal procedures i.e. rules are non-normative and processed together with involved actors
- The involved parts name a third party member that shall identify but not dictate solutions
- Compromising solutions through consent building

Mediation can be beneficial for all parties in terms of ability to control and adjust processes. Compromises can implicitly facilitate win-win situations. However, this kind of management solution requires that the parties have control over their members so that they're able to mobilize them into the advised solutions, and at times processes are not predictable. The power and resource distribution between all involved parties can also hamper negotiations, since it implicates that different actors have different starting positions(ibid).

5.4.4.2.3 Internal solutions

Internal regulations refer to actors with direct acquirement of a collective resource, without interference from others, should manage agreements on rights and obligations on resource distribution (Lundqvist, 2004, p. 42). This requires that the involved actors have guaranteed space for self-regulation of disagreements. The path towards a solution is not norm-binding but informal rules and criteria's for negotiations are formulated under process. This solution is appropriate in cases where there are few interests involved. Internal solutions can benefit from producing quick solutions to disagreements and the solutions that have been negotiated by concerned parties are more likely to be implemented than other management solutions. However, in situations where the resource distribution concerns a large number of interests over a big catchment area, internal solutions can be difficult to implement, since it poses challenges to operate efficient monitoring and surveillance, meanwhile it requires a high level of knowledge capacity on behalf of concerned parties (ibid).

5.4.5 Models of collaboration in local water management

A specific group of stakeholders and collaborative actors with similar acquirements for a resource can comprise a specific model of collaboration (Lundqvist, 2004, p. 62). In a context of private collaboration within a specific market where the actors have same acquirements for a

resource, a “one size fits all”-agreement can be applied. Other forms of collaborative models can comprise interest groups with various different acquirements. In a private collaboration model, actors can take the initiative to make agreements on how to appropriate a common resource. These two examples comprise so called *internally* regulated collaborative models. In cases where there are dis- agreements between beneficiaries and authorities a third party can interact with the support from public authorities. The *third party involvement* implicates an *external legitimization* of the collaboration model (ibid).

5.4.5.1 Partnerships

Partnerships between coordinate private actors and responsive public bodies relates to agreements between the management and use of a water resource (Lundqvist, 2004, p. 62). It can be based on legally binding public norms or be a result of private law principles (ibid).

5.4.5.2 Participatory governance; aim of participation and degree of self-control

When studying public participation according to certain indicators, it is important to understand its underlying objectives and potential effects of certain strategies (Jonsson, 2004, p. 87). Participation can, for instance, be valued based on the degree of participation on behalf of users, according to Sherry Arnstein’s ladder of participation, where the influence of marginalized citizen’s discretion to make impact on political decision-making processes can range from manipulation (low) to self -control (high) depending on the stakeholders objectives and the effects of the methodologies (ibid).

If participation, per se, is treated as *purpose of its own*, all citizen’s with direct connection to a resource need to be included in decision making processes (Lundqvist, 2004, s. 80-82). If public participation is practiced *as a tool* to accomplish a certain agenda, it principally functions to;

- Educate and improve knowledge
- Incorporate values in decision making processes
- Having the purpose of creating efficient decision making processes
- Reduce conflicts
- Legitimize existing networks/ associations and group of individuals and reduce tensions through mutual planning and design of agendas and decisions (ibid)

5.4.6 Community participation in local water management

Wilson and Wilde’s research to find the benchmarks for community participation has been described as “*A recognition of the heterogeneity and elaborate nature of communities and the need for qualitative analysis that measures progress from diverse perspectives*” (CAG Consultants, 2014).

The framework can be used to appraise the degree of community participation in the projects/programming of an organization. The four themes accounted for are further subdivided in to 12 benchmarks enlisted on p.37;

Influence

1. The community is recognized and valued as equal partner at all stages of a process
2. There is a meaningful community representation on all decision making bodies
3. All members have the opportunity to participate
4. Communities have access to and control over resources
5. Evaluation of regeneration partnerships incorporates a community agenda

Inclusivity

1. The diversity of the communities and interests is reflected at all levels of the regeneration process
2. Equal opportunities policies are in place and implemented
3. Unpaid workers/volunteer activists are valued

Communication

1. A two-way information strategy is developed and implemented
2. Program and project procedures are clear and accessible

Capacity

1. Communities are resourced to participate
2. Understanding, knowledge and skills are developed to support partnership working

Table 2 Wilson & Wilde's framework

6 Stakeholders of importance to the study

Some important public institutions, donors and community based organization forms are presented in this chapter to clarify the content of the results in chapter 8.

6.1 New Public institutions

Some of the public institutions installed after the MAS-government came to power, that are of importance to the study, are presented below

6.1.1 Ministry of water and environment

In 2006, the Ministry of Water (MMAYA) was the first water institution of its kind in Latin America to be inaugurated as an incentive to demonstrate the end of neoliberal water governance in Bolivia (Spronk, 2013). It was one of the first reforms taken by the MAS administration in order to centralize the shattered water sector in Bolivia upon demands of the social movements requesting for a public institution that would exclusively address issues related to Bolivian water management (Walnycki, 2013, p. 131). A regulatory agency under the Ministry of Environment, AAPS, came into realization in 2009 with the purpose of monitoring, controlling and supervising activities that align with the drinking water law 2066 and irrigation law 2878. MMAYA is reported to have gone through protracted projects, five different ministers and acting ministers. Reorganizations have also implicated that the irrigation sector is regulated under the Ministry of the Environment as well as the as the Ministry of Rural Development (Spronk, 2013)

6.1.2 Senasba

Senasba (National Service for Sustainable Water and Sanitation Services) was established in 2008 as a decentralized public entity of MMAYA with the purpose of supporting the development of sustainable water provision across Bolivia (Walnycki, 2013, p. 126). It replaces the former agency AAPS with the objective of building sustainable water providers and providing efficient services of good quality and quantity. Operators from small rural and peri-urban scale are included, as well as municipal utility companies such as SEMAPA (ibid).

6.1.3 SENARI

The National irrigation Service (SENARI) is a unit of the Ministry of Water and Environment, which includes the National School for Irrigation with offices in seven departments (GIZ - Deutsche Gesellschaft für Internationale, 2014). SENARI's aim is to develop irrigation in Bolivia together with irrigation farmers considering their costumes and rights. The advisory assistance aims at contributing to strengthen SENARI's role as a training centre for farmers and technical staff in efficient water use. SENARI and the School for Irrigation realize training courses in various departments for farmers and technical staff. The German Development Bank (GIZ) is one of the main funders of services provided by SENARI (ibid).

6.2 Swedish government and the Swedish international development agency (SIDA)

Since the 1990's, Sweden has aimed at extensive and long-stay development collaborations with Bolivia, with the major target of promoting a healthy environment for its citizens, democratic participation and improvements for human rights (Utrikesdepartementet, 2014)

For the period in between 2010-2014, the foreign policy department addressed; *improved water resource management, basic sanitation and enhanced access to clean water*, as means to obtain the overall goal of Swedish aid targeted for development collaborations associated with environmental and climate care (Regeringskansliet, 2010, pp. 12-13)

This goal encompasses four targets for aid distribution:

- Improved environment
- Sustainable use of natural resources
- Enhanced resistance to environmental and climate change in developing countries
- Reduced negative impact on the climate

In between 2009-2013, an amount of 180 MSEK was targeted for development assistance in collaborative projects in Bolivia (Utrikesdepartementet, 2014). Accordingly, the Swedish Government has been a prominent donor in the area of water resource management (ibid).

In the budget proposition of 2013 on foreign aid expenses, the government called for enhanced focus on the Millennium Development Goal 7 that addresses environmentally sustainable development, by virtue of supporting water and sanitary interventions (Regeringskansliet, 2013). In the year of 2007, the Swedish government decided upon strategy controlling the bilateral aid, by reducing its targets from 67 to 33 countries with the purpose of enhancing effectiveness of donor allocations. This strategy results in country-targeted aid allocation policy. In the case of the Latin American Region, the aid budget has been appropriated for mainly three countries; Bolivia, Colombia and Guatemala. In the governmental budget proposition for year 2014, bilateral aid targeted was projected to be reduced (ibid).

6.3 Peri-urban community organizations

The community based drinking water organizations are results of the community driven development of the southern districts of Cochabamba demanding for drinking water where the state, SEMAPA and NGO and church initiatives have failed (Walnycki, 2013, p. 156). These organizations are predominant in the districts 5, 6, 7, 8, 9 and 14. Most drinking water communities have appeared in the aftermath of the second wave of migration into the southern district during the 1990's. Migration has more recently continued into district 9. In 2007 approximately 150 of the most formal organisations; OTBs and Neighbourhood Councils, were reported to be registered in the peri-urban areas (Dúran, 2007, p. 111)

6.3.1 OTB

Organizaciones Territoriales de Base, or Grassroots Territorial Organisations were formalized after the implementation of the Law of Public Participation (LPP) from 1994 which consolidated the formation of 314 municipalities in the country and transference of 20 % of its tax revenues to them (Castellanos & Salvatierra, 2010, p. 343). The OTBs can get access to funds to exercise development projects, and are recognized by the state as legal entities in charge of control and mobilization of community through participatory labour (ibid).

6.3.2 Water committees

The water committees are community owned organizations that to a large extent exist in peri-urban areas of Cochabamba. They occur where there is a public demand for implementing small-scaled infrastructure (Marston, 2014). Many of the members practice knowledge's deriving from mining, peasant and- indigenous union traditions that have also been under the influence of church based and non-profit organizations. According to Walnycki (2013), 50 % of the water in the southern districts is distributed by water committees to commute sources of water that arose prior to the private concessions of water. The committees have increased in number in the aftermath of the water war (Walnycki, 2013, p. 156).

6.3.3 ASICASUDD-EPSAS

The umbrella organization ASICASUDD-EPSAS was formed in 2004 in Cochabamba as an alliance between different drinking water committees to facilitate coordination with the directory board of SEMAPA that was facing difficulties in organizing the scattered water committees (Marston, 2014). A water plan was developed for the southern district where the purpose of ASICASUDD was to act as interlocutor for the public authorities to ensure water supply to the southern districts, and to guarantee social representation in SEMAPA (Minelli, 2012). However, it is argued that the inefficiency with which SEMAPA's planned expansion of the water network was prompted ASICASUDD focus more on water committees and beginning its own expansion projects in the southern districts ASICASUDD-EPSAS have received funding from the state government and international donor agencies, such as Italian CeVi. They are accordingly advocating for co-management solutions (ibid).

ASICASUDD-EPSAS is reported to now have a closer relationship with SEMAPA by negotiations on buying water in bulks from SEMAPA, redistributed to drinking water committees in the peri-urban areas, this model is called *co-management or co-gestion* (Walnycki, 2013, p. 135).

According to Walnycki (2013), ASICASUDD-EPSAS is a social organization and not a movement with the purpose of promoting communitarian water management inspired by mutual help principles of social movements (Walnycki, 2013, p. 168). The author further argues that in

relation to some other well established movements, the organization is not politically affiliated with the MAS-government (ibid).

ASICA SUUD support water committee members in four areas:

- In the political-organizational area that aims to strengthen community based water systems in their organizational skills; the technical-administrative area to solve specific problems that hinder the operation of the associated committees
- The legal area and the area of project management that includes research on funding from public and private sources, to develop new interventions in the southern areas of Cochabamba (CeVI Centro di Volontariato Internazionale, 2014).

The association is engaged in the coordination with other civic institutions to generate new proposals in solving the water problem in the city, as well as in the coordination of national actions to address problems of water legislation and policies. The decisions taken by the assembly are made by the board of directors that consists of the president of ASICA SUUD and one representative from each of the four districts 7, 8, 9 and 14 (CeVI Centro di Volontariato Internazionale, 2014).

6.3.4 Neighborhood councils/General assemblies

The general assemblies are weekly community meetings about local projects where all members of the community need to participate or pay fines if they do not attend an assembly. Members of water committees have the duty to contribute water payments and collective work as well as to participate in political and administrative activities (Minelli, 2012, p. 66). Members of the committees are reported to have the duty to contribute water payments and collective work as well as to join in political and administrative activities (ibid).

7 Key Informants of the study

In this chapter several key actors in the public/private sector of water and sanitary management of Cochabamba are presented. The key informants were chosen to get a deeper understanding of the relation between NGO, public authorities and impact of NGOs on stakeholder relations and the water and sanitary sector as such. The actors comprised in the study follows;

7.1 Key informant group 1; Public/private actors

The key informants of this chapter were representatives of public and private institutions, foundations or resource institutions with direct and indirect connection to water resource and sanitary management in Cochabamba, interviewed in February-March 2014.

7.1.1 Ciudadania

The private association of Ciudadania (Citizenship, Community and Social Studies and Public Action) was formed in 2004 in Cochabamba, Bolivia (Ciudadanía, 2014). It is a non-profit organization dedicated to the production of socially relevant, knowledge-, dialogue- and public actions to facilitate promote and make impact on social processes. Their objective is to address life quality improvement for various sectors that benefit socio-economic excluded groups through the exercise of citizenship. The association was formed as an initiative of a group of academic professionals with recognized experience in cross-institutional programs at regional and municipal level. Ciudadania has intervened in various development projects and in the monitoring of strategic and sectorial development processes (ibid).

Ciudadania was in between 2009-2011 collaborating with the NGOs; Habitat for Humanity and Fundación Pro-Hábitat to improve property tenure in District 9 according to two models; collective ownership and sanitation³. According to Vargas, the initiative was taken with the objective to make policy impact for facilitated regulations on sanitation.

7.1.1.1 Gonzalo Vargas

Gonzalo Vargas is, since 2004, the director of Ciudadania. Vargas is an economist with a record of performing consultancy on proposals for decentralization and autonomy for the constituent assembly (Ciudadanía, 2014). He has also experience in the research on regional analysis of development in Bolivia (1979-2009) on behalf of UNDP. Vargas was briefly involved in the irrigation sector through research and support of national plans in between 1996-1997 and 2008-2009⁴.

7.1.2 CEDIB (The Centre for Information and Documentation in Bolivia)

CEDIB is a non-profit organization with a record of documenting Bolivian news and social research for 40 years (CEDIB, 2014). The preserve more than 7 million documents covering 500 different topics. As an institution CEDIB also carries out investigations and publications on social research. CEDIB has a filial in Villa Pagador of district 14, where it has a record of information spread- and investigations on access to basic services⁵.

7.1.2.1 Escarley Torrico

Escarley Torrico is a Sociologist with a record of working on behalf of CEDIB in the southern districts of Cochabamba⁶. She is the author of several publications on various sectors of social research related to citizen rights and access to basic services. Torrico has worked, indirectly,

³ Gonzalo Vargas[20140320]

⁴ Gonzalo Vargas[20140320]

⁵ Escarley Torrico[20140222]

⁶ Escarley Torrico[20140222]

with water issues through knowledge spread on public investments for basic services for water committees in the peri-urban district 14 ¹⁴.

7.1.3 Swisscontact

Swisscontact is a Swiss-funded foundation working in Cochabamba since 30 years to perform training on economic development, environmental and cooperative service management for municipal institutions⁷. The foundation mainly has two lines of actions in Bolivia; to promote market solutions for community development and environmental management. Swisscontact is currently working with three different project areas;

- Economic activities to promote energy efficiency through improved technology in the neighbourhood of *Sipe Sipe*
- Promotions to monitor air quality in the transport sector and in smaller municipalities of Cochabamba
- Community projects aimed at strengthening environmental management through cross-institutional collaboration. Environmental programs are developed at district level to be capitalized and incorporated in the development of municipal strategies.

In the matter of water and sanitation, the foundation has a record of working in strategic alliances with NGOs. They've made interventions to improve water quality in the neighborhood of *Ayacucho* together with the NGO; Water for people, to address solid waste reduction. Swisscontact has also collaborated with NGO Aguatuya on sanitary topics and environmental sustainability. The foundation is currently in the process of implementing strategies for water reuse and remediation from laundries in district 5 in coordination with the public water company SEMAPA. Swisscontact also has a record of making a diagnosis together on the decentralized waste water treatment plant of San Lomas de Pagador in district 14 together with UN-Habitat and Aguatuya⁸.

7.1.3.1 Carola Ortuño

Carola Ortuno is a project consultant at Swisscontact since the year of 1995⁹. She has a professional experience in urban community based- and public environmental management.

7.1.4 The Regional Department of Basic Services of Cochabamba

The Regional department of basic services of Cochabamba work together with the municipalities in the department of Cochabamba to support, monitor and allocate resources for improved access to water and sanitation¹⁰. The unit is dedicated to support the Regional central Government in working according to the Municipal plan to establish agreements between the 7 municipalities on water distribution from the Misicuni Multiple project. In 2012 the unit was mapping all community based operators in the peri-urban districts for the opening of the Misicuni project¹¹.

7.1.4.1 Ramiro Rios

Ramiro Rios is the head of the Department for Basic Services of the Regional Government of Cochabamba.

⁷ Carola Ortuno[20140306]

⁸ Carola Ortuno[20140305]

⁹ Carola Ortuno[20140306]

¹⁰ Ramiro Rios [20140322]

¹¹ Ramiro Rios [20140322]

7.1.5 The faculty of Agricultural, Forestry and animal sciences (Centro de agua) – U.M.S.S

The Faculty of Agricultural, Forestry and Animal sciences was formed in 1861. It was recognized as an agronomic institution in 1911 and reorganized to become an entity of the University of San Simon in 1931 (Universidad Mayor de San Simón, 2014). The Faculty addresses research on environmental protection in the light of socioeconomic changes, intercultural-, transcultural patterns and climate change. Research is carried out with the objective of supplying with prepositional actions related to poverty reduction, sustainable environmental development, biodiversity conservation, ecological production, food security-and sovereignty (ibid).

7.1.5.1 Rocio Bustamante

Rocio Bustamante is an assistant professor at the Centro de agua; the Andean center for water use and management at the faculty of Agricultural, Forestry and Animal sciences of San Simon University in Cochabamba since 1998 (Mary Ann Liebert, Inc. Publishers, 2012) . She has a record of recognized research on institutional water reforms, water rights, participatory processes and social organizations in the water sector of Bolivia (ibid).

7.1.5.2 Alfredo Duran

Alfredo Duran is the coordinator of Centro de agua-U.M.S.S since 1999¹². Duran has a record of performing research in the irrigation sector. Since the year of 2000 the department is increasingly addressing research on integrated water resource management, thus increasingly addressing water treatment, drinking water, water reuse. In line with the municipal plan of 2013, research is currently focused on municipal domestic water consumption.

7.1.6 Centre for superior studies – (CESU) U.M.S.S

The Center for superior studies of the University of San Simon (*Centro de Estudios Superiores Universitarios*) in Cochabamba is an interdisciplinary research centre where investigation on Sustainable development, Economics, Environment, Urban Planning and Political Science is conducted (Municipal Services Project, 2014). The faculty was formed in 1992 by the chancellor of the university (York St John University, 2014). The research carried is related to the regional debates in Cochabamba such as public policies for water rights, social movements, and the development of the water sector since the water war¹³.

7.1.6.1 Carlos Crespo

Carlos Crespo is a sociologist working with investigation at CESU-U.M.S.S on water-and environmental issues since the year of 1999¹⁴. He has a record of investigating human access to water related to poverty, ethnicity and demography.

7.1.7 Center of water and environment (CASA)-U.M.S.S

The Centre of Water and Environmental Studies of San Simon in Cochabamba has addressed the matter of research during 30 years, mainly on water quality related problems¹⁵. Over the years, investigation has gradually expanded its scope to include integrated aspects of water resource and- systems management. CASA performs academic investigations and technical capacitation of public, private institutions and citizens in water- and advisory services (CeVi(2), 2010). CASA has, in collaboration with ASICA-SUUD, Agua Sustentable, CeVi and Fundacion

¹² Alfredo Duran[20140317]

¹³ Carlos Crespo[20140318]

¹⁴ Carlos Crespo [20140318]

¹⁵ Ana Maria Romero [20140207]

abril, intervened in the training of decentralized community based associations in the peri-urban areas of Cochabamba on water quality monitoring (ibid).

7.1.7.1 Ana Maria Romero

Ana Maria Romero is the Director of CASA-U.M.S.S in Cochabamba since 30 years¹⁶. Her research is specialized in the areas of; water quality, hydrochemistry and water remediation.

7.1.8 Carlos Oropeza- secretary of ASICA SUUD

Carlos Oropeza is an agricultural engineer of the association ASICA-SUUD, employed at the association since 2005. He was initially working as a coordinator of different projects, such as the Yaku al sur project (2009-2012). He has also worked on emergency plans together with the public institution SENASBA to strengthen peri-urban community based water organizations¹⁷. Currently he assumes the role as secretary in the directory of ASICA-SUUD.

7.1.9 Roberto Prado –Ex Director of SEMAPA

Roberto Prado is a Water Engineer with a record of working as director in the general management of the public company SEMAPA in the 1990's before leaving the company in 94. He has professionally been working as a consultant the past 20 years¹⁸. Prado has been an active voice in the public debate on the municipal plan and SEMAPA's role in the municipal public water provision, suggesting that the municipal plan needs to be developed to comply with the national development plan for basic services as well as the policies of Ministry of Water and Environment (MMAyA) (Olivera, 2012, p. 22)

7.1.10 Elizabeth Landaeta

Elizabeth Landaeta is a Bolivian sociologist specialized in social management¹⁹. She has 20 years of working experience in the field of rural development-and social cooperation within Bolivia and in the Latin American region.

¹⁶ Ana Maria Romero [20140207]

¹⁷ Carlos Oropeza[20140320]

¹⁸ Roberto Prado[20121217] *Interview made by Ida Helgegren

¹⁹ Elizabeth Landaeta[20140325]

7.2 Key informant group 2: NGOs of the case study

In this chapter, background information about the sample of NGOs covered in the case study is presented with regards to their background in Cochabamba, objectives and key principles, lines of actions, beneficiaries and funds.

7.2.1 NGOs working with cross-institutional policy impact on water rights and strengthening of small scale providers

In this chapter the sample set of NGOs working with socio-political strengthening of community associations and cross-institutional policy impact on water rights, are presented.

7.2.1.1 Fundacion abril

Fundacion abril is a foundation that was created in 2002 in the aftermath of the Water War. The foundations mission is to;

”Collectively promote and develop participatory, democratic and alternative processes in labor claims and the management of water as a common good through actions based on the organization, management, education, research and reporting mobilized change” (Abril Fundacion, 2014)

7.2.1.1.1 Lines of action

According to Maria Flores, sociologist working for Fundacion abril, the organizations initial objective has been to socially strengthen the community based drinking water systems and their inherent different administrative, organizational and technical capacities. Fundacion abril has, accordingly, had a political objective to facilitate; legal authority, ensured social control of community based water systems and consultation with the state²⁰. Over the years the matter of water management has expanded to include waste water, irrigation and food security in semi-rural areas of Cochabamba. There has been an attempt to work with integrated processes and to elaborate normative political frameworks in issues regarding human right to irrigation and water resources. Flores argues that the foundation is reported to be very political, given that the founder, Oscar Olivera has a background in the union movements. Leadership and labour union principles have thus influenced the profile of the organization²¹.

7.2.1.1.2 Beneficiaries

The organization is currently working with 50 water committees in the peri-urban districts²². 200 members of waste water associations²³. They collaborate with public community based organizations, irrigation and water associations, farming communities. Fundacion abril is also working on food security and irrigation systems in the rural valley of Alto, Cliza in the educational unit of Arbieto municipality, including 120 school children and 5 teachers, (see figures 11 and 12 p.68)

7.2.1.2 CeVi

CeVi is an NGO founded in 1984 with the objective to work for human development, equitable international relations and sustainable global development (CeVi Centro di Volontariato Internazionale, 2014). The NGO became has been programming in Bolivia since 2004 with a series of interventions (CeVi-Centro di Volontariato Internazionale (2), 2014). CeVi is a part of

²⁰ Maria Flores[20140318]

²¹ Maria Flores[20140318]

²² Maria Flores [20140318]

²³ Maria Flores[20140318]

the international movement against privatization of water and in favour of collective resource management and support of small scale providers.

7.2.1.2.1 Lines of action

According to Stefan Argüillaco who has been working in Cochabamba on behalf of the organisation since 2014, the action plan consists of three axes that chronologically follows;

- *Training*
- *Advisory training on technical, administrative and legal references on water management issues, i.e construction of small infrastructures*
- *Working through the international platform “The Americas”, which is a network consisting of press, public sector, academia and university associations that promote exchange of horizontal solidarian knowledge between nonprofit providers from the public sector to counteract privatisation and inefficiency of public services²⁴*

Designed strategies and projects are proposed to local partner organisations and further operated with local community organizations.

7.2.1.2.2 Beneficiaries and Programming

CeVi has gathered around 50 water committees in the peri-urban districts and counseling with city government during recent year²⁵

In 2013 CeVi was taking part in three different projects. Some excerpts of the annual report are presented as follows;

- *Rewarding 10 committees with legal status and the status of operators*
- *Capacity building and technical and operational management of the water committees and the association of ASICA SUUD in the city of Cochabamba*
- *Implementation of environmental education on water for the youth in the southern districts*
- *Legal assistance to community systems to obtain legal personality and the qualification of management bodies*
- *Institutional Strengthening of ASICA SUDD*
- *Associating 5 new Committees with ASICA SUDD*
- *Implementation of training on administrative, technical and legal topics*
- *Realization of an executive project for the construction of a wastewater treatment plant for cooperatives in Arocagua Quintanilla*
- *Construction and Environmental Impact assessment of the wastewater treatment plant*
- *Activation of a system for monitoring water quality (Centro di Volontariato Internazionale, 2013)*

7.2.1.3 Agua Sustentable

Agua sustentable was formed Cochabamba in 2000, in the aftermath of the Cochabamba water war. The organization operates in various sectors of water resource management across Bolivia: food security, irrigation, integrated management of watersheds, international defence and institutional impact of the right to water (CeVI Centro di Volontariato Internazionale, 2014).

²⁴ Stefan Argüillaco [20140218]

²⁵ Stefan Argüillaco [20140218]

7.2.1.3.1 Lines of action

According to Giovanna Canedo, sociologist working on behalf of the organization, the organization is indulged in the subject of water rights related to the act 2066 of the Constitution (2009) that is applied in to the system of granting registries and licenses of records, strengthening institutions and social participation²⁶. The other fundamental part of the organization is, accordingly, the strengthening of service providers and community based water systems for sustainable provision.

7.2.1.3.2 Relationship and funding

The organization has taken part in developing and capacity building institutions such as the Ministry of Water and Environment (MMAYA) and SENASBA, developed sectorial legislation, meanwhile being linked to the social movements (Walnycki, 2013, pp. 123-124). The organization has been a driver for the development of the new institutionalism that constitutes public water distribution of Bolivia. They have received funding from foreign donors such as Oxfam and IDRC (ibid).

Agua sustentable primarily work with community systems through ASICA-SUUD and in coordination with NGOs to address water provision of community systems²⁷. The organisation is taking part in a cross-institutional network where Fundacion abril links the organisation to social movements.

7.2.1.3.3 Legislation and policy making

In the area of Law and Policy, the organization develops actions for the advancement and strengthening the rights of access and use of water resources for decision-makers (Agua Sustentable, 2014). This is achieved through construction of proposals with water organizations in particular and social organizations in general. Three strategies are highlighted as important;

- Knowledge generation
- Public proposals from civil society
- Impact on public policies.

Advocacy between public sector and community systems is promoted to develop a legal framework at national and local level for water-and environmental resource management conform to the constitution of 2009 (ibid).

7.2.1.4 Partnership CeVi, Fundacion abril, Agua sustentable

CeVi, Fundacion abril and Agua sustentable have reportedly worked in a number of occasions since 2004 of which PASAAS and Yaku al sur are described in this report.

7.2.1.4.1 PASAAS project

The PASAAS project was running in between 2008-2011 in the southern parts of Cochabamba. Fundacion abril and CeVi foundation were collaborating in the PASAAS projects, funded by the European Union. 2.12 M USD targeted for improved water supply and 1.45 million targeted for sanitation on behalf of the Swedish development agency in between 2009-2012 (Alveteg, 2013).

According to Walnycki (2013), the project had a potential to institutionalize *co-gestion* between the ASICA-SUUD-EPSAS and the state through the Ministry of Water and Environment in 2008-2010, by virtue of providing a major source of finance for 41 Drinking Water Committees

²⁶ Giovanna Canedo [20140305]

²⁷ Giovanna Canedo [20140305]

to construct tanks, upgrade and extend pipelines and install sewage systems (Walnycki, 2013, pp. 189-190). It is nevertheless reported, that since the infrastructure was put to place, many committees lack of sufficient water quality. Walnycki (2013) stresses that the municipality chose to concentrate funding for community organizations that are covered by the Law of Public Participation for some time after the departure of the late minister (ibid).

7.2.1.4.2 The Yaku al sur project

The Yaku al sur project was running between September 2009 to September 2012 in the districts 7, 8, 9 and 14 of Cochabamba (CeVi, 2013). The project aimed at strengthening the management and distribution of water for 200,000 residents in the south through the drinking water committees linked to ASICA-SUDD-EPSAS. The project attempted to improve public participation and social control through publically enterprise-driven services that were conforming to the implementation of the Misicuni project. To survey SEMAPAs projected expansion of networks in the southern districts, spaces for discussion and development of a future mutual management model for community systems and municipal companies were initiated. The project was coordinated by CeVi and the Italian aid agency ACRA and realized together with Fundacion abril, CASA-U.M.S.S, Agua sustentable. Fundacion abril's intervened through transferring knowledge on consultation and collaboration between public sector and community associations. The Centre of Environment at the University of San Simon were collaborating to implement a system of monitoring and analysis of water²⁸. The NGO Agua sustentable participated to promote public participation for policy making (CeVi Centro di Volontariato Internazionale, 2014). The project was funded with by the Italian ministry of foreign affairs with nearly 2 millio Euros (Walnycki, 2013, p. 194).

²⁸ Ana-Maria Romero [20140207]

7.2.2 NGOs working with adequate housing

In this chapter three NGOs working with social housing and basic in Bolivia are presented with regards to their background, key principles, objectives and lines of actions.

7.2.2.1 *Fundación Pro Hábitat*

Fundación Pro Hábitat is an organization that has been located in Cochabamba since 1992²⁹. The NGO is accordingly dedicated to social and economic capacity building of marginalized families in the peri-urban communities through six different priority areas;

- Microenterprise
- Infrastructure and Environmental management
- Community development
- Qualitative and Quantitative research
- Human rights

7.2.2.1.1 Lines of action

Antonia Terrazas is the director of Fundación Pro Hábitat in Cochabamba since 2005 (foundation for sustainable development, 2014). The principles of self-construction and self-regulation in management are fundamental to their lines of actions³⁰. In the area of adequate housing, Pro-Habitat is carrying out programs with the objective of improving quality of housing at household and- community level by means of construction and the reconstruction of homes and facilities (foundation for sustainable development, 2014). Training is performed in five specific areas;

- Planning and projections of sites for home construction
- Infrastructure development
- Gender equity and female participation
- Offer micro-credit loans to clients working with infrastructure development, small businesses and handcrafts in peri-urban zones (ibid).

7.2.2.1.2 Water and sanitation

The foundation began working with water and sanitation in 2001³¹, initiated by the demand from families in peri-urban areas. They began carrying out diagnostic work, initially on low-cost bathroom solutions, such as ecological toilets. In 2003, the matter of drinking water was initiated in endemic areas of Cochabamba, such as the neighborhood Barrios Unidos in district 14.

7.2.2.1.3 Collaboration

Fundación Pro Hábitat has collaborated with the foundation Habitat for Humanity and research association Ciudadania in district 9, to address security of tenure and exercising citizen right for non-discriminatory ownership in between 2009-2011 (Habitat para la humanidad, 2011). The project was funded by UKaid. Foundation Pró-Habitat is active in the network of RENASEH.

²⁹ Antonia Terrasaz [20140312]

³⁰ Antonia Terrasaz[20140312]

³¹ Antonia Terrasaz[20140312]

7.2.2.2 Procasha

Procasha foundation started as a non-profit organization in 2000 by the director Graciela Landaeta and a number of other professionals with the objective of improving adequate housing for low income families in Bolivia³². Uruguayan experiences of cooperative ownership of housing and working strategies came to influence the idea of implementing similar models to in Bolivia. A delegation from a Swedish private real estate company arrived in 2000 to request for a proposal for housing model to fund, whereupon a strategy was proposed. The organization transformed into a foundation in order to implement their ideas. The foundation initially consisted of 34 professionals and some social activists. Funding has been approved by the Swedish international cooperation agency (SIDA).

7.2.2.2.1 Objectives

The organization has the objective of finding alternative solutions to adequate housing through three principles; Self-management, Collective housing and Mutual aid defined as follows (Procasha, 2014)

Collective Ownership; This is a form of tenure that ensures families the use and enjoyment of housing, habitat and possibility to transmission tenure by virtue of inheriting tenure to family members to ensure legal certainty for third parties (Fundacion Procasha, 2014)

Self-management: The principle of self-management reflects the identification and promotion of solutions through technical, administrative, financial and social counselling during the development of projects. Procasha promoted empowerment of the cooperatives throughout the whole implementation process (Fundacion Procasha, 2014).

Mutual aid: The principle of mutual aid refers to; contribution and inclusion of service networks and preservation of surrounding green- areas, to serve for recreation and communal infrastructure. Self-management is promoted as a means to reduce costs based on the condition of *mutual aid* from cooperative members to keep the services functioning (Fundacion Procasha, 2014).

The working principle of mutual aid, implicates that cooperative members have responsibility to participate in the planning, administration, design and construction of housing. Two major conditions for implementing the cooperative model successfully, is according to Landaeta;

- That the state is willing to target money for engagement of land and construction materials at low interest
- Professionals with background in architecture, building technology and sociology, are willing to take action in favor of the model, and capacitate cooperative members by balancing their demands with technical, social and economic expertise³³.

7.2.2.2.2 Lines of action

The framework to implement the principles is comprised by six areas of action;

- Improving social housing: Co-construction of services.
- Training: Team of professionals to perform counseling.
- Research: Addressing issues related to habitat and housing.
- Impact: Generating public housing policies.

³² Graciela Landaeta[20140329]

³³ Graciela Landaeta[20140329]

- Consulting: In housing, housing and territorial planning
- Cooperative Entrepreneurship (Fundacion Procasha, 2014)

7.2.2.2.3 Beneficiaries

Procasha has performed technical training, interventions to improve housing in the administration and management of service cooperatives in a range of programs in districts; 7, 8, 9 and 14. For some of the projects, female headed households are considered the target groups (Procasha, 2014). According to Landaeta, two cooperatives have successfully been implemented with 42 families as beneficiaries³⁴.

7.2.2.2.4 Partnership and funding

Procasha is a member of the National Network of Human Settlements - RENASEH, and has established agreements with national and international authorities on issues related to housing, habitat and cooperatives³⁵. In October of 2006 Procasha sent a collection of signatures for the proposal of the human right to housing to the MAS-government, together with a partner organization of the RENASEH with support from Fundacion Pró-Habitat. Procasha are allied with The Service Development Liechtenstein, LED, that is a private foundation, and the German catholic non-profit organization Miseror (Procasha, 2014).

7.2.2.2.5 Water and sanitation

In collaboration with the Division of Water, Environment and Technology at Chalmers University of Technology in Gothenburg, Procasha has made interventions to study drivers for the implementation of alternative solutions to sanitation in informal settlements of district 14. They have also collaborated with the NGO *Water for People*, to promote ecological toilets and septic tanks for families in peri-urban areas of district 14. In 2008, with funding approved by the foundation *Habitat for Humanity*, Procasha, equipped a community in Quillacollo with a drinking water network³⁶.

7.2.2.3 *Habitat for humanity*

Habitat for Humanity is an American foundation that opened its first office in Bolivia in 1986. The organisation began operating in Cochabamba in 1997 (Habitat for Humanity, 2013). According to executive national director, Amigal Buzarra, the ambition of the organization is to provide adequate housing at large scale to families, by expanding operation of self-constructed housing models in the five regional departments of the Bolivia³⁷.

7.2.2.3.1 Objectives

Habitat for Humanity's primary vision is to address the need for adequate housing and construction of adequate housing proceeding from a Christian value system (Habitat for Humanity, 2013). The organization urges to promote sustainable development and to support community based incentives related to planning and self-construction of houses. Housing loans are provided to low income families with little or no access to a regular bank financing (ibid)

7.2.2.3.2 Key strategy and target groups

The organization promotes self-construction with the purpose of encouraging active involvement in the building and supervision processes of housing (Habitat for Humanity, 2013). The organization mainly targets access to *formal* adequate housing. Women headed households,

³⁴ Graciela Landaeta[20140329]

³⁵ Graciela Landaeta[20140329]

³⁶ Amigal Buzarra[20140319]

³⁷ Amigal Buzarra[20140319]

families consisting of more than three dependent members and members of special needs are prioritized in the programs. Gender mainstreaming and awareness on gender equality is supported in urban land and property entitlement rights. One strategy is to facilitate securing land tenure processes by rewarding tenure certificates for families, in district 9. Another is to provide with access to micro-loans for buying land and improve basic services (ibid).

7.2.2.3.3 Programs

The Women's leadership Network is a project that resulted from of a strategic partnership between Habitat for Humanity and the research association Ciudadania in Cochabamba that was initiated in 2009 (Habitat for Humanity, 2012). It consists of a group of organized women from the peri-urban 9th district of Cochabamba, taking part in the Secure Tenure Leadership School where training on legal rights, citizenship, secure tenure, Bolivian law, political advocacy and awareness-raising conducted on behalf of partnering organizations. The Women's Network have been participating in discussions with the Ministry of Housing in La Paz to support a subsidy for land rights in collaboration with the local and national women's networks to develop a proposal for a non-discriminatory urban housing law. UKAid and the National Bank of Bolivia have been funding the incentive in the 9th district, and a line of housing construction projects (ibid).

7.2.2.3.4 Agreements

An agreement was stipulated between Habitat for Humanity and the Municipal Planning Department of Cochabamba in march 2012, to enable land tenure certificates for 3000 female headed families in the peri-urban district 9 (Habitat for Humanity, 2012). The agreement stipulates that empowerment of women shall be supported in leadership capacities and grass root movements whilst courses on gender equity, linked to land rights, shall be given to state authorities. A proposed change to the land tenure law, that includes women's rights was formalized and passed to the legislation in May 2012(ibid).

7.2.3 NGOs working with physical spread of water and sanitation

In this chapter, NGOs that primarily work with a *physical* spread of water and sanitation, i.e. technical and administrative approaches to water and sanitation through Public Private Partnerships, are presented.

7.2.4 Water for people

Water for People began programming in Bolivia in 1997 (Water for People, 2014). The NGO has been programming in mainly four rural municipalities in the department of Cochabamba since 1997. In 2008, the organization formed an alliance with the national government, whereupon Water for people has worked in the peri-urban districts of Cochabamba, mainly in district 9 to spread water and sanitary coverage. In 2011 expanded its programming in two other rural municipalities of the Cochabamba region (ibid).

7.2.4.1.1 Partners

Water for People works together with; the local authorities, schools, civic organizations to address decentralized water distribution and sanitary solutions (Water for People, 2014). They have a well-established relationship with the regional department of Drinking Water and Basic Sanitation, as well as the Ministry of Water (ibid).

7.2.4.1.2 Objectives and strategies

Water for people has been running strategic programs in Bolivia with the aim of appealing to the need for water and sanitation (Agua para el pueblo, 2014). Their vision is to be a recognized as *ada-expertise* in providing access to safe water, sanitation and hygiene through education. The key strategy is to intervene as local support for sustainable projects of safe water, sanitation and hygiene at community level- and household level. Four compulsory stages of intervention are carried out in all programs comprising: demand generation, pre-investment, investment and post-investment. The intervention strategy is determined to comply with guidelines from the Ministry of Water and Environment. The main target is to have an impact on the quality of life by indicators such as reduced child morbidity and diseases related to lack of water (ibid).

7.2.4.1.3 Partnerships and funding

Water for people implements small scale water and sanitary solutions with financial support from municipality or private foundations (Water for People, 2014). They have promoted self-construction and administration of ecological toilets for households through micro-credit loans in district 9 and 14 with funds from a Dutch foundation FND, SIDRA and Habitat for humanity³⁸. Since 2007 the organization is focusing on strategic and integral programs. Water for people implement the drinking water network with juridical and economic support from municipality meanwhile training communities to economically and technically manage the systems. Currently 15 drinking water organizations are enrolled in different projects.

³⁸ Claudia Cossio [20140227]

7.2.5 Aguatuya

Aguatuya initially began operating in Cochabamba as a part of the private sector consortium Plastiforte in 2002 (UNDP, 2012). In December, 2004, a partnership model called the *Agua para Todos* (Water for All), was formed between SEMAPA, Plastiforte, local communities and a non-profit foundation. Under the Agua Tuya (Your Water) program, the Agua Para Todos partnership was part of an initiative to unite stakeholders, and improve coordination and efficiency by joining the resources of various partners. As part of this program, Plastiforte constructed secondary water systems in coordination with SEMAPA. In 2004 Aguatuya entered into a Public Private Partnership (PPP) together with SEMAPA, two micro finance institutions (Fundación Pro-Habitat and CIDRE) and water organizations in the *Agua Para Todos* program.

7.2.5.1 Key principles and strategies

Through the *Agua para todos*- running from 2004-2010, Aguatuya has had the objective to improve coverage and expand access to drinking water and sanitation, independent from municipal services, by applying a *multi-sectoral* approach (Heredia, 2006). Five actors were involved in the Public Private Partnership model for the Agua para todos program. The OTBs and other formal organizations have been enrolled in the program. The municipality and SEMAPA provided with technical supervision and with interconnection to main water system. Aguatuya has interacted as a private actor, providing with training on management and administration (ibid).

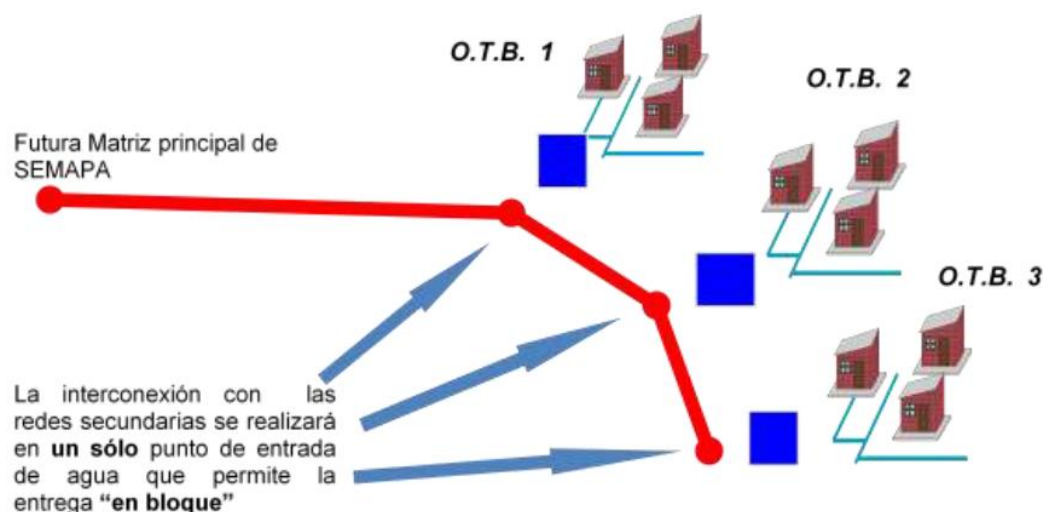


Figure 8. Aguatuyas distribution model

7.2.5.2 Donors and Partners

Besides funding approved by the Municipal Government, The Swedish Embassy has funded three projects initiated by Aguatuya in 2009 with agreements for three years to address the urban expansion of Cochabamba together with a SEMAPA network that is projected in the peri-urban areas. Since the year of 2009, Aguatuya is conducting management courses together with the foundation INFOCAL a couple of times each year (Aguatuya, 2013).

7.2.5.3 Programs

Seven projects were carried out through the partnership for the *Agua Para Todos* program that was running in between 2004-2010 (Aguatuya, 2013). The pilot project of *Barrios Unidos* is an example. It was initiated in 2004 at a total cost of 19 000 USD and for the expense of 175 USD and it serves 1000 people (ibid).

7.2.5.4 Distribution

Throughout 2005-2012, 32 projects were implemented, of which two were sanitation projects that according to Senasba, beneficiated 4190 households and 23 800 people in peri-urban districts, to the total investment of 1 million dollars (Senasba, 2011, p. 34)

7.2.5.5 Institutional strengthening

The Aguatuya foundation was created in 2008 as a means to strengthen The *Agua Para Todos* project and to channel cooperative funds inverted into investigation and development projects (Aguatuya, 2013). The foundation was also created in order to provide technical support to secure the sustainability of projects that have been implemented to this date (ibid)

7.3 Community based organizations and Districts 14, 8, 9

In this chapter, some of the community organizations interviewed are presented to demonstrate their experiences in collaborating with NGOs and the challenges facing them in terms of institutional capacity, communication, urbanization and geographic constraints.

7.3.1 A.P.A.A.S, water association in District 14

The association of A.P.A.A.S was founded in 1990 in Villa Pagador, district 14. It was the first decentralized water association implemented in Cochabamba, and is recognized as one of the most established (Zibechi, 2009). According to an interviewee, the World Bank invested 280 000 dollars to install a decentralized drinking water network and in 1991, with drinking water supplied from a hand pump for the first time in the central market *Febrero 10*³⁹. In 1993, the committee began inaugurating services at household level for 300 members. The committee now has approximately 600 members connected to the drinking water services. In 2008 the water committee accounted for 10 % of the total drinking water provision in district 14 (CEDIB, 2008).

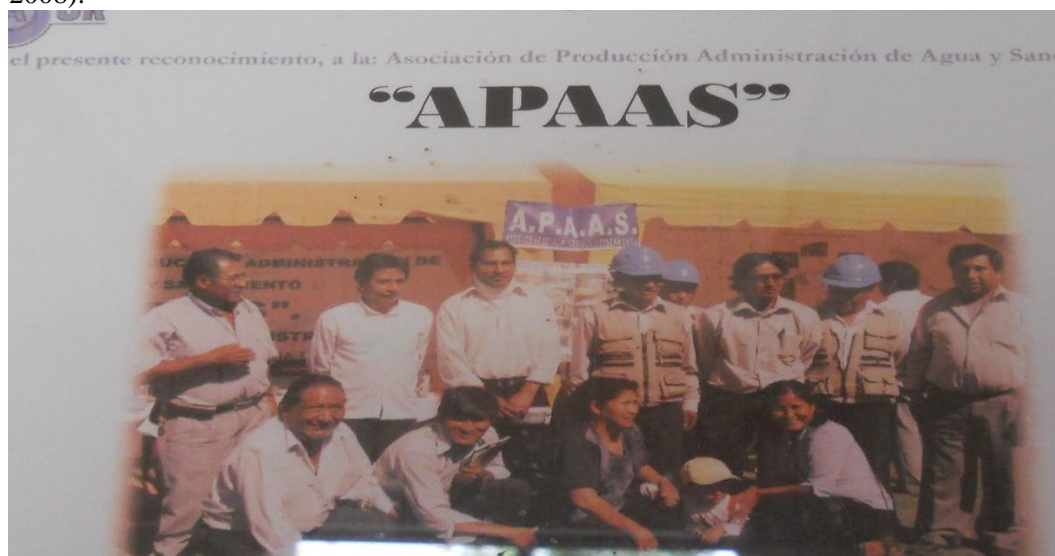


Figure 9 - A.P.A.A.S Association Late Board of members

7.3.2 Community water associations in the neighborhood of Barrios Unidos, district 14

The OTB of the neighborhood *Barrios Unidos* in district 14, was formalized in 1999. In 2001, approximately 516 residents lived in the neighborhood (CEDIB, 2006). The inhabitants in *Barrios Unidos* are to a large extent comprised by migrants from the western regions of Bolivia such as Oruro, Potosi, La Paz. The community consists of low-income workers with a monthly income of 300-400 Bolivianos (ibid).

In 2005 a local drinking water committee was formed in *Barrios Unidos*⁴⁰. The area was affected by malnutrition among its children. Three public institutions were contacted to investigate the problem whereupon they detected contamination in the older water cisterns. The NGO *Fundación Pro Hábitat* initially came in contact with the committee to provide loans for housing. Since the neighborhood was in need of improved drinking water quality, Pro-Habitat suggested loans for private cisterns. The committee suggested a secondary community based supply network as a solution to improve the drinking water quality. The loan was permitted without interest the first year. A Public Private Partnership between Pro-Habitat foundation, Agua Tuya and the committee enabled the implementation and administration of the drinking water network in 2009. Shortly after, ASICA-SUUD was replacing Pro-Habitat in coordinating

³⁹ Interviewee1 [20140322]

⁴⁰ Interviewee 2 [20140315]

the administration of the network. According to Pró-Habitats director; Antonia Terrazas, ASICA-SUDD can operate cheaper by capacity of allocating funds from the state⁴¹.

7.3.3 Drinking Water Association, San Miguel D8

The water committee in San Miguel of district 8 was established 36 years ago, initiating as a cooperative that was coordinating different communal projects together with the local neighbourhood council⁴². In 1992 the neighbourhood council began addressing the matter of drinking water distribution together with the local Catholic Church. With funds from a Danish project, a smaller drinking water system was implemented. The cooperative was transformed to a water committee to address the need for a decentralized drinking-and waste water system in the neighbourhood. The organization has advanced recent years to become a drinking water association, in order to gain recognition in the debate for improved access to drinking water towards public authorities.

7.3.4 Water organizations Los Pinos and Ichocullo district 9

In 2008, the committee of the Ichocullo community and Los Pinos in district 9 contacted Water for People to implement a community based network with cisterns⁴³. There was a proposal on behalf of the organization to take part in the National water and sanitary program *Evo Cumple in* 2008. The committee was requesting for material to install the network, whereupon Water for People was contacted for support. All members in neighbourhoods were reportedly responsible to take part in the excavation before implementing the new community based network. A large proportion of the community members in the neighbouring community Ichocullo participated in the excavation. According to an interviewee, Water for People provided training and courses on leadership, plumbing and management after the implementation of the network.

⁴¹ Antonia Terrazas[20140312]

⁴² Interviewee 4 [20140328]

⁴³ Interviewee 5 [20140303]

8 Results

In this chapter, the results from the field studies are presented with regards to correlation in response from key informants presented in chapter 7. Perspectives on NGO interventions and challenges facing some of their beneficiary organizations in districts 7, 8, 9 and 14 are also presented.

8.1 Transitions in behavior of public sector and community providers

To understand the context in which the NGOs are working, and its dynamic role in relation to the public sector and organized communities, several correlating observations in the behaviour of the public sector and civic community has been indicated by, specifically, key informants of category 1. Based on this information, correlation in observation on; *self-regulation/autonomous governance, emerging conflicts, increase in public investment and transition in resource management*, for a time period that stretches from 1990's to today, have been visualized in appendix IV- IX. In this report, these processes are assumed to have a generic and *indirect* impact on the generic behaviours of NGOs, presented in chapter 5. The visualisations of appendix IV to XII conform to the theory of *formative moments*.

8.1.1 Public investments (2009-2014)

Four key informants indicate an increase in public investments within the time frame from 2009-2014. Carlos Oropeza and Ramiro Rioz both indicate that there is a higher incidence in state intervention and increased public investments as a response towards the paradigm of the human right to water in the constitution of 2009. Roberto Prada, ex-director of SEMAPA, argues that public investment for administration has increased since the formation of Senasba in 2009⁴⁴. Gonzalo Vargas makes a similar observation by associating decreased un-employment in the public sector with an increase in public administration, with a reference to the implementation of the national water and sanitation program (2008-2015). This is visualised in appendix IV.

8.1.2 Autonomous governance (2002-2014)

In this case study, the notion of autonomic governance for community based organizations is associated with the independency from regulation on behalf of public and private sector. It is a process that has been mentioned by five of the study's key informant (key informant group 1) to emerge within a time frame from the 1990's to 2014. This is visualised in appendix V.

Rocio Bustamante, researcher at Centro de Agua- U.M.SS, argues that the process for self-regulation was initiated with the restructuring policies emerging in the 1990's. This resulted in decentralization of infrastructure services together with NGOs and local churches. The call for enhanced autonomy in peri-urban Cochabamba is in this context referring to community based organisations urge to self-govern and manage its own economy, taking a leap in 2002⁴⁵.

Escarley Torrico associates the emergence for self-governance in peri-urban communities with the Cochabamba water war, where people sought to organise themselves as a result of distrust towards the public sector to provide with equitable water distribution⁴⁶. On the inquiry about how the role of NGOs has changed in recent years, Carola Ortuna responds;

*"According to the state constitution, I think there has been a movement of people making their own systems, I think people have left the authorities to take responsibility and we should just support"*⁴⁷

⁴⁴ Roberto Prado [20140305]

⁴⁵ Rocio Bustamante[20140317]

⁴⁶ Escarley Torrico [20140222]

⁴⁷ Carola Ortuno [20140306]

Ramiro Rioz, the director at the department of basic services, stresses that a call for self-regulation has emerged as a response towards the increased interest of the public sector in peri-urban water provision;

“After the Water War, there was a complete turnaround: the state has been in charge of support, the state has been the one to watch, to guarantee that water coverage is increasing. The state now has to participate and regain that authority in the service of water independently, before creating new powers, new owners. And now, the society is willing to break this scenario where the state takes care of the water and the state is the one to deliver the water to the various inhabitants of the country, regardless of boundaries, regardless of this, as jurisdictionally they say is their right. So that it is costing the State: try to recover these advances”⁴⁸

8.1.3 Water resource management and democratization

The flow chart of appendix VI, gives a generic view on the transitions in the behaviour of the water sector and management of water resources in Cochabamba, from the end of the 1990's to 2015, with emphasis of the posterior events since the water war in Cochabamba.

8.1.3.1 Legislative impact of drinking water laws and resource distribution

The legislative impact to guarantee self-regulation for community based water systems over contracts and charging rates conform to act 2066 and the constitution of 2009, have not successfully been implemented, stresses Rocio Bustamante⁴⁹. In 2004 there was still a strong focus on making regulations to the drinking water and sanitation law (act. 2066) that could be developed and approved which, accordingly haven't progressed. The current idea is to look more specifically at principles for resource distribution;

“The idea has been to create a framework that provides the greatest principles to implement specific legislation for irrigation, drinking water, energy for other purposes, and we are in this process, this bill is in Congress right now and so we know there is a strong appeal to get them to implement or approve it, but again, the law is passed and you have to work in regulation, to fit that down to more specific principles on how it will work in projects and interventions”⁵⁰

8.1.3.2 Resource distribution for different sectors

Gonzalo Vargas of Ciudadania and Carlos Crespo of CESU-U.M.S.S indicate that the Misicuni project has, over time, gradually become urbanised, thus is expected to mainly serve the energy and drinking water sector. Ramiro Rioz, confirms that satisfactory agreements for the irrigation could be complicated^{51,52}.

⁴⁸ Ramiro Rioz [20140322]

⁴⁹ Rocio Bustamante [20140317]

⁵⁰ Rocio Bustamante [20140317]

^{51,52} Gonzalo Vargas [20140320] Carlos Crespo*[201404040] –interview by Carl Södersten

⁵² Ramiro Rioz[20140322]

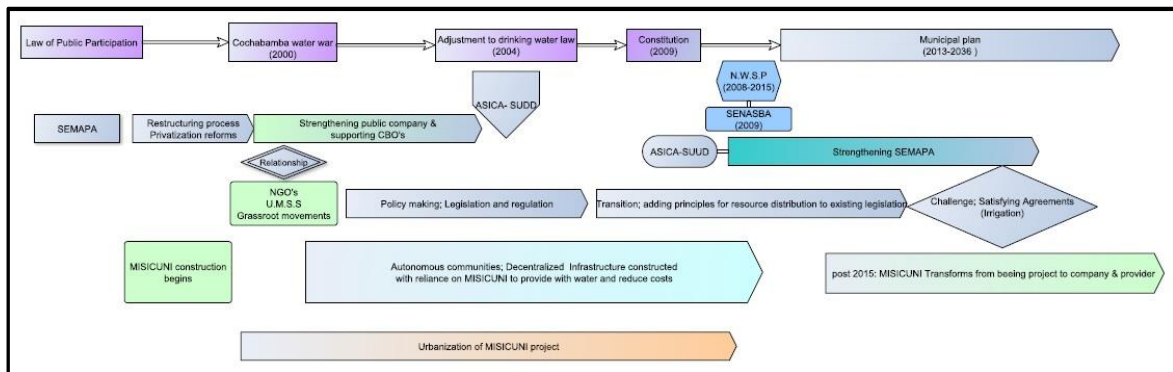


Figure 10 - Flow chart transitions in resource management and water sector

8.1.3.3 Public sector

Escarley Torrico argues that the public sector has played an ambiguous role as a public provider during the posterior events after the water war. Community run projects have been supported by SEMAPA and the municipality meanwhile the public company has been strengthened. Carlos Crespo argues that MMAYA and SEMAPA currently lack of social representation, hence is, to a large extent, constituted by state representatives⁵³. A flow chart describing transitions in resource management and the behaviour of the sector is presented in figure 10 and with higher resolution in appendix VI.

8.1.3.4 Water targets and sanitation

Ramiro Rioz, describes that one of the goals of the Municipal plan (2013-2036) is to obtain 70 % water coverage in the departmental region of Cochabamba, and aim water coverage to all residents in the municipality by the year 2025, conform to the national water and sanitation plan (2008-2015).

*“We have three challenges: one, the first challenge is to allocate water to municipalities; the second challenge we have is to give the waters of all municipalities, and the third challenge is to generate a metropolitan company, one company not operating in the networks but that may give access and sell water in blocks. That is, the company that may be in the metropolitan region and have Misisuni dam as a distributor”*⁵⁴

Carlos Oropeza and Escarley Torrico indicate that some of the challenges facing the opening of Misisuni are related to the rapid construction of small infrastructure in peri-urban areas in recent years⁵⁵. Torrico argues that The Ministry of environment has not had a defined action plan, hence lack of a realistic perception over by what means the water coverage is increased, whether it is referring to an higher number of implemented wells in the communities or increased water volumes per constructed well⁵⁶.

Gonzalo Vargas and Rocio Bustamante argue that the National Water and sanitation program (2008-2015) has focused very much on drinking water distribution at the expense of sanitation. According to Bustamante, it reaches coverage of 40 % at some districts⁵⁷. Torrico further argues that water is perceived as the basic need over sanitation among community associations,

⁵³ Carlos Crespo[20140320] Crespo, Carlos *[20140404] –interview made by Carl Södersten

⁵⁴ Ramiro Rioz[20140322]

⁵⁵ Carlos Oropeza [20140320] Escarley Torrico [20140221]

⁵⁶ Escarley Torrico [20140221]

⁵⁷ Rocio Bustamante (2) *[201403] –interview made by Carl Södersten

⁵⁸ Gonzalo Vargas[20140320]

which could further implicate that the pressure on authorities to address increased coverage for sanitation is low⁵⁹. Ortuno stresses that the support and monitoring from the public authorities in sanitary management is absent;

*“We have visited some seedlings that are not working, not because the responsibility for self-management among population is not delivered. The municipality is currently, on the sanitary issues, not cooperating in the peri-urban area, thus our intervention is to support and identify this for the decentralized treatment plants”*⁶⁰

8.1.4 Emerging conflicts and separations

Indices of separation and conflicts is another emerging observation that has been notified by informants from all key informant groups, within a time period that elapse from 1990's to today, this is outlined in a generic mapping in appendix VIII.

Bustamante argues that conflicts have emerged over the past year associated with weak accountability on behalf of the water authorities⁶¹. The regulatory responsibility for different aspects of water resource management is, accordingly, not well defined.

Carlos Oropeza, argues that a legal recognition for granting licenses and registries, cannot per se fulfil the paradigm of human right to water;

*“It is useless to us, being a recognized system in all the legality when there is no water, no water. Our wells are drying up and the state assumes this function, it recognizes you but does not have the obligation to provide with water. We thought we were convinced that the state would give us a license, gives us a record at first but then, it is not fulfilling the paradigm”*⁶²

Oropeza stresses that the state need to assume a regular role, by virtue of supporting the implementation of the infrastructure and supporting the systems permanently⁶³.

On the matter of consultation and dialogue processes for equitable resource distribution between the public sector and the social movements, Ramiro Rioz argues;

*“Let's say we still find it difficult to meet all the demand there, we need a lot of investment in order to meet all the demand that exists. Actually social movements, here and now, they recognize that there is a state that can invest in the theme of water then they turn to this party. We cannot meet the demand of all but if, say, we are committed to respond to this need, they, I think still, from their point of view, they see that the state is not fulfilling that role; not because it cannot, but because we have so much need and also demands, because there is still, as I said earlier, no ownership of the sources. When we go to a source that is shared; there is as much empowerment, as there is hoarding”*⁶⁴

Gonzalo Vargas stresses that tensions have emerged in between community- based organisations since the implementation of programs that work in line with the National water and sanitation plan (2008-2015)⁶⁵. He stresses community organizations and NGOs are

⁵⁹ Escarley Torrico[20140222]

⁶⁰ Carola Ortuno[20140306]

⁶¹ Rocio Bustamante[20140317]

⁶² Carlos Oropeza[20140320]

⁶³ Carlos Oropeza[20140320]

⁶⁴ Ramiro Rioz[20140322]

⁶⁵ Gonzalo Vargas[20140320]

increasingly dependent on collaborating with municipal and state government through ASICA-SUUD.

8.1.5 The Misicuni project

Carlos Crespo and Escarley Torrico denote that the municipal plans to extend SEMAPA's provision in some peri-urban districts with the opening of the Misicuni project, is a potential source of conflict. Crespo states;

*"There are systems such autonomous unwilling to give up their rights, then what will happen is that the municipal plans intention is to incorporate small systems to metropolitan water company, the issue is whether they will be willing to get these systems in metropolitan water company, there are some who will want, but others do not want to"*⁶⁶

Torrico and a member of the local association A.P.A.A.S in Villa Pagador, refer to the local network implemented in 1992 as a setting example⁶⁷. Decreasing capacity of the existing network, in addition with SEMAPA's plan to extend its provision in the district, can cause tensions and further produce scenarios where beneficiary members either refuse to pay the tariffs of the existing network. Another potential risk is that the association opposes to lay-out SEMAPAs projected network before the Misicuni project opens.

Oropeza states that a large number of small infrastructure have been implemented in recent years in the water scarce peri-urban districts, meanwhile write-off and water tariffs have increased, thus Misicuni is believed mitigate or, at its best, solve the problem. Torrico makes a similar observation;

*"There are water committees that are doing well; but there are places where there have been drilled wells, and there is no water. So they, for example, build water reservoirs, keep water moving north, fill the tanks with water from the tank and then the committees are housing the water. So now they are waiting for Misicuni to bring them water through the viaduct, which either can cater these large tanks or not. But until then when there is no other source of water, things are unsafe"*⁶⁸

Crespo further stresses that a further withheld Misicuni project could implicate conflicts;

*"Misicuni, initially intended to be open in the middle of last year, after they said late last year. They have now said that it will be in September, October, now they have said 2015. So what will happen if you will not get water from Misicuni next year? What you will have are conflicts safely"*⁶⁹

⁶⁶ Carlos Crespo* [20140404] –interview made by Carl Södersten

⁶⁷ Interviewee 5 [20140328]

⁶⁸ Escarley Torrico [20140221]

⁶⁹ Carlos Crespo* [20140404] – interview made by Carl Södersten

8.1.6 Generic impact of sector on NGOs

To understand the context in which the NGOs are act in and it's dynamic role in relation to the public sector and organized communities, several observations have been made by key informants on the direct impact on NGOs and their relations. These observations have been associated with formative *events* for a time period that stretches from 1990's to present [2014]. This is illustrated in appendix IX.

8.1.6.1 Collaboration between State, Municipal government and NGOs

Carlos Crespo and Gonzalo's implicate that NGOs are increasingly subjected to interventions in programs conforming to the National water and sanitation plan (2008-2015)⁷⁰. Crespo suggests that the incidence of coordination in between NGOs is decreasing. Gonzalo argues that foreign funds have gradually decreased since the nationalization of water, thus make NGO interventions marginalized;

*"What happens is, not only on the issue of water and sanitation, the role of NGOs has been reduced each time, that is, for various reasons that are varied, the government itself, the state, assumes that all the tasks benefit the society, the state somehow sometime seems like a large NGO that wants do everything from production to education projects on water and sanitation or irrigation projects, such as My Water I, II, My Irrigation I, II, etc., which are programs through which the State Government intends to have a direct relationship with the people that demand these services"*⁷¹

Ramiro Rioz of the Regional department of basic services further argues that NGOs could facilitate its relationship between community-based water associations and the public sector, by virtue of aligning with the municipal agenda;

*"The municipal plan is to give water coverage to all residents by 2025; that's one of our goals. We are trying to add the NGOs so they can contribute. We show that through joint efforts, municipalities and NGOs, we can achieve good coverage"*⁷²

On the matter of partnership model between public authorities and NGOs, Rioz further elaborates;

*"The best thing they can do is to work in coordination with public institutions, which is the same Government and the same municipalities. It's the best they can do: coordinate with these entities, because they, uh, municipalities and Government, we know where our weaknesses are and know where they need to follow"*⁷³

⁷⁰ Carlos Crespo[20140310]; Gonzalo Vargas[20140320]

⁷¹ Gonzalo Vargas[20140320]

⁷² Ramiro Rioz[20140322]

⁷³ Ramiro Rioz[20140322]

8.1.6.2 Transition in scale

Gonzalo Vargas stresses, that there has been a gradual focus towards urban water provision, which is anticipated to marginalize the demands from the irrigation sector;

“In the water war, the presence of the irrigators was very, very important, but all that has been declining because somehow the government has taken the initiative to be present in the field, then, if they have a program, with many millions of dollars such as My Water, then a small or medium-sized NGO can’t compete, partly because of the evolution of the sector, NGOs no longer become relevant to the social movement. Irrigators lost in the last election, in the previous election and lost significant ground to other movements and achievements are not establish”⁷⁴

Escarley Torrico argues that there, since the reform process of the 1990’s, has been a huge focus on programming for drinking water distribution among NGOs s which is associated with limited financial funds⁷⁵. However, the presence of the NGOs has, accordingly, decreased in the southern districts recent years.

Carlos Oropeza, claims that ASICA-SUUD is recently working closer to the municipal government than the NGOs to address peri-urban water provision according to the municipal plan. The peri-urban communities are facing emerging situation with water scarcity thus, accordingly, need other solutions;

“We have realized that we somehow, in the background of all the work with NGOs, have been giving nothing more than calming pills, addressing problems temporarily, leaving aside the big problem; Resolve the issue that is much more comprehensive, more long-lasting with large projects such as Misicuni”⁷⁶

Oropeza further argues that NGOs have been marginalized in the municipal plan, thus need to coordinate with the municipal government to address water provision at large scale;

“As such we too have realized, that efforts in models of small systems are not sustainable, then there is a need to come together, to associate to form much larger companies. So in that sense I think this should be the work of the NGOs”⁷⁷

Ramiro Rioz, similarly, argues;

“Currently, in addition, the state is the one providing the largest amount of resources, NGOs have lowered their resource intensity and the State has contributed to the central or departmental levels, and the municipalities are facing that”⁷⁸

⁷⁴ Gonzalo Vargas [20140320]

⁷⁵ Escarley Torrico [20140221]

⁷⁶ Carlos Oropeza [20140320]

⁷⁷ Carlos Oropeza [20140320]

⁷⁸ Ramiro Rioz [20140322]

8.2 Transitions in stakeholder relations and approach to public participation among NGOs working with water and sanitation

In this chapter the relationship between the studied samples of NGOs working with; political strengthening of community associations and policy impact on water rights, social housing and physical spread of water and sanitation, are presented. The information is based on key informant category 2. A mapping over transitions in stakeholder relations for this set of NGOs is presented in appendix X-XII.

8.2.1 Transitions in relationships Fundacion abril, CeVi and Agua sustentable

Cevi, Agua sustentable and Fundacion abril are NGOs that emerged in Cochabamba in the aftermath of the water war to address economic, technical and juridical strengthening of peri-urban community systems and institutional policy impact for water rights.

8.2.1.1 Transitions in relationships; Fundacion abril

Fundacion abril, has since its initiation been working as an umbrella organisation for community based water organisations and social movements in Cochabamba⁷⁹. In between 2000-2004 the NGO had an agreement with SEMAPA and to consult between the community-based organisations and the public company. According to Flores, they were active in policy making and added an adjustment to law of drinking water in 2004 that resulted in the formalisation of the association ASICASUUD-EPSAS. ASICA-SUUD was, according to Flores, a part of the foundation. In 2005 the foundation created a nation-wide network of organizations that address issues related to different aspects of water resource management and policy making. Flores argues that the network was active in pushing forward the establishment of the Ministry of Water and Environment in 2006. Further activities in policy making resulted in raising changes to the constitution of 2009 with the acknowledgment of the human right to water. In between 2009-2012 the foundation was taking part in the project of *Yaku al sur* to promote advocacy between the state institutions and community based associations together with CeVi, Agua sustentable, ASICA-SUUD and three other partner organizations. According to Maria Flores, one of the initial objectives with the formalization of ASICA-SUUD has been to make it an independent organization, which is why a separation took place after the project ended⁸⁰. They've established an agreement with the national irrigation ministry SENARI recently, which has opened up a direct relationship with the state. The organization is currently working with food- and irrigation security with local organizations in semi-rural parts of Cochabamba, such as in the project of school gardens in the municipality of Arbiato. (See figures 11 and 12, p.68) In recent years, the organization reports to increasingly work with an organization called OLYMPUS that addresses habitus and gender related issues in social housing.

The foundation doesn't comply with the municipal plan to expand public company water provision in the peri-urban communities, since it is presumed to joint and orient water committees towards a more centralized water management⁸¹. Flores stresses that the foundation seeks to establish closer relationship with public research institutions to improve the technical capacitation on behalf of the organization. This is done in order to meet the *needs* of the beneficiary groups better⁸².

⁷⁹ Maria Flores[20140318]

⁸⁰ Maria Flores[20140318]

⁸¹ Oscar Olivera [20121212] [Interview by Ida Helgegren]

⁸² Maria Flores[20140318]

8.2.1.2 Transitions in relationships; CEVI

CeVi, has since its initiation been programming in Cochabamba through cross-institutional collaborations⁸³. The organisation aims at working to enhance the regional and international cooperation according to the goals of the Municipal plan (2013-2036). CeVi performs consultancy between institutions and community associations together with ASICA-SUUD. Like Fundacion abril, the organisation aims at working closer to research institutions in order to access resources targeted for drinking water treatment. Over the years, CeVi reports to have strengthened collaboration with other NGOs in the training of equity management. In the future, Arguillo announce that the CeVi wishes to enhance interagency cooperation and international cooperation with other NGOs working in peri-urban districts.

8.2.1.3 Transitions in relationships; Agua sustentable

The organization of Agua Sustentable was formed in 2000 to work with institutional strengthening of organizations and public participation⁸⁴. Since 2009 Agua sustentable is working to implement rights to water according to the constitution in terms of application, registration and social participation of water regulation. Since 2009, community water organisations are participating in the development of public policies conformin to the national recovery plan on public participation of Senasba. The organisation has collaborated with CEVI, Fundacion abril and Community based organizations through ASICA-SUUD in the Yaku-al sur project and, accordingly, managed to strengthen the methodological and institutional capacity of the community associations. According to Canedo, the organisation intends to work more on surveys in order to joint collaboration between public and community actors⁸⁵. Agua sustentable also seek to establish closer relationship with research institutions to address water quality improvement of the Rocha River.

8.2.1.4 Transitions in relationships; Separation between Fundacion abril and ASICA-SUUD (2009-2012) post-Yaku al sur

An interviewee from the drinking water association (DWO) of San Miguel in district 8, Maria Flores from Fundacion abril and director of ASICA-SUUD Carlos Oropeza confirm that there has been a separation in the time since the project ended and that the association now works independently from Fundacion abril⁸⁶. The interviewee from the DWO stresses that ASICA-SUUD has come adrift from Fundacion abril and some of the local associations due to a conflict that wasn't clearly mentioned in the final evaluation of the Yaku al sur project⁸⁷.

⁸³ Stefano Arguillaco [20140318]

⁸⁴ Giovanna Canedo[20140305]

⁸⁵ Giovanna Canedo[20140305]

⁸⁶ Mari Flores[20140318] Carlos Oropeza [20140320]

⁸⁷ Interviewee 4 [20140328]



Figure 11- Fundacion abril demonstrating irrigation device for a cultivation project in the municipal school of Arbieto



Figure 12- Cultivation project at the elementary school of Arbieto, Cochabamba region organized and funded by Fundacion abril and JIKA-Bolivia

8.2.2 Comparison of public participation on behalf of CeVi, Agua Sustentable and Fundacion abril

In this chapter, public participation aligning with the framework for community participation Wilson & Wilde (2003) is presented for the NGOs of the study. Representatives of NGOs respond to how capacity development, communication, leadership, influence and gender/indigenous inclusivity are addressed in the organization towards their partnering community based organizations (CBOs). The questions formulated are available in appendix II.

8.2.2.1 Capacity development

According to Flores, Fundacion abril addresses *Capacity development* by strengthening organizations, i.e capacitate organizations socially, technically and administratively⁸⁸. CeVi and Fundacion abril report to adjust their programming by proposing and developing strategies and designs together with the parental organizations. Consent building as a means to facilitate dialogue processes is also reported to be important.

CeVi and Fundacion abril mention recognition of local knowledge as an important function to capacitate the organizations, thus envision a horizontal approach to community participation⁸⁹. Flores stresses that Fundacion abril approaches capacity development by *qualitative* rather than *quantitative* measure, which is given as a motive to work independently from municipal and state government. Agua sustentable mainly has the objective of strengthening the institutional capacity of community organizations by means of supporting the directories and leaving a methodology for them to precede their work from⁹⁰. Canedo also suggest that Agua Sustentable promotes internal regulation of CBOs nevertheless their support is mainly to leave decisions based on the constitution, that design resource use and administration.

According to the CeVi, the objective for the organization is to maintain relationship with parental organizations⁹¹. Fundacion abril aims at making the beneficiary organization independent, stresses Flores.

8.2.2.2 Communication

CeVi and Fundacion abril, accordingly, communicate *directly* with the community organisations by virtue of attending meetings, peer-sessions and providing labour capacity. They have dialogue forums for social discussion and workshops for exchange of technical and administrative knowledge. Agua sustentable communicate with the CBOs through the association ASICA-SUUD. Expertise is hired to work on behalf of Agua sustentable to carry out regular quality control of community systems. Manuals and technical information is handed out to the directory of the CBOs to work on a methodology for their community systems. Representatives of CeVi, Fundacion abril and Agua sustentable attend organizational meetings and peer-sessions. Maria Flores stresses that Fundacion abril, attempt to visualize the grassroot organisations publically instead of rewarding attention to the foundation.

8.2.2.3 Influence

Influence is evaluated according to the three sub-categories; *Leadership, Transparency and Evaluations*.

⁸⁸ Maria Flores[20140318]

⁸⁹ Maria Flores [20140318] Stefano Argüillaco[20140318]

⁹⁰ Giovana Canedo [20140305]

⁹¹Stefano Argüillaco[20140318]

8.2.2.3.1 Leadership

Maria Flores states that union and labour principles are important issues for the foundation, given that the founder, Oscar Olivera, is a former union leader. Recognition of existing knowledge of community associations, traditional knowledge of peasant and mining organizations is reported to be significant. Fundacion abril envisions direct and horizontal relationships with partners. Giovana Canedo reports that Agua Sustentable does not work with capacity building on leadership *as such*. Leaders and directories are, accordingly, capacitated to follow internal statutes and regulations according to control mechanisms that *conform to* the constitution of 2009⁹². CeVi reports to address leadership by virtue of proceeding from existing administration of the parental organizations. The high migration to peri-urban communities is something that Giovana Canedo mentions as a challenge for a *sustainable* management of the parental organizations. Directories change with every two years, thus capacity needs to be rebuilt regularly.

8.2.2.3.2 Transparency

Giovanna Canedo stresses that the strategy of capacity building towards institutions and social organisations on behalf of Agua sustentable, is an approach of transparency in the process of guaranteeing access to water services⁹³. In terms of economic transparency, Agua sustentable addresses a budget that is open for revision to the directory of the parental organizations. According to Flores, Fundacion abril initiate partnership by presenting available budget to the partnering organization. CeVi have annual reports and documented peer sessions available at the official website (CeVi Centro di Volontariato Internazionale, 2014).

8.2.2.3.3 Evaluations

Fundacion abril works with evaluations through consent building and mediation in peer-sessions, meetings and workshops⁹⁴. It's an approach that CeVi also reports to have⁹⁵. CeVi and Agua sustentable perform external evaluations of their projects. According to Flores, Fundacion abril create inter-agency committees for the implementation of projects, where a representative from the parental organization is involved to monitor and making remarks on accountability.

8.2.2.4 Gender and Indigenous Inclusivity

Fundacion abril and CeVi reportedly don't promote formal strategy programs or bye-laws to address gender and indigenous rights, since it is presumed to create exclusivity of other beneficiary groups⁹⁶. Fundacion abril has, accordingly, a record of initiatives to promote gender and indigenous inclusivity. One example is the Andean School of Water which is an initiative that was formed after the Cochabamba war to enable forums and workshops on cross-cultural themes that serve to recognize and spread traditional rural knowledge on water management, agricultural production and ecological rights. Agua sustentable has, according to Canedo, addressed female and indigenous inclusion since initiation. In 2010, a specific gender strategy was implemented to acknowledge and prevent barriers for female participation⁹⁷. Evaluation can be carried through workshops sessions in native languages, where performances can be assessed visually and orally.

⁹² Giovana Canedo [20140305]

⁹³ Giovana Canedo [20140305]

⁹⁴ Maria Flores [20140318]

⁹⁵ Stefano Argüillaco [20140318]

⁹⁶ Maria Flores [20140318]; Stefano Argüillaco [20140318]

⁹⁷ Giovana Canedo[20140305]

8.2.3 Transitions in public and private relations between NGOs working with social housing and their approach to Public participation

In this chapter, reported transitions in stakeholder relations for the studied sample set of NGOs working with social housing and basic services is presented. A mapping of these processes is to be found in appendix XI.

8.2.3.1 Transitions in relationship; Fundacion Pro-Habitat

According to Antonia Terraza, Fundacion Pro-Habitat began programming on small-scaled sanitary solutions in the peri-urban districts in 2001, due to demands from community organizations⁹⁸. Pro-Habitat was intending to address drinking water distribution at household levels. In 2003, there was a demand in district 14, for water distribution at community level. Agreements with the municipality were initially set to implement and manage water systems which, according to the director, implicated high costs for the beneficiaries. The foundation began operating in a Public Private Partnerships in 2003 to address technical and administrative capacitation. From 2009, cross-institutional work through the Public Private Partnership model became Pro-Habitats formal strategy. Drinking water management was coordinated with ASICA-SUUD and Aguaturya. From 2009 and Pro-Habitat decided upon ending all agreements with the municipality, due to dissatisfying experiences. In 2010 Pro Habitat made a transition to exclusively work on social housing and household services. Since 2011, they report to have an indirect relationship with families to grant loans for social housing. ASICA-SUUD has replaced the foundations work to administrate and manage the water systems by capacity of accessing governmental funds⁹⁹.

8.2.3.2 Transitions in relationship; Procasha

In 2006 Procasha and Foundation Pró-Habitat sent a collection of signatures for the proposal of the human right to housing to the government. Between 2008 and 2009 Procasha was, in collaboration with partner organizations of the RENASEH platform, active in policy making to add a new article to the constitution that recognizes the human right to housing¹⁰⁰. In 2009 the article was passed to the legislation. According to Landaeta, the state institution Ministry of housing that was implemented in 2007 has preferred quantitative goals over qualitative, as a means to implement social housing in Bolivia¹⁰¹. The inauguration of houses by the number of beneficiaries is a quantitative goal that is preferred over quality improvement in basic services, argues Landaeta. This has caused some implications to develop the cooperative housing strategy. The foundation reports to have good relationships with the municipal government, UN, the mother organization of cooperative housing in Bolivia and the regional ministry of autonomy. In 2013 funding on behalf of the Swedish cooperation agency ended. Landaeta reports that the foundation aspires to enhance the capacity of professionals to raise the question of cooperative housing and community involvement to a socio-political level in the future¹⁰².

8.2.3.3 Transitions in relationships; Habitat for Humanity

Habitat began programming in Cochabamba in 1997¹⁰³. They've worked through cross-institutional collaborations to implement or facilitate implementation of basic services in adequate housing. In 2005 Habitat for Humanity joined the RENASEH platform, and has since,

⁹⁸ Antonia Terrasaz[20130312]

⁹⁹ Antonia Terrasaz[20130312]

¹⁰⁰ Graciela Landaeta[20140329]

¹⁰¹ Graciela Landaeta[20140329]

¹⁰² Graciela Landaeta[20140329]

¹⁰³ Amigal Buzarra [20140319]

worked with policy making towards the state government for improved regulations for social housing. In 2008, Habitat for Humanity funded the implementation of a water and sanitary network in Procashas cooperative projects COVIVIR. In between 2009 and 2011 the organization was educating on female leadership for legal right to tenure and giving juridical assistance for the OTB organisations in the 9th district, together with partner organizations Fundacion Pro-Habitat and Ciudadania. The project was funded by UK-Aid that is, according to Buzarra, taking over the project. The current relationship that Habitat for Humanity has with other private organizations is through accommodating policy acts to for adequate housing¹⁰⁴. An agreement was set between the municipal government and the organization for improved right to female tenure, approved in 2012. In 2013 the Financial Services law was passed to the legislation, where a principle for provision to regulate lending rates and set minimum lending quotas for the productive sector and social housing is included (International Monetary Fund, 2014). Habitat was in the spring of 2014 discussing the legislative impact of the new law for public safety and land appropriation¹⁰⁵. Buzarra further explains that the foundation has altered its strategies over scale through the years to adopt more holistic approaches¹⁰⁶. The foundation is currently in the process of creating an institutional design to generate a line of access for adequate housing, where they call for support from local government for cost recoveries.

¹⁰⁴ Amigal Buzarra [20140319]

¹⁰⁵ Amigal Buzarra [20140319]

¹⁰⁶ Amigal Buzarra [20140319]

8.2.4 Comparison on community participation NGOs working with social housing

In this chapter, community participation aligning with framework Wilson & Wilde (2003) is presented. Representatives of the Fundación Pro-Hábitat, Procasha and Habitat for Humanity respond to how; *capacity development, communication, leadership, influence and gender/indigenous inclusivity* is addressed in the organization towards their partnering community based organizations (CBOs), clients or cooperative members. The questions formulated are available in appendix II. A mapping that analyses the entities according to the framework is presented in Appendix XIV.

8.2.4.1 Social Capacity and influence

The evaluation of social capacity and influence refers to three subcategories of social capacity and influence; Research, Risk management, Juridical assistance and leadership and Training.

8.2.4.1.1 Research

In recent years Habitat for Humanity is conducting projects to find other alternative materials for construction. Procasha has since 2010 collaborated with Water for People and the Division of Water, Environment and Technology at Chalmers University of technology, to study barriers and drivers to implement alternative solutions for sanitary techniques in informal settlements. Both foundations stress that the beneficiaries prefer conventional solutions over alternative¹⁰⁷.

8.2.4.1.2 Risk management

In coordination with the departmental risk committees led by local government, Habitat for Humanity works to anticipate risks in flood prone areas¹⁰⁸. None of the organizations report to have or provide specific insurance mechanisms for the construction processes.

8.2.4.1.3 Juridical assistance and leadership

Foundation Pró-Habitat, Habitat for Humanity and Procasha report to have record of working with adequate housing through juridical assistance and policy making, partially through the network of RENASEH¹⁰⁹. Procasha perform courses on civil rights, leadership, and advocacy on communication with public authorities for cooperative members. Terrasaz stresses that Fundación Pro Hábitat perform workshops on leadership- and equity building.

8.2.4.1.4 Training

Procasha and Fundación Pro Hábitat are active in social, technical and administrative training. They report to perform workshops on co-responsibility, rights and obligations. Habitat for Humanity, perform administrative and technical training through advisory consultancy. Habitat for Humanity administrates volunteering programs where families can be provided with labor capacity in the construction phase. Procasha is currently active in a project that to address *habitus* related issues such as illiteracy and social exclusion, by providing reading sessions with teachers and families. In collaboration with a private association that is working with food security, cooperative members can receive certificates for allotments to cultivate vegetables¹¹⁰.

8.2.4.2 Communication

There is a strong focus on professionalism on behalf of the Procasha institution¹¹¹. Landaeta argues that technicians need to have technical as well as socio-political knowledge about

¹⁰⁷ Graciela Landaeta[20140329]

¹⁰⁸ Amigal Buzarra [20140319]

¹⁰⁹ Landaeta, Graciela [20140329], Amigal Buzarra [20140319], Antonia Terrasaz[20130312]

¹¹⁰ Observation/ shadowing of Procasha[20140217]

¹¹¹ Landaeta, Graciela [20140329]

Bolivian society as well as down-to scale knowledge about communities, since many of the residents are migrants from rural or mining areas. Procasha is taking part in national and international platforms for professionals where cooperative members can exchange experiences. Workshops on materials, paintings, administration are, accordingly, also regularly performed within different projects. According to the bye-laws of the organization, *consent building* and *community participation* are fundamental for the planning, building and post-building phase. Habitat for Humanity stresses to regularly have *direct* contact, principally, with each individual client/household through advisory consultancy and training, which is a working principle that Fundación Pro-Hábitat also practices¹¹². As oppose to Procasha, Foundation Pró-Habitat denounces that professionalism is a barrier to establish confidence from their clients. Fundación Pro-Hábitat is reported to have an *in direct* contact through ASICA-SUUD with family member and associations that have been benefited with drinking water systems¹¹³. Procasha communicate with community members through the local neighborhood councils. The meetings are used for information spread to the community on future plans on behalf of the organization in the community¹¹⁴.

8.2.4.2.1 Evaluation

Habitat for Humanity and Procasha announce for annual evaluations of their activities. Habitat for Humanity makes *internal evaluations* on the quality of administration according to a set of indicators¹¹⁵. A section of the foundation monitors resource allocations. Fundación Pro-Hábitat performs joint evaluations with community associations and families. Monitoring sessions are reported to always be included either through workshops, interviews and feedback sessions this strategy is practiced to minimize resource intensity. Procasha order extern valuations regularly where the quality is judged according to; level of comprehensiveness among members, the cooperation model as such and its labour principles. Habitat for Humanity regularly performs open revision towards donors and beneficiaries¹¹⁶. The official website publishes information on annual expenses and social network. Annual reports are, according to Buzarra, provided each year upon request.

8.2.4.2.2 Transparency

Procasha and Habitat for Humanity report to have information available on annual meetings and budget through their website and open revisions for donors and clients, upon their requests^{117 118}.

Fundación Pro Hábitat has, reportedly invested in digitized water meter system in 2008-2009, to enable automatic monitoring of the drinking water consumption of households in the areas they were funding community based drinking water management¹¹⁹. This is argued to have improved the administrative capacity of the committees and remove barriers for the economic management.

¹¹² Amigal Buzarra [20140319], AntoniaTerrasaz[20140306]

¹¹³ AntoniaTerrasaz[20140306]

¹¹⁴ Observation of Procasha [20140230]

¹¹⁵ Amigal Buzarra [20140319]

¹¹⁷ Graciél Landaeta [20140329]

¹¹⁸ Amigal Buzarra [20140319]

¹¹⁹ AntoniaTerrasaz[20140306]

8.2.4.3 *Inclusivity*

None of the organization report to have specific gender strategies, although all of the organizations have records of working with projects where female-headed households or cooperatives have been the implicit target groups.

8.2.5 Transitions in public and private relations between NGOs working with physical spread of water and sanitation and through PPP

In this chapter, general information on transitions in relationship with private and public actors is presented for the NGOs associated with physical spread of water and sanitary services. A mapping over transitions in stakeholder relations is presented in Appendix XII.

8.2.5.1 *Transitions in relationships Water for people*

Water for people began programming in 1997 in Cochabamba department. According to Claudia Cossio, employee at the organization between 2011 and 2012, Water for people was mainly active in interventions in each municipality in between the years of 1997-2007¹²⁰. From 2007 and on, Water for People has been focusing on strategic and integral programs in each municipality. From 2008, the organization began working with water and sanitation in the peri-urban district 9. UN-Habitat, Water for People and the municipality formed an alliance, proposing basic sanitation in two communities where eco-toilets and decentralized treatment plants have been implemented. Hilda Cuenta, former employee on behalf of WFP in Cochabamba, reports that the organization promotes work through non- normative strategies together with local organizations¹²¹. The official website of Water for People, confirms that this principle is formal in the organization since 2013 and attempts to address improved water coverage in communities according to bottom-up approach (Duey, 2013). In 2011 Water for People performed quality monitoring of household cisterns together with the Regional department of basic services by registering water trucks.

Since 2013, an alliance between Water for People, the municipality and SEMAPA, similar to the *Agua para todos* project of Aguaturya has been implemented (Senasba, 2011, p. 31). The program is called *Everyone forever*. Organizations with licenses can bind agreements to implement secondary networks¹²². The municipality is in charge of implementing the network at community level, and Water for People capacitate the management and administration of the decentralized water systems¹²³. Water for People's target for 2013 was to improve sanitation coverage by transitioning from being financial to technical support (Agua para el pueblo, 2014). Cossio, former employed at WFP, suggests that this represents a transition in co-funding sanitation with other organizations like Habitat for Humanity and UN-Habitat, to let private enterprises be in charge of the collection- and treatment services, meanwhile the WFP is in charge of technical capacitating families to implement bathrooms¹²⁴.

8.2.5.2 *Transitions in relationships Aguaturya*

Aguaturya began operating as an entity of the consortium *Plastiforte* in 2002. In between 2004 to 2010 had a private public partnership with SEMAPA, the municipality and UNDP through the program *Agua Para Todos*, where formalized organizations in various peri-urban districts could allocate funds according to the LPP to allocate water and service provision. Totally 4 376 houses were connected to the project in the district 4, 11, 9, 3, 5 and 8 in between 2004-2010 (Aguaturya, 2010, p. 5). According to the director, Gustavo Heredia, Aguaturya currently has agreements with the MMAYA and Senasba¹²⁵. According to the Heredia, Aguaturya would like to focus more on treatment and reuse of wastewater in the future, as there is great demand for technical solutions in that area¹²⁶.

¹²⁰ Claudia Cossio [20140227]

¹²¹ Hilda Cuenta, [20140205]

¹²² Claudia Cossio [20140227]

¹²³ Hilda Cuenta [20140205]

¹²⁴ Claudia Cossio [20140227]

¹²⁵ Gustavo Heredia(mail contact) [20140308]

¹²⁶ Gustavo Heredia(mail contact) [20140308]

8.2.6 Comparison on public participation NGOs working with physical spread of water and sanitation

8.2.6.1 Capacity

Water for people and Aguaturya *primarily* capacitate community based water organizations technically and administratively. Water For People is also coordinating activities with UN-Habitat and the municipality to address education on water and sanitation in municipal schools related to the paradigm of human right to water¹²⁷.

8.2.6.1.1 Influence

Water for People, reportedly organizes administrative committees together with local organizations. WFP defines the rate and the local population can choose other representatives to handle the economic management of water services. There are sometimes, accordingly, conflicts over charging rate and measured consumption¹²⁸. The parental organization has the responsibility to announce a judge and conflict manager.

8.2.6.1.2 Leadership building

Water for People arranges meetings regularly with community based water organizations during implementation processes¹²⁹. After implementation management training is, accordingly, practiced once or twice each month, upon demand. According to Hilda Cuenta, former employee at the office in Cochabamba, there are no normative frameworks when planning activities, they are jointly planned and practiced together with parental organization¹³⁰.

Aguaturya, reports that their principal role is to present designs for secondary network or treatment plants of a project, to be developed with the approval from the leaders. Leadership and institutional capacity building *as such* is hence the concern of the parental organization to develop or to strengthen.

8.2.6.1.3 Training

Aguaturya has an agreement with an educational institution called INFOCAL to give three courses per year on operation, maintenance, and system administration¹³¹. Some OTBs have been enrolled in programs earlier thus are trained to capacitate others with less experience. Aguaturya, reports that their principal role is to present designs for secondary network or treatment plants of a project, to be developed with the approval from the leaders. Leadership and organizational capacity building is hence the concern of the parental organization to develop or to strengthen.

8.2.6.2 Inclusivity

According to Gerardo Montana, inspections are made to see what organizations that can be enrolled in any of their programs, the organization needs to be formal and have a president¹³². Another condition is that the organizations are situated in peri-urban areas. Organizations in semi-rural are thus excluded. Cossio says that female participation is endorsed by Water for People although there is no specific gender strategy¹³³. Aguaturya has a record of working with a gender framework in the implementation of a decentralized waste water treatment plant in San Lomas de Pagador, district 14¹³⁴.

¹²⁷ Hilda Cuenta[20140205]

¹²⁸ Hilda Cuenta[20140205]

¹²⁹ Claudia Cossio[20140227]

¹³⁰ Hilda Cuenta[20140205]

¹³¹ Lourdes Valencia & Gerardo Montana [20140305]

¹³² Gerardo Montana [20140305]

¹³³ Claudia Cossio[20140227]

¹³⁴ Claudia Cossio[20140227]

8.2.6.3 Communication

Water for people report that they have regular direct contact with community based organisations and households¹³⁵. This approach is argued to enable collecting more representative information, according to Cossio. Aguatuya, principally, work directly with existing directories of an organization. The training is transferred through the institution of INFOCAL.

8.2.6.3.1 Manuals and website information

Aguatuya has enlisted information to organizations enrolled in programs as well as donors and visitors on their official website. Manuals for water quality monitoring, water tariffs and consumption rates, technical and economic management are available as well as project reports. Water for People have installed an android based information system to map identify locations where the organization has been programming and what sort of intervention they've done in order to facilitate information to donors and official visitors¹³⁶.

¹³⁵ Claudia Cossio[20140227]

¹³⁶ Claudia Cossio[20140227]

8.3 Key informant perspectives on challenges and opportunities for NGOs working to address water and sanitation in peri-urban Cochabamba

In this chapter the observations on the challenges and opportunities for NGOs to address peri-urban water- and sanitary management in the future is presented.

8.3.1 Perspectives from public/private actors on generic challenges and opportunities

Alfredo Duran from the faculty of agronomy at U.M.S.S argues that NGOs can get caught in conflicts over scale-provision in between large scale promoters, such as the municipal government, and community associations¹³⁷. Ortuno stresses, that there is an adverse perspective on large-scale incentives from small scale providers which is an issue that NGOs should address by facilitating cross-sectorial dialogue¹³⁸. She stresses that the NGOs should put pressure on the municipal authorities to implement regulatory mechanisms for control and surveillance of previous and future NGO interventions in peri-urban Cochabamba. Duran indicates that NGOs might face challenges in establishing permanent agreements and relationships with public institutions, given that they are primarily perceived as strategic short term partners¹³⁹.

Gonzalo Vargas and Escarley Torrico suggest that NGOs could adopt more comprehensive, holistic programs that serve to grasp the many aspects of water and sanitation, as a means to work independent from the state sanctioned water and sanitation programs¹⁴⁰¹⁴¹. Carlos Oropeza argues that there has been a heavy focus on knowledge building and strengthening organizations on behalf of some NGOs in recent year, that given the circumstances, might have served in vain;

“If, let’s say, Misicuni is further withheld, which will be reflected in the small systems, then what good will it do if the NGOs continue to work on strengthening, if there is no more water?”¹⁴²

Carlos Oropeza suggests that NGO interventions cannot guarantee the access to water without a multi-sectorial approach¹⁴³. The beneficiary community based organizations, could accordingly, benefit from managing a plan together with NGOs on water distribution for the southern districts.

Elizabeth Landaeta, sociologist with experience in rural development, reflects on some of the challenges NGOs are facing to address community development;

“We have a lot of people here with a different cultural matrix, that if trying to incorporate them into the mental array of development theory, it does not always work, I think the particular issue is the subject of engaging tools and technologies that are inadequate in the organized activities here that are not always disciplinary”¹⁴⁴

Ana Maria- Romero, the director at the Center of Environment at U.M.S.S, suggest that some of the major concerns for NGOs to operate in the future will be that of limited external funds¹⁴⁵.

¹³⁷ Alfredo Duran[20140317]

¹³⁸ Carola Ortuno

¹³⁹ Alfredo Duran[20140317]

¹⁴⁰ Escarley Torrico[20140222]

¹⁴¹ Gonzalo Vargas[20140320]

¹⁴² Carlos Oropeza[20140320]

¹⁴³ Carlos Oropeza[20140320]

¹⁴⁴ Elizabeth Landaeta [20140325]

¹⁴⁵ Ana-Maria Romero[20140207]

Fix strategies and objectives are prone to cause challenges in terms of effectiveness and resource intensity, thus NGOs could possibly benefit from binding agreements with local institutions and adjusting their objectives at sites with existing networks.

8.3.2 NGOs

According to Montana of Aguatuya, a diagnosis has been made that identified a large proportion of the 700 committees situated between the districts of Sacaba and Quillacollo, to be administratively and technically malfunctioning¹⁴⁶. Aguatuya has made an agreement with SEMAPA to address the high demand for drinking water and enhanced capacity of organizations that want to enroll. Aguatuya stress that their interventions have implicated some challenges for the organizations and their beneficiaries in enrolling and co-financing¹⁴⁷. In this matter, charges have previously been covered to 50 % by funds from Swedish government and 50 % from beneficiaries, which has been a solution that the organization has favoured. In 2013 bilateral aid from Sweden was cut.

Landaeta stresses that the Bolivian society is very politicized, which is reflected in the group behavior of the communities¹⁴⁸. The Bolivian state is argued to not associate good outcomes with a cooperative housing model, which is why the foundation has relied on private donors, such as Habitat for Humanity, to allocate funds. Amigal Buzarra of Habitat for Humanity claims that there has been a gradual trend in demands favoring *self-help* over *mutual-aid* as working principles for self-construction within the social housing sector¹⁴⁹.

Flores indicates that Fundacion abril has had a politicized profile since start, rooted in a mining union tradition, which is an image that the organization would like to tone down and focus more on the *needs* of their beneficiary organizations¹⁵⁰

¹⁴⁶ Geraldo Montana; Lourdes Valencia [20140305]

¹⁴⁷ Geraldo Montana; Lourdes Valencia [20140305]

¹⁴⁸ Graciela Landaeta [20140329]

¹⁴⁹ Amigal Buzarra [20140319]

¹⁵⁰ Maria Flores [20140305]

8.3.3 Community associations perspectives in D9, D14, D8

In this chapter a set of perspectives on some of NGO interventions from a sample of beneficiary organizations of the study, are presented.

8.3.3.1.1 Water committee district 8

The president of the drinking water association in district 8 has, accordingly, collaborated with Fundacion abril since the late days of the Cochabamba water war¹⁵¹. The committee has also been in contact with Agua sustentable through the projects of PASAAS and Yaku al sur. According to a committee member, a conflict emerged in the end of the project that induced the separation between ASICA-SUUD and the Fundacion abril. It's argued that the conflict was never articulated in the final evaluation¹⁵². The committee is reported to be adrift from Fundacion abril and ASICA-SUUD since, although some relationship is sustained with ASICA-SUUD. In terms of demand for the future capacity improvement on behalf of Agua sustentable and Fundacion abril, the issue of waste water treatment and water reuse is addressed. The committee is expressing a desire for Fundacion abril to become less *politicized* in the matter of articulation and communication and to focus more on the *needs* of their beneficiary organizations¹⁵³. The committee further expresses concerns over the opening of Misicuni project, given the background that a mining law recently was passed to legislation, that is believed to benefit the mining sector before the opening of Misicuni¹⁵⁴.

8.3.3.1.2 A.P.A.A.S association District 14

The ex-president of the A.P.A.A.S association in district 14 raises concern over its institutional capacity in the future¹⁵⁵. The continuous migration to the district with its relatively young population implicates a need for regular knowledge building in the directory, as well as the community. He stresses that the quality of life in the communities have improved due to safer system and improved hygiene but that SEMAPAs projection of a network in the district can challenge the cost recovery of the drinking water system, as well as the institutional stability of the local association¹⁵⁶.

8.3.3.1.3 Water committee in Barrios Unidos District 14

According to an interviewee from the Water committee in Barrios Unido in District 14, the relationships with Foundation Pró-Habitat and Aguatuya has been characterized by compromises¹⁵⁷. The interviewee mentions that the water quality in the area has improved since the installement of the network and that they've gone through theoretical and practical training in water management and administration. The committee reports to have established *confidence* over time. In terms of capacity improvement, there is a desire on behalf of the directory on more *social support* on behalf of Aguatuya and Fundacion Pró-Habitat to ease dialogue with public authorities at the benefit of the local associations in the district. A local association called SISASPA is, accordingly, going through difficulties with appliance for registration¹⁵⁸. Increased cost-recovery on behalf of the organizations is also desired, given the background that some other associations in the districts are at risk of going bankrupt.

¹⁵¹ Interviewee 4 [20140328]

¹⁵² Interviewee 4 [20140328]

¹⁵³ Interviewee 4 [20140328]

¹⁵⁴ Interviewee 4 [20140328]

¹⁵⁵ Interviewee 1 [20140322]

¹⁵⁶ Interviewee 1 [20140322]

¹⁵⁷ Interviewee 2[20140315]

¹⁵⁸ Interviewee 2[20140315]

8.3.3.1.4 Water organizations in Los Pinos and Ichocullo District 9

According to the interviewee, WFP regularly visits the organization, but the community association finds it hard to contact the office in Cochabamba since the change in directory¹⁵⁹. There is a desire for increased support in the supervision and control of water quantity in the cisterns, as well increased training on chlorination dosage as well as cost recovery for chlorination. Another associate member report that the community is in need of improved sanitation. ASICA-SUUD and Aguaturya were programming prior to Water for People in the district, and the directory is reported to have had bad experiences with them, thus confidence in Water for People was initially very low¹⁶⁰. Water scarcity and poor water quality is something else that the interviewee reports to be of concern in the neighbourhood.

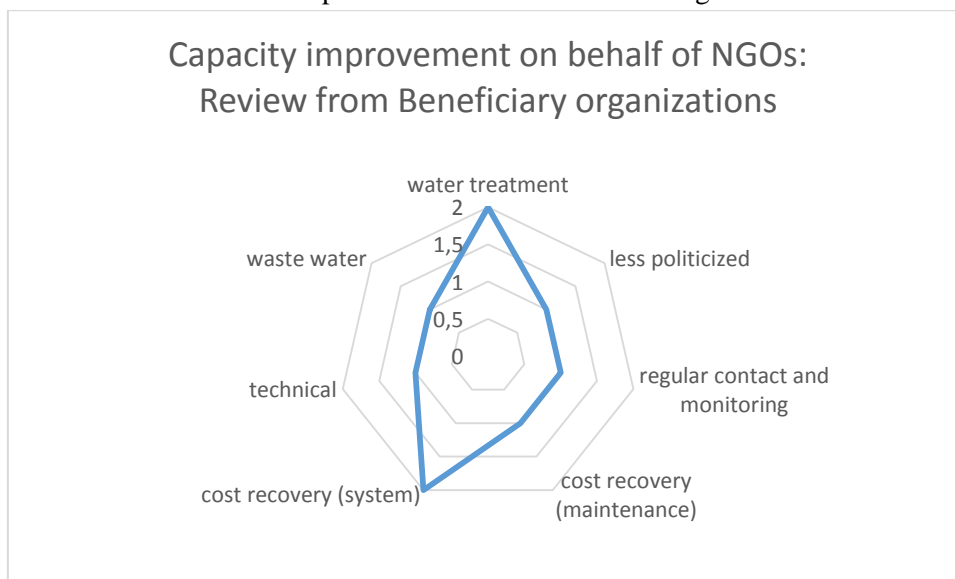


Figure 13 - View on capacity improvement of interviewed beneficiary organizations

¹⁵⁹ Interviewee 5 [20140303]

¹⁶⁰ Interviewee 5 [20140303]

9 Analysis

In this chapter, an evaluation is made on the approaches to *Public Participation* among the studied samples of NGO. This is followed by internal analysis on correlations between NGOs in terms of CPR-management, changing stakeholder relations and capacity improvement. The third subchapter consists of external validation of the case study results with correlating observations from other case studies.

9.1 Evaluation Public Participation and organization building of the NGOs

In appendixes XIII–XV, mappings of each individual NGOs approach to public participation and organization building is evaluated based on the information that has been presented in the study. The information is evaluated according to Wilson & Wilde's framework for community participation (2003) and CPR- theory. It attempts to indicate differences and similarities in how NGOs govern, communicate and address different indicators for public participation.

9.1.1 NGOs policy making and strengthening community associations

The analysis aims at indicating how NGOs address community participation according to the benchmark of Wilson & Wilde (2003). The NGOs are studied with regards to social aspects of capacitation, communication, influence and gender/ indigenous inclusivity (according to the 2009 constitution). A visual mapping of this evaluation is presented in appendix XIII.

9.1.1.1 Capacity

Capacity is evaluated with regards to sub-categories *Technology, Conflict management and Purpose of participation*.

9.1.1.1.1 Technology

CeVi, Agua Sustentable and Fundacion abril report that they would like to engage themselves more in to research in the future to enhance technical and institutional capacity of the organization, this could be associated with attempts to develop *capacity to support* the parental organizations.

9.1.1.1.2 Conflict management

In this context, Agua sustentable intervene as an actor that delivers *external solutions*, they contribute with proposals to the directory of the parental organizations on water resource management and administration *through* ASICA-SUUD. Fundacion abril and CeVi work according to principles of volunteerism and communal agenda, i.e. *mediate solutions*, they negotiate; develop designs and agendas together with parental organizations. When observing the organizational setup between the NGOs during the yaku al sur project, CeVi, Agua sustentable appears to have bonded *third party agreements* were Fundacion abril and CeVi were involved as *third party members* to mediate and facilitate cross-institutional dialogue. However ASICA-SUUD is a party that has *delegated responsibility* on behalf of Agua sustentable, i.e. have some *delegated power*.

9.1.1.1.3 Purpose of participation

Based on the key informant information, Agua sustentable primarily promotes public participation of beneficiary groups as a *purpose of its own* to *include* beneficiary organizations into decision making processes at cross-institutional level, thus to democratize decision making processes. Fundacion abril and CeVi, primarily address public participation as a *tool* to legitimize, incorporate values and enhance the knowledge of existing networks.

9.1.1.2 Communication

CeVi and Fundacion abril are, based on the information collected, having a *direct* relationship with the community associations. Since Agua sustentable mainly work with community organizations through ASICA-SUUR, they are considered to have established an *indirect* contact with them. Agua sustentable is performing *one-way communication* in terms of capacitating community directories and providing technical information. *Two-way communication* is enabled through the attendance and evaluation of workshops and peer-sessions. Fundacion abril and CeVi is in this model viewed to perform *two-way communication* by virtue of the platforms were knowledge exchange, social dialogue and workshops on technical training are practiced. Strategies, designs and projects are proposed together with parental organizations.

9.1.1.3 Influence – Degree of self-control

The degree of self-control and independence from NGO intervention, if looking at the objectives of the different NGOs and the strategies they implements, could be analyzed from various perspectives. It is possible to argue that there is a *legitimization* of the parental organizations on behalf of all three NGOs by virtue of proceeding from existing network in leadership questions, proposing designs and elaborate plans in conjunction with parental organization. The recognition and practice of existing leadership and administration indicates a *delegation of power* to the parental organization. However, Agua sustentable is primarily working through ASICA-SUUD, thus have *indirect contact* with beneficiary organizations. They delegate methodologies and information that, *per se*, need to comply with the constitution. CeVi is reported to have direct relationships with; the municipality, research institutes, NGOs and local community organizations¹⁶¹. The institutional strengthening of ASICA-SUUD in addition with associating other organizations to it, can implicate a *delegation of power* and *legitimacy* to ASICA-SUUD which can theoretically severe equitable stalemating with the community organizations.

9.1.1.4 Inclusivity (Gender and indigenous)

The high migration to peri-urban communities is something that Giovana Canedo mentions as a challenge for sustainable management of community organizations¹⁶². The dynamics however indicates that there is a diversity that, given enabling conditions, can be reflected in the directories, given that various parts of the local communities can be selected. The gender strategy on behalf of Agua sustentable, can be assessed as an enabling mechanism for the diversity of the community to be socially represented. Fundacion abril, and CeVi however argue that this could implicate *imposed* policies on behalf of the extern organizations that could potentially exclude some beneficiaries¹⁶³.

¹⁶¹ Stefano Argüillaco[20140318]

¹⁶² Giovana Canedo[20140305]

¹⁶³¹⁶³ Maria Flores [20140318] Stefano Argüillaco[20140318]

9.1.2 NGOs working with social housing

In this chapter, an evaluation of community participation that is conform to the framework of Wilson & Wilde's (2003) is presented for the NGO samples working with social housing and basic services. A mapping over their approach to community participation is presented in Appendix XIV.

9.1.2.1 Adaptive capacity

Procasha and Habitat for Humanity emphasize professionalism and cross-institutional exchange of knowledge as activities that they wish to continue with to improve capacity on behalf of the organization. Habitat for Humanity, reports to stay active in policy making to implement regulations that can facilitate credit for property right and basic services on behalf of government, however, clients are not reported to be included to participate in these processes.

9.1.2.2 Level of self-control

Internal regulation or self-control of all beneficiary organizations is promoted for all operations supported by Foundation Pró-Habitat, once a project is completed¹⁶⁴. On the matter of drinking water distribution, Foundation Pró-Habitat have *delegated power* to ASICA-SUUD, thus have transferred all administrative and monitoring capacity to them, since 2009. This *indirect* relationship with the community association implicates that the level of participation for the community members and parental organizations can be sub-oriented to ASICA-SUUD which can challenge their degree of *legitimization*. This regime can be further challenging since the parental organization is juridical and administratively dependent on ASICA-SUUD thus lack of capacity to mutually survey ASICA-SUUD.

9.1.2.3 Purpose of participation and regulation of commodity

All three organizations report to have multidisciplinary approaches to capacitate their clients or cooperative members although the *participatory governance* practiced by the organizations are varying significantly. Habitat for Humanity and Fundación Pro Hábitat address participation as *a means* to implement adequate housing and basic services, they also refer to its beneficiaries as “clients” at, principally, household level. *Individual participation* to regulate property is addressed, by the latter organizations, over *communal participation* to regulate property. Procasha has participatory governance as *a means* to enhance *habitus related* issues, i.e. aspire to improve and sustain the quality of life at community level, thus communal participation is a *pre-requisite* for successful implementation of adequate housing¹⁶⁵. Participation according to the labour principles of mutual aid and self-help can in this sense be regarded as an objective to fulfill *cooperativism* as well as a *purpose of its own*. At one hand participation serves to *incorporate values* and *legitimize* cooperative members at multiple level of decision making. On the other hand, the strategies serve to democratize decision-making processes¹⁶⁶.

9.1.2.4 Stable solutions for participation

According to the execute director of Habitat for Humanity, there has been a transition in trend of construction strategies in recent years from their clients; from self-help and mutual aid and cooperative, to self-construction for individual households¹⁶⁷. The director of Procasha argues that individualism as a mental legacy, per se, is a barrier to successfully convict and implement the cooperative housing model¹⁶⁸. She argues that the Bolivian state doesn't associate the

¹⁶⁴ Antonia Terrasaz[20140312]

¹⁶⁵ Graciela Landaeta[20140323]

¹⁶⁶ Graciela Landaeta[20140323]

¹⁶⁷ Amigal Buzarra [20140319]

¹⁶⁸ Graciela Landaeta[20140329]

cooperative model with beneficial outcomes, since the foundation has been in the process of protracted projects. The perspective on successful social housing is argued to be less systematic than that of the state, and the foundation define their goals and objectives by qualitative measures. The collective housing model is promoted, since it is argued not to put the beneficiary at debt, i.e. it lacks of economic *sanctioning mechanisms*. Subsequently, this strategy pre-requisites a high level of commitment on behalf of involved stakeholders in order to develop (Lundqvist, 2004, p. 40). Habitat and Fundación Pro-Hábitat have economic sanctioning mechanisms in the shape of capital costs¹⁶⁹.

It is further difficult to identify a generic degree of *self-control* or *level of legitimization* among the beneficiary clients and members of the three organizations, based on the sampled information.

9.1.2.5 Communication

All three organizations practice *direct* and *two-way communication* with their beneficiaries either through individual consultancy (Habitat for Humanity and Fundación Pro Hábitat) or through neighboring councils and cooperative meetings (Procasha). The evaluations performed on behalf of Habitat for Humanity are principally *one-way directed* and *internal*. Since Foundation Pró-Habitat has delegated power to ASICA-SUUD for drinking water management in 2009, it no longer has a direct contact, thus, *two-way communication* is not practiced with this beneficiary group.

9.1.3 NGOs physical spread of water and sanitation and PPP

In this subchapter, NGOs Water for People and Aguaturya are studied in terms of approaches to community participation. A mapping of the entities that conform to the framework of Wilson & Wilde's (2003) is presented in Appendix XV.

9.1.3.1 Capacity

Aguaturya and Water for people primarily address the *technical* and *administrative* aspects of implementing and managing secondary water networks. When analyzing the progress of their work during the 21st century, a gradual transition towards increased collaboration with SEMAPA, municipal department and the preference of OTB organizations over other associations, are noticeable. Both organizations address organizational strengthening and conflict management as concerns for the beneficiary organizations to *internally regulate*. Water for People addresses programming according to objectives and strategies that have been coordinated together with the parental organization. This implicates some *legitimization* of the existing network. The parental organizations do, however, not have *social control* over the charge and consumption rates. Aguaturya reportedly argues that they operate on demand from organizations, whereupon they present designs and plans for implementation of network that can be approved. Organizations with juridical recognition, financial capacity, and president can further be approved to join and go through capacitation in administration and management. According to the coordinator Moneda, the cost recoveries for some beneficiary districts in *Quillacollo* and *Sacaba* were previously reduced to 50% by funds from Swedish Government that has been addressed to a halt in 2013 when bilateral funding from Sweden was cut. This is argued to be one of the *challenges* to address for the organization. If the costs are too high this could implicate that some beneficiary organizations cannot be financially capacitated to maintain and upgrade their systems. According to the director Heredia, Aguaturya reports to address waste water issues and water treatment as a target for capacity improvement¹⁷⁰.

9.1.3.2 Influence

Aguaturya *delegates power* to perform administrative and technical capacity building of beneficiary organizations to an external institution; INFOCAL. Through INFOCAL, capacity enhancement is, somewhat, delegated to *experienced organizations* to teach other with no previous experience in enrolling in their programs.

9.1.3.3 Purpose of participation

The strategies of Water for People, to involve parental organization in the planning of objectives and strategies, is partially argued to be an efficient way of working¹⁷¹. The purpose of involving beneficiary groups can serve partially as a *purpose of its own* and as a means to democratize decision making processes, although the organizations cannot decide the charges and rates themselves. They can also be associated with tools to *incorporate* values and enhance the knowledge of existing networks.

9.1.3.4 Communication

Agua Tuya communicates directly with the directories of the parental organizations in a community. They *delegate power* to perform capacity building to an external institution, INFOCAL. Through INFOCAL, power is further *delegated* to experienced organizations to capacitate organizations with no previous experience in enrolling in their programs. The administrative and management training is transferred indirectly from Agua Tuya to its beneficiaries. Manuals and information available on the official website also implicate an

¹⁷⁰ Gustavo Heredia[20140308] (email)

¹⁷¹ Claudia Cossio[20140207]

indirect *one-way communication* with organizations that can create barriers if there is no regular contact between the parties. Aguatuyas programs are demand driven, thus information and are suggested to be delivered upon request.

9.1.3.5 Inlusiveness (Gender)

Both organizations report to have worked with gender inclusivity in different forms. With the implementation of the waste water treatment plant in San Lomas Pagador (2012) in district 14, that was funded by the the Swedish government, Aguatuya carried out evaluations based on painting workshops *exclusively* for female community members.

9.2 Internal validation of results

In this chapter, the correlating findings between studied NGOs are analysed according to CPR-management theory and archival records.

9.2.1 Conflict resolution

Carola Ortuno *indicates* that scenarios where NGOs *interact* to facilitate consensus at cross-sectorial scale, i. e. make agreements on conflict resolution could be a good prospect for NGOs¹⁷².

Duran mentions that NGOs could get *caught* in several conflicts if addressing cross-institutional dialogue through third party agreements, referring to the large number of different interest groups that acquire for common pool resources; the Misicuni project, as well as groundwater distribution and land appropriation¹⁷³. According to *Ostroms eighth design principle; external solutions* are suggested in cases where there is a high incidence of stakeholders acquiring a mutual water source for different purposes (Lundqvist, 2004, p. 75). This is based on the assumption that all stakeholders are driven by their self-interest, thus are likely to be subjected to the *Prisoner's dilemma* if they cannot make satisfying agreements internally. Administrative decisions based on law and regulation is another type of *external solution* that could be proposed. The conditions to practice this type of external solutions are; well-defined resource-oriented and utility-oriented principles in the legislative framework.

Duran stresses that NGOs, *theoretically*, could put pressure on authorities to bind collective agreements, enable surveillance and sanction mechanisms. However, public institutions are argued to prefer permanent relationships with public institutions over private or external institutions¹⁷⁴. In addition Ramiro Rioz confirms that the municipality is not interested in collectively agreeing on strategies with the NGOs, and refers to *co-gestion* as NGOs conforming to the existing municipal plan¹⁷⁵.

When studying the relationship between the sampling set of NGOs and their relations to small scale provides groups, Agua sustentable stands out as an installer of external solutions through the method of delivering administrative and juridical decisions based on law and regulations to regulate resource use, for the directories of community associations. Fundacion abril and CeVi, practice mediation by working with models that implicate equitable stalemating, having informal procedures and non-normative approaches processed together with involved community associations. Canedo suggests that Agua sustentable is on the trajectory of working more on surveys to joint actors at cross-sectorial scale, which can be regarded as an attempt to address conflict resolution¹⁷⁶. The study has also highlighted that Fundacion abril have come adrift from some other partner institutions after the Yaku al sur project. The theory of conflict resolution highlights that some of the difficulties with mediation is that mediators do not always have control over their members so that they're able to mobilize them into the advised solutions, and at times processes and behaviours are not predictable (Lundqvist, 2004, p. 42). The power relations between all involved parties can also hamper negotiations, since it implicates that different actors can have different starting positions (ibid).

Water for People mention that they work through non-normative approaches, however, they regulate the tariffs and administration and address that the parental directory should address conflicts internally¹⁷⁷.

¹⁷² Carola Ortuno[20140422]

¹⁷⁴ Alfredo Duran [20140320]

¹⁷⁵ Ramiro Rioz[20140321]

¹⁷⁶ Giovana Canedo[20140305]

¹⁷⁷ Hilda Cuenta [20140205]

Procasha has reportedly also bonded third party agreements for collective ownership of housing with the heirs of cooperative members (Fundacion Procasha, 2014). They, similarly work through consent building and volunteerism, but have normative approaches and strategies to incorporate in order to fruitfully implement collective housing. The other NGOs report that the community water organizations should address conflict management *internally*. *Table 1* outlines the characteristic conflict resolution schedules of the studied NGOs.

NGO	Internal solution	External solution	Mediation
Fundacion abril			(*)
CeVi			(*)
Agua sustentable		(*)	
Procasha		(*)	
Habitat for Humanity			
Foundation Pró Habitat	(*)		
Water for People	(*)		
Aguatuya	(*)		

Table 3 - Approach to conflict resolution among sampled NGOs

9.2.2 Power relations

Legitimization of the community organization and their *degree of self-regulation* practiced by NGOs need to be analyzed with relation to ASICA-SUUD. *Table 4* on page 91 shows, some indicators of power relations between NGOs and ASICA-SUUD in recent years. ASICA-SUUD was, reportedly, created to be an umbrella organization for other community based water committees¹⁷⁸. Since the end of the Yaku al sur project, there has been one confirmed separation between one of the NGOs and ASICA-SUUD. Three key informants emphasize that NGO interventions have been reduced to address water provision in the peri-urban districts in recent years¹⁷⁹. ASICA-SUUD report to currently work less with NGOs and more with the municipal government¹⁸⁰. When analysing the results, several key informants of the NGO samples confirm that they have either worked *through* ASICA-SUUD or *delegated power* to ASICA-SUUD to address drinking water management with water committees in peri-urban Cochabamba. CeVi is reportedly, institutionally strengthening ASICA-SUUD meanwhile associating other committees to it¹⁸¹.

¹⁷⁸ Maria Flores[20140318]

¹⁷⁹ ¹⁷⁹ Gonzalo Vargas ; Carlos Crespo; Escarley Torrico [20140320]; [20140310]; [20140221]

¹⁸⁰ Carlos Oropeza[20140320]

	Delegated power and/or communication	Associates water committees to A- SUUD	Co- ordination of activities	Separation
<i>Fundación Pro-Hábitat</i>	(+)			
<i>CeVi</i>		(+)	(+)	
<i>Agua sustentable</i>			(+)	
<i>Fundacion abril</i>			(2004-2012)	(+)

Table 4 - Power relations between sampled NGOs and ASICA-SUUD on water resource management

9.2.3 Transitions in relationships and interventions

Among the NGOs that have been active in the policy making and institutional strengthening of community organisations, CeVi and Agua sustentable report to have direct relationships with several public authorities and municipal government. CeVi, is accordingly trying to link between the interests of the community based water committees, SEMAPA, ASICA-SUUD, the Municipal government and local Research institutes. Fundacion abril has currently a direct relationship with the Ministry of irrigation, SENARI, and the Agrarian communities in semi-rural municipalities of Cochabamba¹⁸². Aguatuya had agreements with the Municipality and SEMAPA from 2004-2010 in the *Water for all*-project. Now Water for people is involved in a program together with the municipal government and SEMAPA that is similar to that of Water for all. The key informants of the studied samples of NGOs don't report to currently have a strong relationship or coordination in between each other.

9.2.3.1 Financial capacity

Several key informants report that NGOs funding is decreasing or is marginal in relation to the programs that are carried out on behalf of the national government. The Swedish Government has cut all bilateral aid to Bolivia from 2013, which is something that seemingly has affected two of the studied NGO objects, Procasha and Aguatuya¹⁸³.

9.2.3.2 Capacity improvement

Several NGOs that have been active in policy making report to address capacity improvement in other areas, thus a transition in focus is proposed towards *technical capacitation* and *conflict management*. Some NGOs of the study that report to have installed *sanctioning mechanisms* in the shape of capital costs, could theoretically have presumed that it is a guarantee for *desired* repayment from beneficiary. However, in terms of improved capacitation, cost recovery is something that three of the NGOs report to approach, with hopes on external donors or governments to cover¹⁸⁴.

¹⁸² Maria Flores [20140318]

¹⁸³ Graciela Landaeta[20140323]; Gustavo Moneda[20140305]

¹⁸⁴ Amigal Buzarra (Habitat for Humanity); Gustavo Moneda(Aguatuya) [20140305]

Future capacity improvement	Water Treatment	Technical	Research-related	Conflict-resolution	Cost recovery	Policy impact	Socio-politics
NGO							
Agua sustentable			(+)	(+)			
Fundacion abril		(+)					
CeVi		(+)					
Procasha		(+)					(+)
Habitat for Humanity					(+)	(+)	
Fundación Pro Hábitat					(+)		
Water for people							
AguaTuya	(+)				(+)		

Table 5 -Future capacity improvement of sampled NGO

The future capacity improvement that the NGOs are reported to commit to, shown in *Table 3*, indicates that there is a transition in intervention among the NGOs that have been characterized by working with cross-institutional policy making for water rights and strengthening of small-scale systems since the water war. They report to address improved collaboration with research institutes to endorse technical and research capacity in the future (Fundacion abril, CeVi and Agua sustentable). This trend corresponds with the more pragmatic approach on policy making on behalf research institutes; from attempts to work on regulations for water rights, to gradually focus on implementing principles for effective water resource management¹⁸⁵.

Among the NGOs working on social housing, it becomes apparent that the NGOs are currently giving *lower priority* to implement basic service (mainly drinking water) although Fundación Pro Hábitat is actively working with micro credit solution in sanitation for peri-urban low income families.

Whereas Procasha claims to address the issue of collective housing to a *political level* as a future challenge, Habitat for Humanity are trying to address financial policy impact through cost recovery on behalf of municipal government¹⁸⁶.

Another correlation between two NGO samples are that of Agua Tuya and Water for People previously had or currently has agreements with the municipality and SEMAPA to implement secondary networks with *higher priority* to organizations that can allocate funds from the Law of Public Participation.

¹⁸⁵ Rocio Bustamante [20140317]

¹⁸⁶ Graciela Landaeta[20140323] Amigal Buzarra [20140319]

9.2.4 Community development

Hereunder, the NGOs of the case study are compared in terms of interventions at scale and their efforts to promote self-regulation, based on the results presented in chapter 8.

9.2.4.1 Programming in Scale

A mapping of the studied NGOs interventions at scale for water and sanitation is listed in table 4 below. The letter C denotes *Community*, and refers to the NGOs that address upgrading water and sanitary upgrade at community level, either through a local association or with community members in a cooperative. The letter H stands for *Household level* and refers to NGOs that address the upgrade of drinking water or sanitation for individual families in a community. What distinguishes the different entities is that sanitary solutions are exclusively addressed at household level.

NGO	Water	Sanitation	Scale
Agua sustentable	C		C
Fundación abril	C		C
CeVi	C		C
Fundación Pro-Hábitat	no longer	H	H
Habitat for Humanity	H	H	H
Procasha	C	H	C/H
Water for People	C	H	H
Aguatuya	C		

Table 6 -The scale of provision among sampled NGOs

9.2.4.2 Level of self-regulation

Based on the very qualitative assessments on community participatory approaches; Procasha, Fundación abril and CeVi as well as Water for People emerge as the NGOs with most pronounced attempts to practice *stakeholder participation*, thus to include community members and organizations in the implementation-as well as decision making processes over water management and rights to access drinking water and basic services. Agua Sustentable and Procasha appear to be the NGOs that address public participation as *a tool* to enhance knowledge and incorporate values of right to water and housing, as well as a *purpose of its own*. It is however, difficult to outline a specific degree of legitimization that the NGOs attribute their beneficiary organizations/members from the descriptive scenarios and mappings.

9.3 External Validation of results

In this chapter, observations from other case studies and archival records that confirm and correlate with the result and analysis chapter of this case study, are presented.

9.4 ASICA-SUUD and peri-urban community associations

According to the Final evaluation of the *Yaku al sur* project, reserved by CeVI, the project managed to strengthen the capacity of organization and enhance participative management among the community systems (CeVi, 2013, pp. 33-34). The outcome, was, however, lower than expected. According to the evaluation, ASICA-SUUD was strengthened as a technical instance; it is argued to have politically and organizationally been consolidated in its role as a representative for the community based systems. The evaluation states however, that the local influence over public policies and investment didn't make an impact, which is reflecting an adverse relation to municipal government. It is stressed that this could pose a major challenge to put advocacy processes forward. The paper states that, despite that there is no information to establish the generic *view of the citizens* (in the peri-urban districts) on the agreement between Misicuni and SEMAPA, the generic perception of the community leaders was quite negative. It is further concluded that the general perception among leaders of the water committees on the impact of self-regulation was adverse or that it even had slightly reduced since the initiation of the project. ASICA-SUUD is reported to have experienced difficulties during the time in which the project was running, which is associated with mainly contextual factors (ibid).

According to Walnycki, four communities were selected each year to work with ASICA-SUUD- EPSAS during the *Yaku al sur* project, which implicated a favoring of those linked with the association over potential beneficiaries (Walnycki, 2013, p. 185). The author further stresses that the new local water systems associated to ASICA-SUUD, have not necessarily represented more than one third of the peri-urban committees. Some other associations have since joined local, local peasant organizations and syndicates in rural and semi-rural regions of Cochabamba (ibid).

Walnycki (2013) reports that the ASICA-SUUD EPSAS have raised concerns over the system of licenses and registries given the background that heavy strengthening in decentralized infrastructure has created a sense of entitlement to access water among the community associations (Walnycki, 2013, p. 44). In the directory of ASICASUUD, two representatives are working for an organization that administers licenses and registries that encourages communities to sign up (ibid).

The scholar further argues that ASICASUDD-EPSAS has established a closer relationship to the state in recent years with the aspiration of improving capacity of the drinking water committees, (Walnycki, 2013, p. 135). Over time ASICA-SUUD is argued to have developed some political agency in peri-urban communities by trying to make compromises between large-scale and small scale interventions (ibid).

9.5 Conflict scenarios in peri-urban communities and NGO coordination

Walnycki (2013) claims that there has been limited research carried out on the impact of legal water rights to peri-urban water organizations, although a higher incidence of conflicts among community operators, domestic and agricultural sector has been identified in the research of Bustamante, when granting legal rights to *rural* communities that share same watersheds (Walnycki, 2013, p. 44).

Incidents are reported to have occurred in neighbouring communities that are confined to a mutual aquifer or where some communities pipe the water over. Due to rapid urbanization,

some communities have decided upon enclosing access to the aquifers conform to the community boundaries whereupon conflicts have emerged (ibid).

The legality of OTB organizations is stressed to implicate exclusiveness of other organization as potential collaborators to NGOs, since they can manage funding through the Law of Public participation. This is an observation that several sources mention¹⁸⁷ (Nijenhuis, 2002) (González, 2011, p. 167) (Walnycki, 2013), (Marston, 2014)

The community-run water organizations in peri-urban Cochabamba are argued to favour small-scale provision, a preference supposedly derived from the water war conflicts in the beginning of the centuries that were partially instigated by water committees (Marston, 2013). Some associations are argued to rhetorically promote autonomous water provision, decision making and maintenance of infrastructure meanwhile having delegated power to SEMAPA for distributing water in bulks. It could also be associated with an emerging resistance towards SEMAPAS and the municipal and national government efforts in the post-war process, reports Walnycki. There is however no defined co-management model between SEMAPA and the small-scale providers, although SEMAPA is reported to have a poor reputation between many community associations (Minelli, 2012).

The water committees could engage themselves more with NGOs as a solution to sustain autonomy from SEMAPA and the municipal government, argues (Marston, 2014) although they might get caught in controversy over their autonomy by adjusting their practices to fit international rhetoric about efficiency, sustainability, and social equity. Marston further argues that just as scale-provision is not predetermined, local water associations are not politically neutral (Marston, 2014).

A mapping of NGO interventions to upgrade water and sanitation in peri-urban communities, from 2001 to 2013, conducted by the scholar Walnycki (2013), was argued to left much to desire in terms of comprehending the spread and impact of NGO interventions (Walnycki, 2013, pp. 183-184). Some NGOs are suggested to work in the peri-urban communities together with ASICA-SUUD and the local drinking water committees, while some, like Water for People, work closer to the municipality. There is however, accordingly, little connection in between them, or knowledge about other's interventions. Walnycki (2013) draws the conclusion that NGOs work with certain partner organizations *by preference* and that some partnerships and alliances exclude other. It is further argued that this preference implicates that the interventions don't necessarily reflect where access to water and sanitation is most deficit, but the pre-existing networks and objectives of the NGOs (ibid).

¹⁸⁷ Escarley Torrico[20140221]

10 Discussion

In this chapter, the findings of the study and the analysis is discussed with reference to the aim of the study and with support from information retrieved from archival records.

10.1 Formative moments

Studying the results of the study, the one thing that becomes apparent is that the Bolivian society is complex and has gone through many transformations at cross-sectorial levels that are reflected in the *behaviour* of the public institutions and the structure of social participation. The initial aim of studying NGO interventions with regards to community participation and relations to CBOs was adjusted to take into account aspects of institutional reform processes, legislation, central government, donor interests, as well as behaviour of all stakeholders involved in order to give a comprehensive context. There is little research done on specific NGOs and their impact as partners to other local actors, over time. This case study has hopefully highlighted some crucial events and processes that have been of relevance for the development of water sector in Cochabamba in recent years, not just at community level, but even at institutional level. The issues that have been addressed by several key informants are more or less *interrelated* rather than *isolated events* with their own impacts on processes. Conflicts, water scarcity and the issue over scaling-up water and sanitary services can be associated with regional events such as; Misicuni project, the private concession and the following Cochabamba war. The post-water war effect on SEMAPAs was argued to have initiated dialogues between the grassroots movements and the company that came to decline in 2004, when ASICA-SUUD was established. During the following years, SEMAPA was reported to focus on strengthening of the company.

These processes can also be associated with events with impact on the national water sector; Law of Popular Participation, the acts and adjustment to the water legislation before and after the water war (act 2029 and 2066) and transitions in national governance. The MAS-government and its national water plan (2008-2015) has by scholars like Susan Spronk (2013) been accused of being populist, corrupt and inefficient. Waves in aid governances and expectations from foreign donor agencies can also have characterized the impact of the national water programs.

10.2 Autonomy and conflicts over scale

The collective memory of SEMAPAs role during the privatization process is reflected in the distrust among population to increase scalar provision of drinking water. At the same time, little or no attention is given to large scale waste water treatment and sanitation. The public investments are reported to have increased in a time where several higher tier institutions have been implemented with the task to survey, monitor and guarantee water rights and fulfil millennium development targets, although accountability over agreements, conflict resolution and social representation is argued to be vague. The call for autonomous regulation can be associated with a resistance against privatization reforms that took a leap after Cochabamba water war. The discourse in the following years was, according to Bustamante, focused on acknowledging water, not as a commodity but a common resource, a socio-political current embraced by NGOs, research institutes and grass root movements with further impact in the policy making in the first decade of the 21st century. This has subsequently been invoked in the popular rhetoric of the MAS government, and the constitutional support for self-regulation and decentralization. The administration is however accused of being centralistic, neo-liberal in its extraction policies, inefficient and reliant on external funding to enhance development in the water and sanitary sector.

The NGOs could be argued to add to the conflict over resource management, by principally, favouring provision at small scale, and the strengthening systems that are at risk of putting organizations and community members at high write-offs and debts if relying on Misicuni as the main water source.

10.3 Public institutions and resource management

The increase in public administration could reflect an inefficiency of the new institutions, given that they are installed to support and grant registries and licenses according to the constitution, when, by logic, institutions are not in capacity of guaranteeing the *existence* of serviceable water resources. The prisoner's dilemma in this context reflects problems at several dimensions. The right to *self-organize* and *be recognized* is a principle for stable CPR-management. However, given that increased number of registries and contracts to community providers, can be associated with a higher incidence of conflicts, central municipal bodies need to address conflict resolution. Agreements between municipality and community associations where NGOs intervene either as mediators could, theoretically, mitigate conflicts at cross-scale. In a worst case scenario, negotiations are hampered, i.e. the *transaction costs* in the negotiation processes are too high to make fruitful decisions, which could implicate that the stakeholders behave differently than the mediator desire. A stable system for collective agreements implicate that involved parties are enabled to *mutually sanction-and survey* each other, which pre-requisites that the public institutions can be surveyed by extern parties. It also pre-requisite that social representation and public participation is not just invoked the legislative framework and in cross-sectorial decision-making processes as a *purpose of its own*, but *as a tool to fulfil* the paradigm of human right to water.

The transitions in policy making for water rights on research institutes appear to have turned from favouring social contracts to implement principles for effective and well defined principles for resource management, i.e. definitions of the usufruct and the *disposition of freedom* over the commons. *Resource* –and *utility* oriented rules could benefit from being adjustable with time and the degree of urbanization. The work reflects a pragmatic transposition towards how land and water resources need to be governed and managed to mitigate future problems, affected by the insecurities in resource distribution that are associated with the Misicuni project. In this sense, if NGOs address conflict resolution exclusively with small-scale provides, it could be a very temporary solution to address water related conflicts.

10.4 Well defined stakeholder roles

The scenarios above highlight the importance of literal communication. The ambiguity of SEMAPA after the posterior events in supporting decentralized systems, meanwhile strengthening the company can be notified by some key informants (Torrico, Flores) as well as from the extern case studies. If actors that coordinate work according to the municipal plan argue that this approach is the most pragmatic and sustainable for effective water management, than even rhetorically supporting and strengthening decentralized systems that are facing water scarcity could raise false hopes if there is an over reliance on the Misicuni-project to be the main water source.

ASICA-SUUD plays a key role in the small scale provision in peri-urban communities that is reportedly quite difficult. They appear to have got caught in to controversy over trying to compromise between large-scale and small scale providers. The directory is reported to have some connections to the authorities that grant licenses and registries, which could implicate a power relation that need to be studied deeper and that can be unfruitful for equitable stalemating with the local community associations.

10.5 NGOs future roles in addressing upgrading peri-urban water and sanitation

NGOs could potentially think of how they can address the matters of water and sanitation in a wider context and redefine their role in the above context. If there is, to this date, little coordination between the NGOs and lack of knowledge on their previous interventions, improved effort to share information and making collective agreements, if possible, through public entities, or internally to enable monitoring of NGO interventions.

The scale perspective is also important. Many of the NGOs that are targeting sanitation are primarily working at household level, whereas water is perceived as a community-oriented matter.

Cost-recovery is reported to be something that NGOs rely on state or foreign donors to address. There is a risk of putting beneficiary groups in economically challenging situations if the donors choose to withdraw from funding, as in the case of Aguatuya and the bilateral aid from Swedish government that was addressed to a halt in 2013. If these events correlate with a withheld Misicuni project, that could amplify conflicts.

NGOs working with social housing and basic services face challenges with high prices on urban land market and increased urbanization in peri-urban areas.

A large focus on result orientation and quantitative approach in the water and sanitary sector, endorsed by external donors, can implicate that NGOs can have relatively small impact on the development of the sector in relation to the programs funded by the state, or that NGOs will have to bind agreements with municipal authorities to collaborate without the opportunity of collectively propose, sanction an survey their actions.

If NGOs seek to establish independent initiatives to develop the sector, together with local groups and movements, the solution of working with decisions based on law and regulations could be an alternative. Increased informal settlements from migrants could implicate that the aspects of citizenship will be of even higher importance in the future. Enhanced focus on health improvement through education and introduction of alternative low-cost and small scaled sanitary solutions is also urgent to address in the future.

11 Conclusion

To sum up some of the important findings of the study and tracing them to the initial research questions;

- The case study's sample of NGOs working in Cochabamba with water and sanitation are mainly active in three categories; physical spread of water and sanitation with primarily administrative and technical capacities and priority of OTB organizations. Another category works with policy making for water rights, resource distribution and strengthening of small-scale systems administratively, technically, juridical and social assistance. A third category addresses water and sanitation as a basic service in adequate housing. Among the studied samples, water distribution is primarily addressed at community scale through a community association, whilst sanitation is addressed at household level.
- There is a correlation in activities and approaches among resource management research institutes and some NGOs; a gradual transition from working with policy making for water rights to small-scale providers after water war, towards working on regulations and solutions for effective resource management. This reflects a more pragmatic transposition towards water resource management.
- A large number of small-and large scale stakeholders are at risk of getting caught in conflicts over mutual land-and water resources, thus conflict resolution is urgent to address and will be of even greater concern if, for instance, the Misicuni project, will be withheld. This scenario, in addition with expelled funds from donors for cost-recovery of systems, could potentially amplify conflicts
- NGOs could intervene in conflict management through cross-institutional dialogue however are also at risk of getting caught in between conflict/ hamper decisions between different stakeholders if they cannot mobilize groups into a desired behaviour. Their resource capacity and power relations to different stakeholders, especially public authorities and ASICA-SUUD need to be taken into account since it is likely to reflect their ability to mediate.
- External solutions for conflict resolution are, theoretically, the best solution when binding agreements on collective resources with a large number of interest groups, like in the case of Misicuni. This could be implemented through decisions based on legislations to institutions and small-scale provider, which is something that Agua Sustentable is reportedly doing. However, this pre-requisite that the legislation is well-defined and that involved actors can mutually survey and sanction each-other and collectively agree on solutions.
- NGOs could improve monitoring by donors putting pressure on coordination and public authorities on sharing information through a memory bank over past interventions regulated by public authorities. This pre-requisite that they, as institutions, also are open to mutual surveillance and sanctioning.
- Knowledge building on water and land- resource management and citizen right for migrants could be a gate-keeper for NGOs in the future, given the background that migration and informal settlements are steadily increasing and that. Increased knowledge building on water resource management for community associations can, according to CPR-theory, somewhat stabilize an organization.
- NGOs can further actively join in policy making to establish a legislative framework where principles for utility-oriented and resource-oriented rights and the accountability of water institutions are better defined.

12 Recommendations

In order to gain deeper knowledge about the power relations between NGOs and ASICA-SUUD, further case studies are recommended. Further policy making can be performed on behalf of NGOs to improve the utility-oriented and resource-oriented rules to implement a more comprehensive water legislation. Due to the limitations of the study, following recommendations are proposed to comprehend stakeholder relations between NGOs and local actors addressing water and sanitation in Cochabamba, deeper;

- In depth studies of power relations between ASICA-SUUD and NGOs
- Pressure on donors for NGOs to coordinate and monitor each other and installing agreements.
- Amplified knowledge building on citizenship, sanitation and hygiene for migrants
- Further research on the impact of security over tenure on the access to basic services

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Figure 1. *Map over Bolivia* [Map; Bolivia] At:

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Figure 2 Nihenjius, Gery (2002) *Figure 3.1 The political-administrative structure of Bolivia before and after 1994* [Illustration; schematic view on changes in political administration of Bolivia] In: *Decentralisation and popular participation in Bolivia- The link between local governance and local development*, Utrecht

Figure 3. Blum, Vivian Schwarz Blum & Eguívar, Eduardo Córdova (2008) *Gráfico II. 1: Bolivia. Indicadores de gobernanza (1996-2007)* [Image; Graph over structural institutional processes in Bolivia from 1990-2008] Cochabamba; Ciudadania

Figure 4 Marston, (2013). [Bolivia, the city of Cochabamba, and La Maica] In: *Geoforum* (2013)

Figure 5. Ledo, Carmen (2013) *Localización de área del acuífero de recarga alta, baja y descarga dentro de la subcuenca Rocha Maylanco y Huella urbana 2012-2036* [Map; Groundwater basin in Cochabamba region] In: Ledo, Carmen. *El Agua Nuestra de Cada Día- Retos e iniciativas de una Cochabamba incluyente y solidaria*. Cochabamba; CEPLAG- Universidad Mayor de San Simon

Figure 6. Departamento de Cochabamba (2013) *Ubicación de los municipios del Área Metropolitana y emplazamiento de Jove Rancho Límite de municipio* [Localisation; Municipalities and placement of plant Jove Ranche] In: *RESUMEN EJECUTIVO ÁREA METROPOLITANA DE COCHABAMBA- Informe Etapa II: Demandas futuras y estrategias de expansión-Área Metropolitana de Cochabamba*. Cochabamba; Departamento de Cochabamba

Figure 7. Stakeholder chain of the study (Sima Abdollahi, 2014)

Figure 8. *Aguatuya (2010)* [Futura Matriz Principal de SEMAPA] In: *Reporte Proyecto Agua Para Todos, 2005-2010*

Figure 9. Late Board of members of A.P.A.A.S foundation, A.P.A.A.S office in Villa Pagador, district 14, Cochabamba (Photo: Sima Abdollahi, 2014)

Figure 10. Transitions in resource management and water sector of Cochabamba (Illustration: Sima Abdollahi, 2014)

Figure 11. Fundacion abril demonstrating irrigation device in municipal school of Arbieto, Cochabamba (Photo: Sima Abdollahi, 2014)

Figure 12. Fundacion abril programming on cultivation project in Arbieto, Cochabamba (Photo: Sima Abdollahi, 2014)

Appendixes I-XV have been created by Sima Abdollahi, 2014

Appendix

I Questionnaire public actors

II Questionnaire NGOs

III Questionnaire beneficiaries

IV Mapping public investment

V Mapping Autonomous governance community organizations

VI Mapping Transitions in Resource management and stakeholder relations

VII Mapping targets water and sanitation

VIII Mapping Conflicts

IX Mapping impact on NGOs

X Mapping Transitions in relationships NGOs policy making

XI Mapping Transitions in relationships NGOs social housing

**XII Mapping Transitions in relationships NGOs working with physical
spread of water and sanitation**

XIII Mapping community participation NGOs policy making

XIV Mapping Public Participation NGOs social housing

**XV Mapping Public Participation NGOs physical spread of water and
sanitation**

Appendix I: Questionnaire key informant category 1: in public/private actors - professionals with experience in water and environmental management in Cochabamba

Q1. How ___ is profiling itself in the local context of Cochabamba and why?

S4Q1. What impact has ___ had on the development of water and sewerage Cochabamba?

Q2. What is _____ relation to other private/ public actors in the water and sanitary sector=

Questions about NGOs addressing water and sanitation in the local context of Cochabamba

A. -What is the role of different NGOs with respect to water and sanitation in the context of Bolivia?

A1 In what ways has changed the role of NGOs on these issues during the last few years?

B. What is ___ relationship to other NGOs?

- In what way these NGOs interact and coordinate their work (between them)?
- In what way these NGOs changed their objectives and strategies through the years?
- In what way are these NGOs working with public participation and gender inclusivity?
- According to you, what are the factors that can facilitate a better relationship between the NGOs and other NGOs?
- According to you, what are the factors that can facilitate a better relationship between NGOs and community based systems and public actors?

C. What role have NGOs had in the Misicuni project ?

D. What will happen with NGOs working with water and sanitation in the future?

- What will be the major challenges?

Appendix II. Questionnaire NGOs

Q1. What is the role of ____ in increasing coverage to water and sanitation in Cochabamba?

Q2. How is ____ profiling itself in the local context of Cochabamba?

S1Q8. Who are the beneficiaries?

S2Q8. What resources have you prioritized?

S3Q8. What resources would ____ like to invest in for the future?

S4Q8. What impact has this profiling had on the development of water and sanitation in Cochabamba?

S5Q8. How has ____ objectives changed over the years?

Q4a. What is ____ current relationship with:

- Private actors/Public actors? (government, municipality, public donors)
- The civil society?
In addressing the development of water and sanitary services?

Q4b. What other NGO's do you collaborate with?

S1Q4b. How was it before (a couple of years ago)?

S2Q4b. How will it be in the future?

S3Q4b. Why?

S4Q4b. How could ____ and different stakeholder groups (1-3) benefit from collaborations?

Q4c. How is ____ addressing transparency and accountability in their work towards:

- Beneficiaries?
- private stakeholders?
- public stakeholders?
- Community members?

Q4e. What are the factors that can facilitate improved relationships between ____ and:

- Beneficiaries
- public and private stakeholders?
The communities?

Q5. How would ____ define Capacity building and Public participation?

S1Q5. How is ____ addressing this in their attempts to improve water and sanitary solutions ?

S2Q5. How much support is provided by ____ in the implementation of water and sanitary services?

S3Q5. How much support is provided by ____ in the maintenance process of water and sanitary services?

S4Q5. How much self-management and devotion to participate is required from beneficiaries?

Q6. How is ____ working to include and integrate target groups:

- in your programs/projects?
- in practices?
- in decision processes?

(S1Q6. Can you identify the target groups ?)

Q7. What channels to communicate on planned and completed projects are used towards:

- Beneficiaries?
- Public and private actors?
- Civil society?

Q8. How is ____ approaching existing networks and organizational structures?

S1Q4. How is ____ approaching traditional labour principles in accordance with the legislation of 2009 and its recognition of indigenous/ethnic working principles?

Q9. How is ____ working with and approaching leadership questions?

S1Q5. Power relations and conflicts?

S2Q5. Social mobilization?

Q10. How is ____ addressing, social assistance, conflict management and insurance mechanisms in their efforts to develop the water and sanitary sector in peri-urban districts of Cochabamba?

Q11. What experiences does ____ have in incorporating institutional gender frameworks?

Can you give any examples?

Q12. What achievements in promoting female participation in ____ work to improve the coverage of water and sanitation have ____ experienced?

Appendix III. Questions to beneficiaries in Cochabamba

Q1. How have you been in contact with ____ and what did they do?

In what project have you participated and how did you participate?

-What were the requirements to be chosen and to perform the project?

(-Did you complete the project?/Will you continue with the project)

-How was your experience on being chosen and to perform for the project?
(difficult/easy)

-How was the overall experience?

Q2. How are you informed about your rights and obligations as a participant of the project?

-How much support or guidance was provided on behalf of ____ during the construction/implementation process?

-How much support or guidance was provided on behalf of ____ after the construction/implementation process? (monitoring)

-How was the overall experience?

Q3. How were you able to communicate with and evaluate ____ during and after the project?

-How could you gain access to information or look for advice?

-How could you express yourself?

-How could you evaluate the project, yours and others performance (including the NGO)

Q4. How were/are you confiding in ____?

-How is your relation to ____ now?

-How was your relation to ____ before?

What impact has the project had on your life?

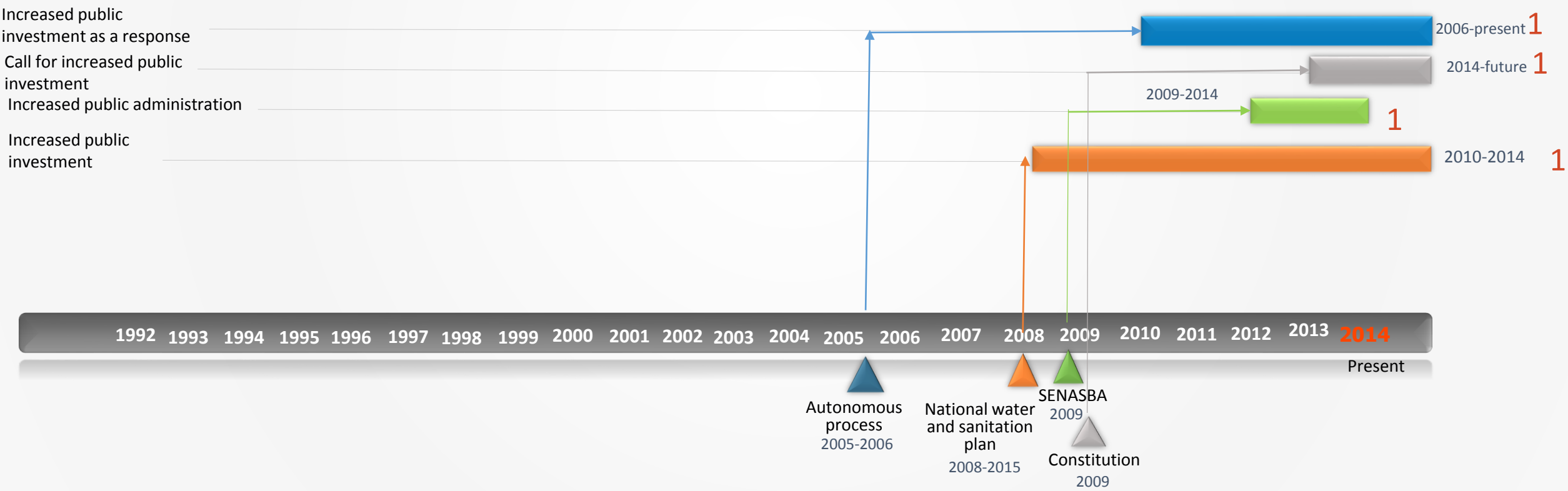
-What is the major difference in your life in relation to before the ____ was implemented?

Q5. What things would you like to be improved/prioritized in ____ work to implement and managing water and sanitation?

Q6. What other things would you like ____ to prioritize in the future?

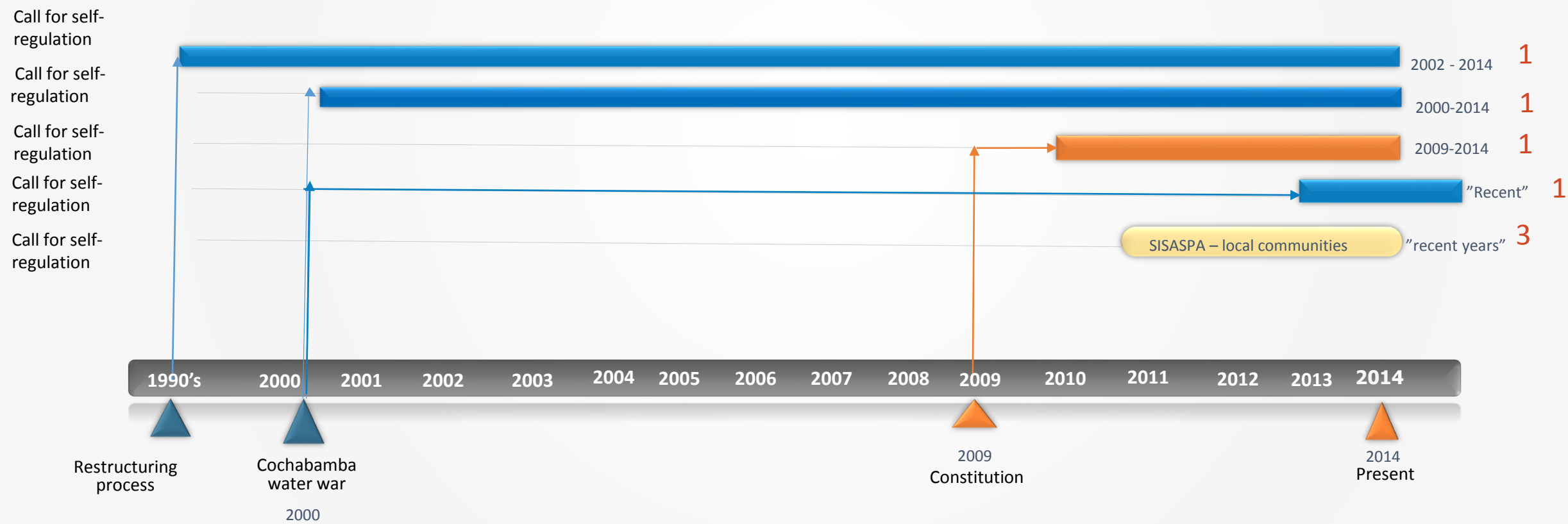
Appendix IV: Public investment in water and sanitation

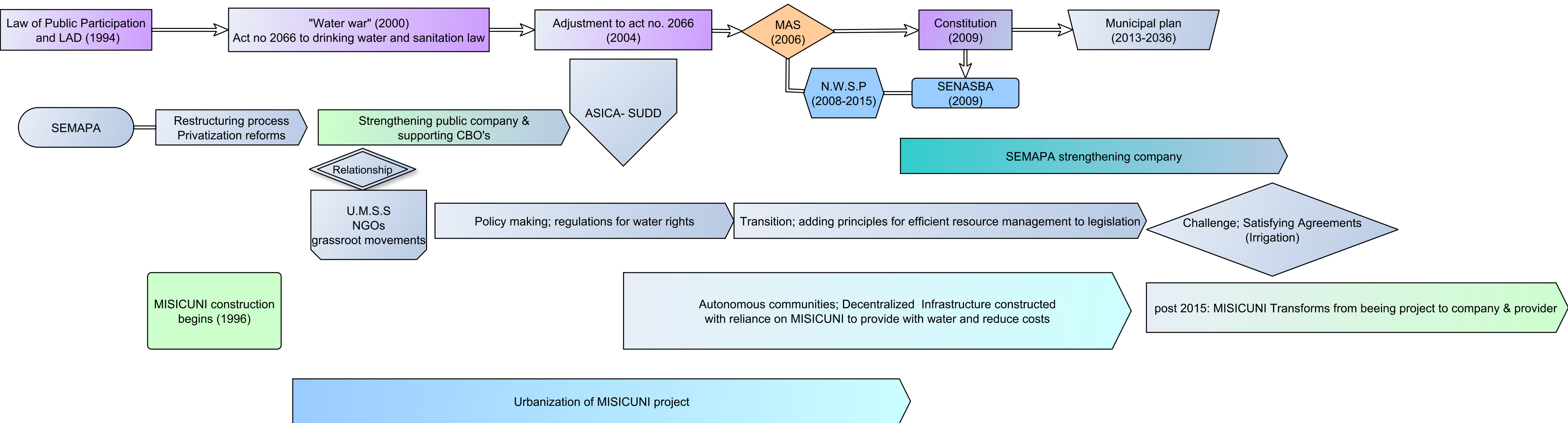
1 Key informant group; 1



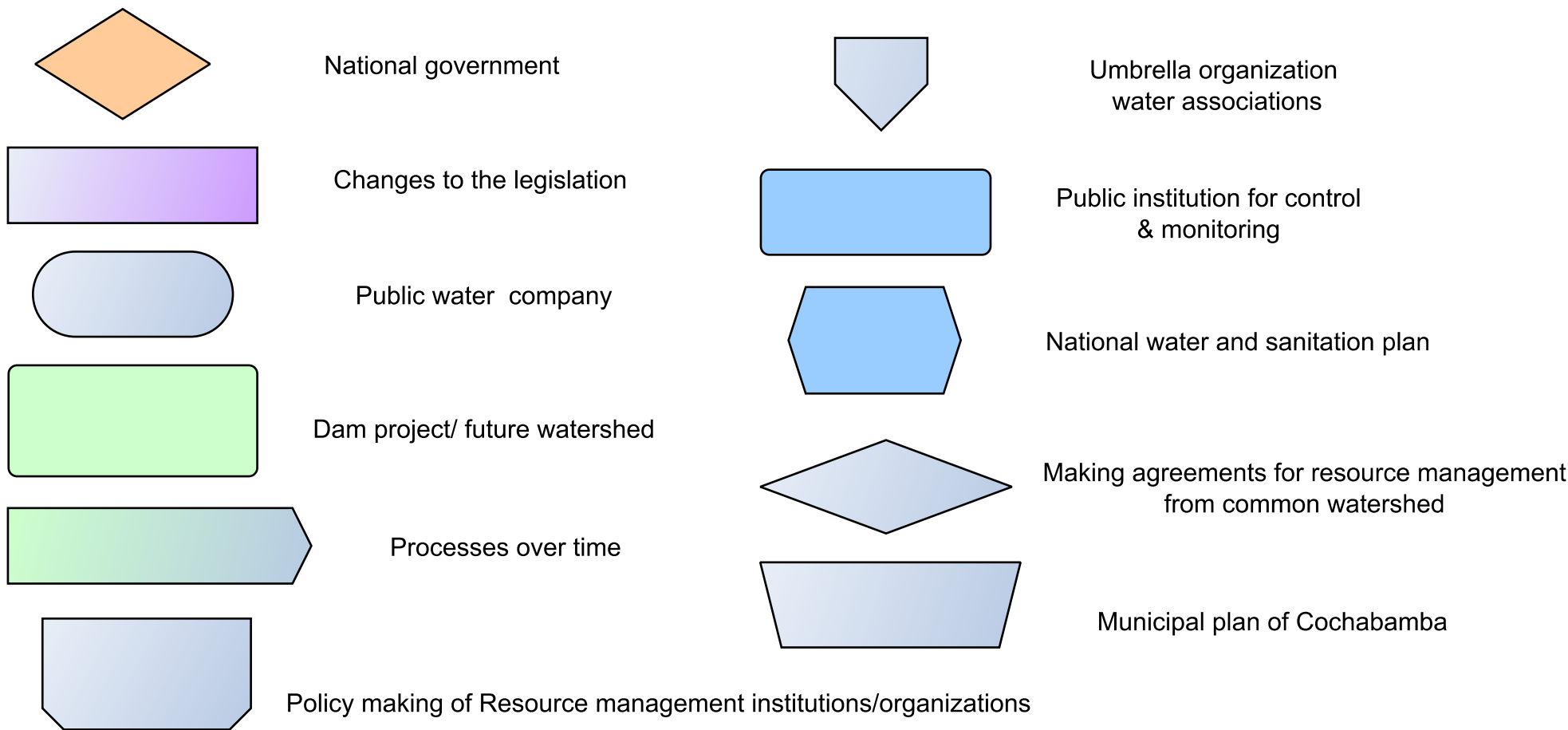
Appendix V: Call for autonomous governance small-scale providers 2000-2014

1 Key informant groups; 1, 3

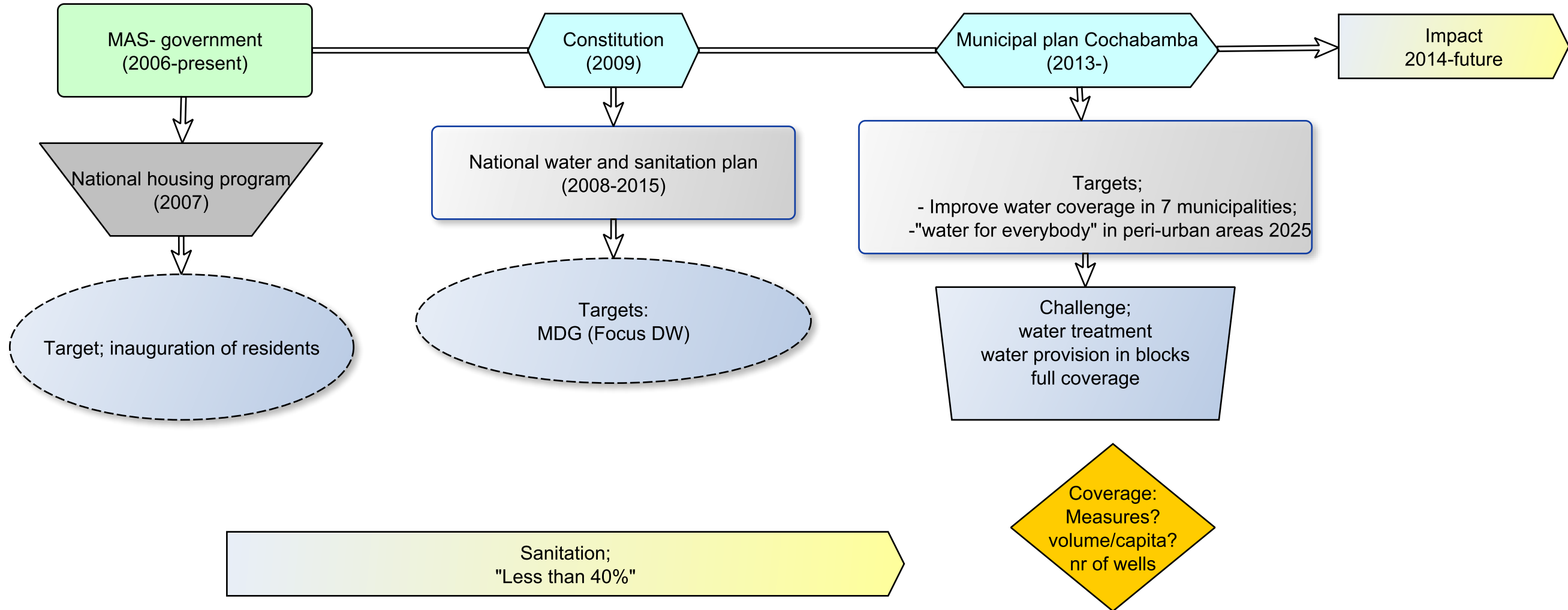




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APPENDIX VII

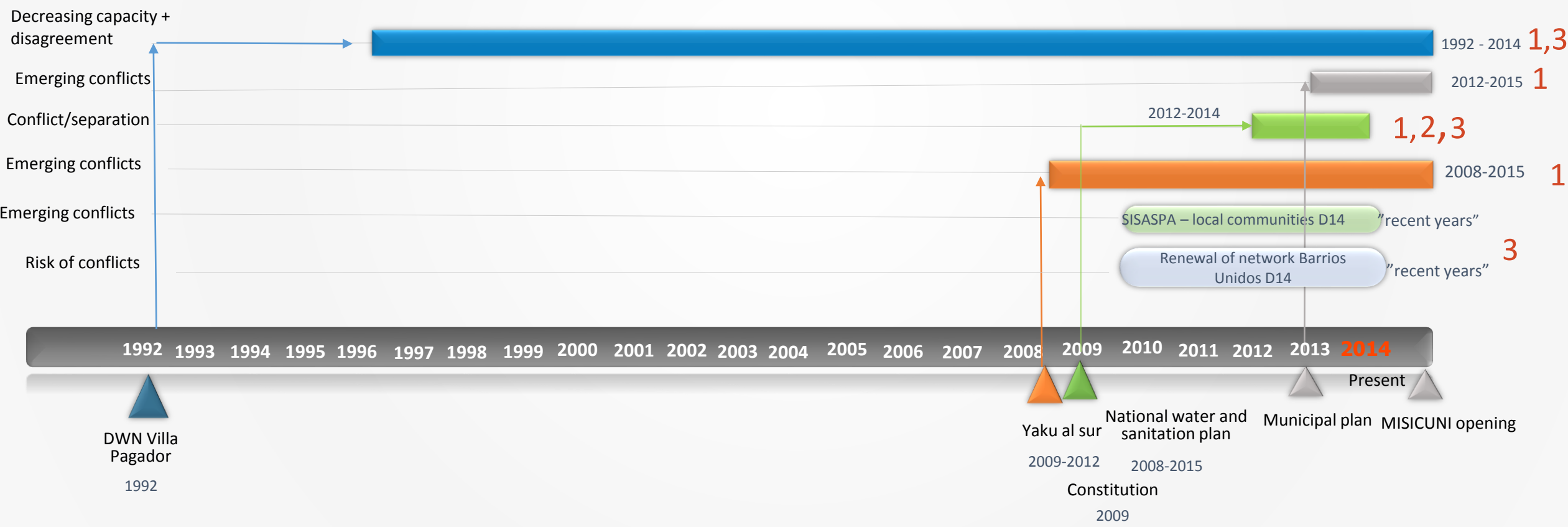


Appendix VIII: Emerging conflicts, separations or disagreement

1 Key informant group; 1

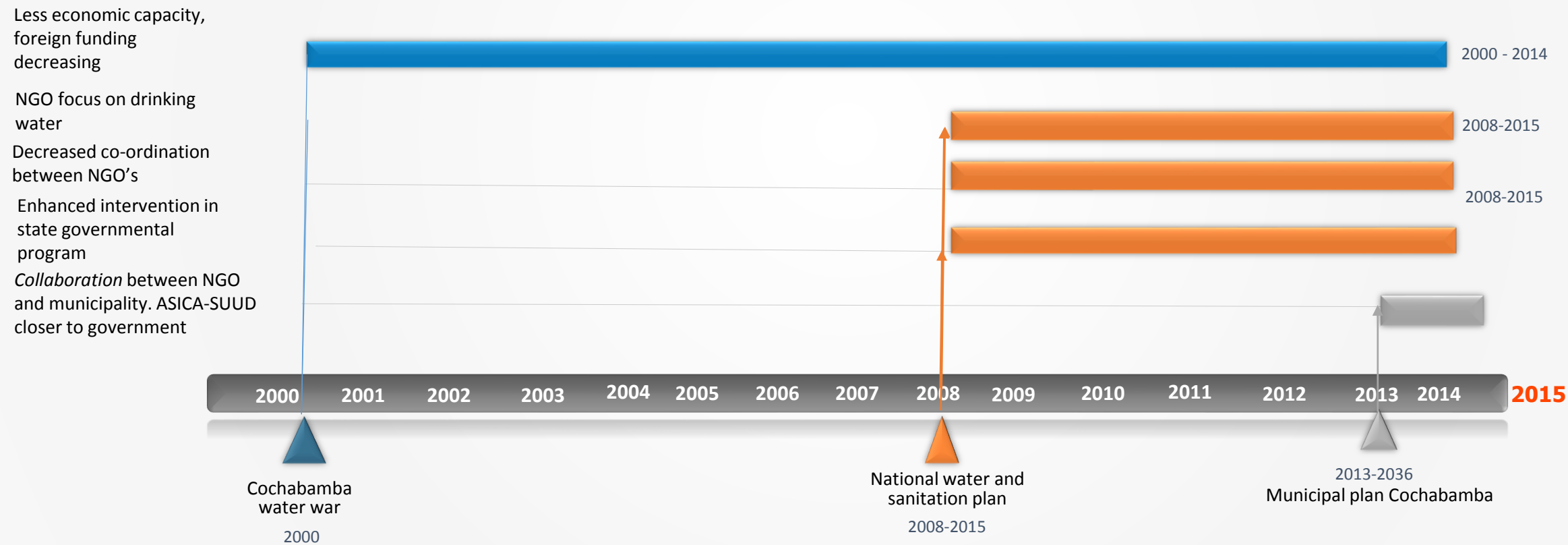
2 Key informant group; 2,

3 Key informant group; 3

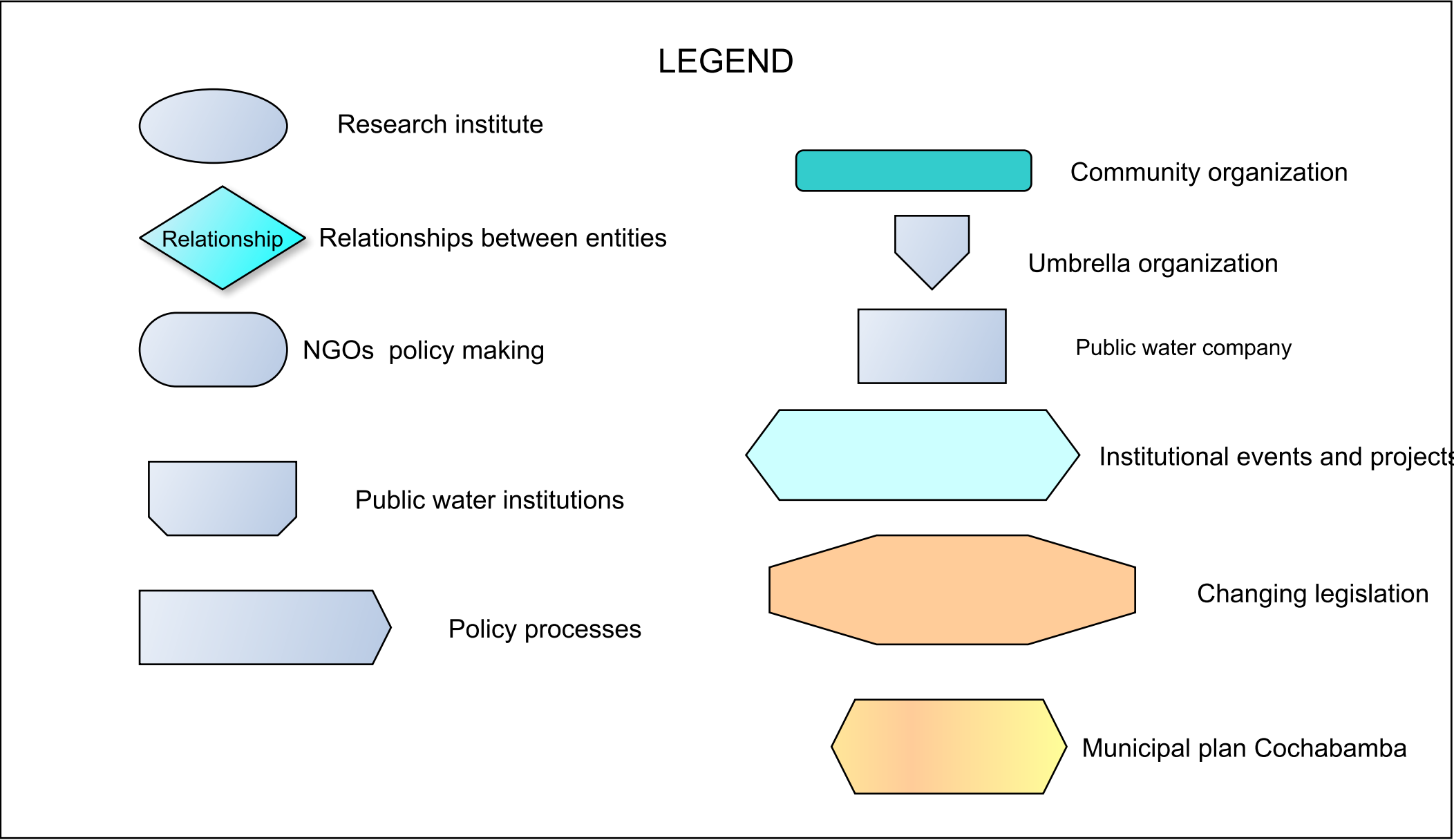
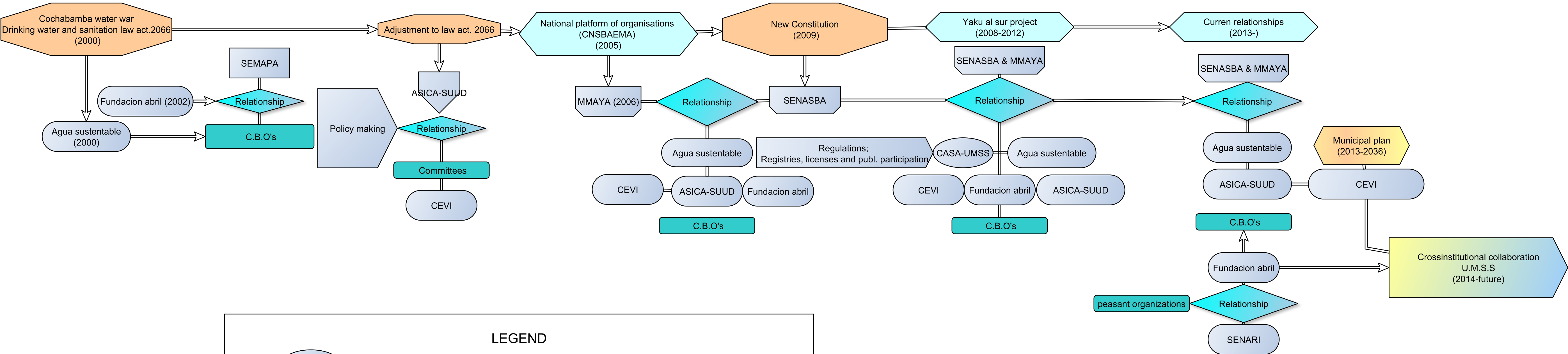


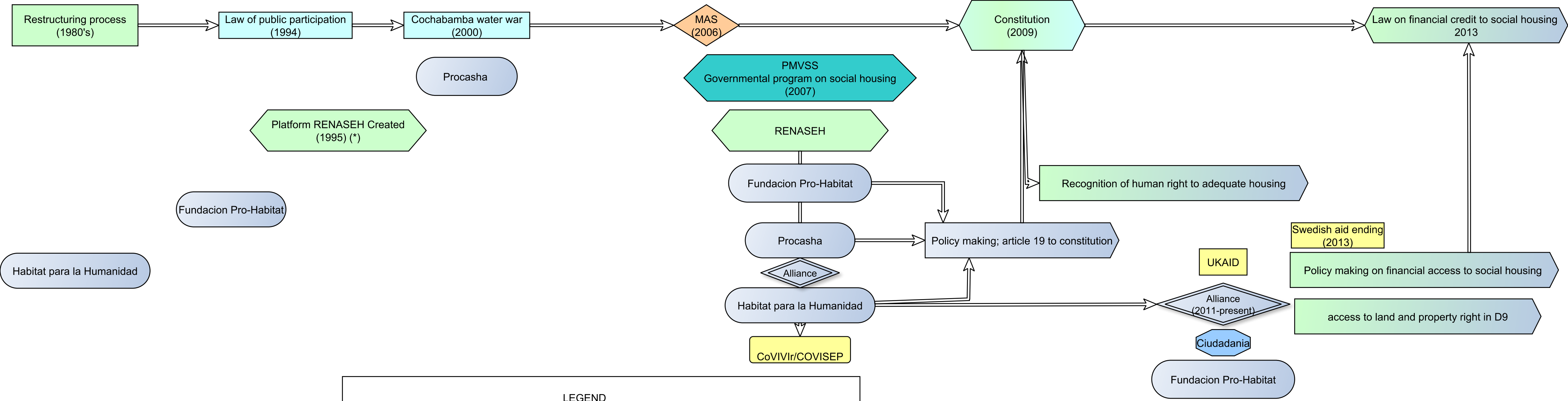
Appendix IX: Impact on NGOs

1 Key informant group; 1



APPENDIX X





LEGEND

	Crossinstitutional platform		Private non-profit research association
	NGOs social housing		Alliance
	cooperative projects		Policy making processes
	National program for housing		National government
	Foreign Donor		Changes in legislation

