

Water Conflicts in the Chimborazo Province, Ecuador:

The strategies of water users to claim and defend their water rights



M.Sc. Thesis by Milagros Sosa Landeo

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*Mana nunca tukuy ... Yaku
(Adivinanzas Kichwa)*

“ÑUCANCHIC Yacu, (nuestra agua) así como nos permite vivir nos está haciendo sufrir. Es que cada vez merma el agüita y nos estamos peleando por ese poquito que queda?, Será que podemos hacer parir al agua?”

Carlos Oleas,
Interjuntas Chimborazo

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Abstract

In Ecuador, like in other Andean countries water is becoming a contested issue. There is an increasing demand for water resources and thus a high competition between different users. This situation is aggravated because of the deficient water management ability from Government institutions, which do not have enough financial and human resources to perform their activities and instead create problems such as double allocation of water rights. In addition the unclear and complicated legal framework provokes also overlapping of functions between government officers responsible for water management in the country.

In this context the proliferation of water conflicts is evident. These conflicts are between different water uses (i.e. agriculture vs. domestic purposes) and involved several users from high diverse backgrounds. These water users, in order to ensure and defend their water rights employ a creative set of strategies. To counteract those water conflicts, some negotiation or mediation processes are also performed with the idea to solve or transform the conflict situation. During these processes and in a context of *legal pluralism*, *forum shopping* is practiced in order to reinforce water users' positions. Thus at certain points the users will employ and stick to what is written in the national water law and at the same time they will also employ their own local rules. This is very much related with the conscious practice of *mimicry*, where the user adopt certain model but do not subordinate to this and at local levels perform according to their own principles. During this exposition of strategies and negotiations process power is a key element and it is used in different ways.

Therefore, this thesis aims to illustrate two water conflicts in the Chimborazo Province in Ecuador, highlighting the strategies employed by the water users. These two case studies also show that the struggles for water involve more than just access to the resource; they also symbolize respect and recognition. Water conflicts are complex arenas where water users from different social and cultural background display all of their capability to claim and defend their rights. It is important to achieve insight in these strategies in order to understand the nature of the claims from water users involved in conflicts over water.

Key words: *Water conflicts, water rights, power strategies, conflict resolution, Chimborazo, Ecuador*

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This thesis is the final stage of my studies in the Master programme of International Land and Water Management at Wageningen University. My studies were sponsored by the Walir Program (Water Law and Indigenous Rights). This is a collaborative program coordinated by Wageningen University and the United Nations Economic Commission for Latin America and the Caribbean (UN/ECLAC) and is implemented in co-operation with counterpart institutions in Bolivia, Chile, Ecuador, Peru, Mexico, France, The Netherlands and the USA. In the framework of this Program I followed the Walir Course in Peru (Curso Interandino WALIR, Recursos hídricos, derecho y ciencias agronómicas. Una perspectiva antropológica) which constituted the beginning of my studies in The Netherlands. Thank you Ir. Rutgerd Boelens and Dr. Armando Guevara who gave me that opportunity.

I received the suggestion from Rutgerd Boelens, my second supervisor, to do a research in the Chimborazo province, Ecuador about water conflicts. This topic is becoming an important issue which provokes contested situations. I liked the topic and decided to start with this adventure. Thanks Rutgerd for helping me before and during the field work, also with comments and material during the writing stage. The process of this thesis started with the proposal. This was a hard period and cost me lot of effort but after the whole process of the research, now I know why it is important to have a good start. Thanks Edwin Rap, my first supervisor, for the advices during the development of my proposal, and after the field work, for his helpful comments to organize the report. (Also for making the effort to understand my difficult English).

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Acronyms and Glossary

Acronyms

ADR	:	Alternative dispute resolution
CNRH	:	<i>Consejo Nacional de Recursos Hídricos</i> National Council of Water Resources
CODERECH	:	<i>Corporación de Desarrollo Regional de Chimborazo,</i> Regional Development Corporations of the Chimborazo province
INERHI	:	<i>Instituto Ecuatoriano de Recursos Hídricos</i> National Institute of Hydraulic Resources
INTERJUNTAS	:	Federación de Provincial de Organizaciones de Usuarios de Agua ‘Interjuntas Chimborazo’ Provincial federation of water user associations Interjuntas Chimborazo
IPROGA	:	<i>Instituto de Promoción para la Gestión del Agua</i> Promotion Institute of Water management
RDCs	:	Regional Development Corporations

Glossary

Cabecera parroquial	:	Town centre
Canton	:	Third Ecuadorian administrative unit below Region and province
Comunero	:	Member of peasant or indigenous community
Hacendado	:	Landowner, landlords
Hacienda	:	Large farm owned by one person
Juez de Agua	:	Water master
Junta de regantes	:	Irrigators’ associations
Junta de Usuarios	:	Water users associations
Mestizo	:	Person who comes from a mixture of culture or parentage (European and indigenous or non-European)
Minga (<i>Kichwa</i>)	:	Collective work within the community or Communal day of labour in Andean countries
Minifundio	:	Small plot
Paramo	:	Ecuadorian Highlands over 3000 meters
Parish / Parroquia	:	Fourth Ecuadorian administrative unit below <i>Canton</i> , region and province

Perito : Engineer expert responsible of inspections in the
Water Agency
Quebrada : Stream, creek
Sentencia : Verdict. In this report it is considered as water
permit

Chapter I. Introduction

People's lives, livelihoods and future depend on water (Meizen-Dick and Pradhan, 2000). However, like in others Andean countries, in Ecuador water is becoming a contested issue. There is more pressure on access to water resources, because of factors such as population growth, urbanization and the expanding of the water use sectors (Cremers *et al*, 2005). This situation is aggravated because of deficient water management. Conflicts over water resources are expected to intensify in the future (Gleick, 1993). In that context, this thesis aims to illustrate two water conflicts in the Chimborazo Province in Ecuador.

Therefore, these pressures generate competition and conflicts over water between water uses and users (for instance, water for domestic use versus water for agriculture). In cases of water conflicts people try to ensure and defend their water rights by applying, next to other methods, a set of power strategies. These water conflicts are developed within the context of legal complexity; this means that there is more than one normative system. Thus, depends on which system is used to recognize or accept a claim over water resources as legitimate.

To counteract water conflicts some negotiation process are also performed, where power is a key element which is used and employed in different ways. These cases show that the struggles for water involve more than just access to the resource; they also symbolize respect and recognition. Water conflicts are complex arenas where water users display all of their capability to claim and defend their rights; they follow different strategies for that. It is important to achieve insight in these strategies in order to understand the nature of the claims from water users with different social and cultural backgrounds involved in conflicts over water.

To respond this question I will investigate, by using existing concepts and theoretical orientations, the conflicts of water resources and the different strategies that are followed for two places. Those case studies are analyzed by using a selection of research methods, and the outcomes are compiled and discussed. One case demonstrates historical development and final conflict resolution, while the second case demonstrates a region that is under conflict at present. Thus, within the framework of conflict management this study gives insights about particularities of water conflicts, context, interacting actors, power strategies and final outcomes.

1.1. Research Framework

1.1.1. Problem statement

Ecuador, like other Andean countries, experienced processes of natural resources management reforms which were mainly influenced by neo-liberal policies. These policies are not according to the demands and needs of local population at field level, there is not relevant improvement in terms of resources management.

Lately, water rights and water uses are becoming contested in Ecuadorian Andes locations. This competition originates forms of struggles that are considered 'water conflicts' in this study. These conflicts involve more than struggles for water and reflect different expressions of power relations among actors. Thus the actors, for this research, water users, employ a creative set of strategies to defend their positions.

Therefore the problem statement for this study is elaborated as follows:

There is a lack of understanding about the different strategies of water users to claim and defend their rights, gain water control and power in conflict situations.

1.1.2. Research Objective

This research aims to explore how the water users involved in water conflicts strategically claim and defend their water rights in the Andes. These different strategies are illustrated through the description of two case studies about water conflicts in the Chimborazo province, Ecuador.

1.1.3. Research Question

Based on the above problem definition, the following central research question guides this study.

How do water users of the Chimborazo Province in Ecuador who are involved in water conflicts, claim and defend their water rights, and how do different legal systems, power relations and water control activities influence those conflicts?

Sub questions:

Water rights:

- How are water rights obtained?
- How do right holders manage their water rights?
- What are the perceptions about water rights from parties involved in conflicts?
- Why is an official water permit important for the water users?

Power and Water control:

- Who are the main actors in water management in the area?
- Who influences water allocation?
- Which are the characteristics of water distribution in the area?

Water conflicts and Conflict resolution:

- What do the different users want water for?
- What are the main water demands?
- Which are the most frequent reasons for water conflicts in the area?
- How are the water conflicts managed in the area?
- What are the available mechanisms to reach solutions?

1.2. Research Background

1.2.1. Legal, institutional and organizational context of water management in Ecuador

Formally, water management activities in Ecuador occur under the framework of the Ecuadorian Water Law of 1972. This law defines water as a national good of public use, inalienable or non transferable and non tradable good. This law gives water rights to the users to utilize the resource in the form of non transferable concessions. The concessions could be occasional, temporal (for irrigation or industries), or permanent (for domestic use) (Hendriks, 2006). After the Ecuadorian Government gives a water source in a concession, the water users receive a *sentencia* or official

water permit. According to the different types of uses, the law establishes levels of priority (Ecuadorian Water Law, Art 36):

1. Domestic use and livestock consumption;
2. Agriculture;
3. Industries, energetic and mining uses;
4. Other uses.

There are compulsory annual water fees, for example, in case of water for agriculture, the users have to pay to the Water Agency or to the Regional development corporations a retribution to the State for the construction of the irrigation infrastructure.

Water for domestic purposes do not imply annual water fees to the State. There is a contribution to the water supply company in case that there are installed water control devices in the area. It is remarkable that in Ecuador the main water use is for agriculture purposes, then domestic uses and finally water for industry¹.

The Ecuadorian Government has an active role in water management. Administration, control and supervision of the resource are outsourced by the *Consejo Nacional de Recursos Hídricos*² or CNRH (National Council of Water Resources), at national level. This office is organized in 11 *Agencias de Aguas* (Water Agencies) located in different major cities of the country. These agencies have administrative, judicial and technical boundaries and responsibilities, for instance, functions related to conferring water use concessions for several purposes, reforms of water permits, water conflicts resolution, etc³.

The water users are represented by *Juntas and Directorios de aguas* (Water Associations and Water Boards). The law establishes the creation of these organizations to deal with water for domestic and for irrigation purposes. In terms of irrigation, water is managed by the *Juntas de Regantes* (Irrigators Associations), which operate public irrigation systems and are responsible of water distribution among their users (i.e. Quimiag Irrigation System, Chambo Irrigation system, etc)⁴. Water boards are formed by 5 or more users with common water rights over a water source (creek) or a commonly used canal. These associations need to be formed and registered at the consecutive Water Agency before they can apply for a water permit.

Article 86 of the Water Law establishes that in order to obtain water rights, any application should include: name and detailed location of the water source, water flow, intake point, the names and addresses of the known users, final destination of the resource, type of work and installations to be executed to use the water, the estimated time of work and the studies or technical maps to justify the request. The costs to fulfil those requirements are 80 US dollars excluding the lawyer services which could cost 300 US dollars approximately (Halmstad, 2004). According to Davila and Olazábal (2006) the high cost is the main restriction for indigenous and peasant communities to apply for a water permit.

¹ See Appendix 1 for further information.

² Until 1994 this office was the *Instituto Ecuatoriano de Recursos Hidráulicos*. INERHI, (Ecuadorian Institute of Hydraulic Resources). It was also responsible for construction of State irrigation systems, now this is task of the *Corporaciones Regionales de Desarrollo* CRDs (*Regional Development Corporations*).

³ See Appendix 2 for information about CNRH or visit: <http://www.cnrh.gov.ec/docs/agencias.htm>.

⁴ The Quimiag Irrigation system involves 3,000 hectares and 2,500 beneficiaries. Or the Chambo irrigation system: 80 water user associations, from 67 communities, 10,412 beneficiaries, irrigating an area of 5,245.29 hectares.

Some of the major critics about legal aspects of water management in Ecuador are the uniform and detailed elaboration of rules or norms. These rules reside below the National Water Law and are created as a complement of this (Hendriks, 2006). The application of

these rules is not clear and creates confusion among the users. Cremers *et al.* (2005: 42-44)⁵ have conducted several studies within the context of the process of irrigation sector reforms, and identify some crucial problems:

1. Lack of leadership by central government in the orientation and implementation of water policies;
2. Unclear legal framework, which provokes confusion and overlapping of functions (i.e. Provincial Government and the regional development corporations overlap functions in terms of construction, operation and maintenance of hydraulic infrastructure);
3. Little participation and representation of local government and water users in the process of institutional decision-making;
4. Shortage of financial and human resources. This provokes extensive delays in the process of assigning water rights (or conceding water permits). Also the allocation of water rights to users without studies about water availability in the area provokes water conflicts.

Nowadays, there are initiatives to deal with water conflicts besides the official and costly litigation in courts. These initiatives are the implementation of alternative dispute resolution (ADR) methods carried out by the civil society. The Ecuadorian National Law recognizes these ADRs as legal procedures, two of these methods are explained in the Box 1.1:

Box. 1.1 Alternative Dispute Resolution methods⁶

Box 1.1 *Alternative Dispute Resolution methods:*

Negotiation: The parties involved in a conflict voluntarily agree to exchange opinions, make agreements in a common effort to solve their conflict. There is not participation of an external actor (INAPMAS, 1999). It is a social process which consists of discussions between parties under certain conditions, in order to reach an agreement. (Guerrero, 1998). During negotiation process persuasion plays an important role and there is not submission of any party to the other. (INAPMAS, 1999).

Mediation: It is a negotiation process with the intervention of an external and neutral actor. This third actor helps the parties during the discussion and seeks, together with them, for an agreement to cope with the conflict. The mediator does not have any decision-making power in the process (Guerrero, 1998). Mediation is an interactive process and reduces tension between parties. The parties involved in the conflict are free to participate in the mediation and they can also abandon it anytime. During mediation and the discussions of topics, it is necessary discretion among the parties and also from the mediator. Mediation is flexible; it is applicable to any kind of situation and actors. It is an economic and fast option, because it demands less money and time than official procedures. The parties can control the process and the results according to their interests. It is an ideal method to apply in cases of conflicts caused by miscommunication between parties (INAPMAS, 1999; Alfredo, 1995). For some researchers mediation is considered as Conciliation (Femenia and Afanador, 2000).

At the local level, an organization which currently implements ADRs in water conflicts in Ecuador is the Interjuntas Chimborazo, which mainly plays the role of mediator of those conflicts. This organization is a *Federación Provincial de Organizaciones de Usuarios de Aguas* (Provincial

⁵ See: Appendix 3 for further information about the water sector in Ecuador, institutions and reported problems.

⁶ See Appendix 4 for further information about the level of participation of actors in the ADRs.

Federation of Water Users Associations), which gives legal advices to the water users. It works since 1998 in the Chimborazo province⁷.

1.3. Research Methodology

This research is mainly qualitative and consists of the presentation of cases about water conflicts, highlighting the different strategies applied by the actors. The research illustrates two cases from the Chimborazo Province, Ecuador. The strategy implemented is the case study approach. The research is conducted by using different methods of data gathering.

1.3.1. The Research Strategy and its implementation

The *case study approach* strategy means the study of one or more cases “to develop a full understanding of the case, in its natural setting, recognizing its complexity and context” (Rap, 2007; Punch, 2005). A case study is an event which occurs in a bounded context. A case is bound in terms of period of time, place, actors who interact and in a certain topic (Rap, 2007). For the objectives of this research, a Collective Case Study typology is followed. This consists of investigating several cases. By comparing the results of each case, the analysis aims to learn more about each individual case location, but also allows multiple comparison of a chosen topic (in this case, water conflicts and related themes) within and between cases.

In this research, two case studies are developed, following the idea that case studies are suitable research strategies to approach “real-life” situations within specific contexts (Teshome, 2003). Thus, two water conflicts events were investigated and explored as dynamic processes. This considers, for instance, the high diversity of actors or parties involved in conflicts, with their different strategies, positions and claims, but also the incentives of the dispute and historical background.

This research received support from ‘*Interjuntas Chimborazo*’ to select the case studies. This organization has knowledge of the historical background of the cases and identified some of the actors. Interjuntas approached those conflicts in different periods of time. Mainly, this office played the role of mediator. Those previous linkages or contacts were a key starting point to approach the actors and explore the conflicts. Historical overview and documentation about the conflicts was available before starting with the fieldwork. Introduction to community leaders, government offices or water users’ representatives was arranged by the staff from Interjuntas.

Case selection

The main criteria that I considered to select the cases were:

1. the cases need to include apparent competition between different water users regarding their water rights;
2. the cases require to have some similar and different (dependent on the local situation) social actors or water users. (i.e. indigenous communities, large farmers, etc.).

Differentiation in terms of cultural and social backgrounds, economical and political power or legal frameworks could influence in the performance of the actors involved in water conflicts. Some areas were already intervened or at least contacted by Interjuntas. It should be noted that these

⁷ See Appendix 5 for further information about this organization and the conflicts intervened by this.

criteria can differ from the criteria considered by the counterpart to recommend certain cases. Selection can be influenced by the idea of proposing cases with favourable characteristics for (possible) intervention.

The first study area selected as a research site is the parish⁸ of Quimiag, *canton*⁹ Riobamba in the Chimborazo Province. Here three different water user groups compete and claim for their water rights over the Sanaquinllay creek. The water users who are involved in this conflict are considered diverse because they come from different cultural, social and economic backgrounds. These differences are also in terms of demands for water use and their claim-making strategies. This case involves *hacendados*, *comuneros*, and users from a town. The problem between these actors consists in the competition of their water rights and water control.

The second case study, also in the Chimborazo Province, is located in the neighboring area of two parishes from the *canton* Alausi: Achupallas and Tixan. This case is about a water conflict within indigenous communities: Cobshe Alto vs. Gulag Huayco. These communities claim water rights over the same creek. In this case it is interesting to see how the two communities deal with water conflicts. In comparison with the previous case it is also interesting to explore how actors, from similar cultural backgrounds, employ different strategies to enhance their positions in conflict situations.

Figure 1.1. Location of the study areas in the Chimborazo Province



Adapted from www.edufuturo.com and www.munimadrid.es

In the figure the two research areas are highlighted.
For more information about the Province see the Appendix 6.

⁸ Fourth unit level of the Ecuadorian areas. After *Canton*, Province and Region.

⁹ Third unit level of the Ecuadorian areas. After Province and Region

When the fieldwork started one of the conflicts was in process, and in the other case a dispute was already settled. The difference of time events influenced in the way how the cases were approached and elaborated in this report. The first conflict occurred whilst the research was carried out and it was possible to follow the negotiation process of the parties. In this case the research was focused on the ongoing interaction of the actors. The second conflict was already terminated with a signed agreement between the parties in conflict. In this case the research is focused on the collection of data on the past events, which have led to a resolution. The fieldwork was carried out between May and July 2007.

1.3.2. Research Methods

Semi structured interviews

Interviews were applied in different settings and on different occasions. For example in the field, after a community assembly, during *mingas* (community collective work), before and during meals, walking to the water creeks, during and after an expert's inspection, and also other atypical settings¹⁰. Also some interviews were carried out during meetings with government agencies such as the Water Agency of Riobamba and the development corporation of the province: CODERECH¹¹. Other organizations interviewed were Interjuntas, local NGOs and foreign consultants, who were working on the topic of water management and conflicts. In total 20 interviews were carried out and all of them were executed with the consent of the respondents. Table 1.1 shows the type of informants in this research. The previous information provided about the future informants was useful to organize them in groups. This responds to the criteria of 'judgment and opportunistic sampling' mentioned by Burgess (1984).

Table 1.2 Type of informants for the research

<i>Type of informants for the research</i>	
Field	Community leaders Presidents of water directories Water users (inside & outside communities) Young and old community representatives Women community representatives <i>Hacendados</i>
Government offices	Director of Water Agency Water Agency expert Director of Regional Development Corporation Agriculture engineers
Others	Personnel from <i>Interjuntas</i> NGO engineers and local consultants (i.e. civil & agriculture engineers) Foreign researchers

¹⁰ See appendix 7 for supplementary information about the settings where the research did the field work .

¹¹ Regional Development Corporation of the Chimborazo province.

Participant Observation

This method was employed with the purpose that the researcher immerses herself into the daily life of the groups to be explored (e.g. organizations) and observes relationships among people, for example *comuneros* (community members), water users or government officers. Thus, the aim is to see also how ordinary activities such as *mingas* are carried out and how people perform them and behave in those situations. This method provided the researcher with better understanding of the actors involved in the conflicts, in addition to the interviews and discussions. It was an indirect way to approach sensitive issues.

Observations

During the fieldwork, also observation of irrigation infrastructure has been carried out. For instance intakes, natural and artificial reservoirs, earth canals, pipe systems, pumps, etc. Those observations considered not only the condition and maintenance of infrastructure, but also to see what infrastructure was present, and thereby what opportunities or methods were available (both legal and illegal) to have access to water resources and to transport water.

Literature review

Other information was acquired from several sources for literature review: Books, articles, reports, legal documents (*i.e.* permits from the Water Agency), water users' statutes, etc.

1.3.3. Limitations of the research

This research is mainly qualitative and it is important to remark that during the fieldwork it has been found that water conflicts are sensitive issues for the water users and related to many other aspects (*i.e.* respect between users, trust relationships, unofficial deals etc). In this sense, it was difficult to approach or figure out some other problems involved. There was a need to construct trust relationships between the informants and the researcher. Therefore it was important to spend more time with some of the actors. Also, actors might doubt to acquire direct benefits from this study, as they could have from development projects carried out by Non Governmental Organizations or the Ecuadorian government. Therefore this aspect conditioned the willingness of some actors to collaborate with the study. The research would not be possible without the different people's opinions. However, the interpretation of these opinions done by the researcher could bias the outcomes of the research.

1.4. The Outline of the Research

This thesis consists of five chapters. After starting with the introduction and research outline part in chapter one, the second chapter presents the theoretical framework used for the research. This includes definitions and discussions of concepts such as water rights and legal pluralism, power that are relevant for understanding and explaining the context of this study, and for answering the research questions. It also shows definitions of water conflicts and conflict resolution theories. The third and fourth chapters illustrate the two case studies. Both of them show different water users fighting for water rights and access to the water resources. In both experiences, the different water users' strategies to claim and defend their water rights are highlighted. The fifth and last chapter presents the final conclusions of this study.

Chapter II. Conceptual Framework

The concepts and discussions presented below shape the development and analysis of this research. The conceptual framework highlights three main aspects. The first is about water rights systems in relation with existing legal pluralism in the Andes region. The second aspect refers to power, where different concepts, interpretations and reactions are presented and discussed. Also the links between power and water control are illustrated. The third aspect is about water conflicts and conflict resolution theories. It highlights the different definitions and the discussions about the existence of a real conflict resolution stage. Elaboration of different explanations of the concepts above increases understanding of the encountered situations.

2.1. Water Rights Systems

Water rights

Water rights are defined as ‘authorized demands to use (part of) a flow of water’. This authorization includes some ‘privileges, restrictions, obligations and sanctions’ (Beccar *et al*, 2002: 3). The water rights are allocated to individuals and to collectivities (i.e. Water Users Organization). The authors highlight that it is essential to clearly determine rights, obligations and responsibilities of the users within a group. Collective rights are obtained through several mechanisms; some of them are (Beccar *et al*, 2002):

1. Formal concessions conferred by the State - which are therefore officially recognized by State law;
2. Obtaining rights by antecedent use of the water source. It is for example being the first one using a *quebrada* o creek (i.e. prior access or prior appropriation rights), or by using a source because of the preferential location of the community to this one (i.e. the source is located within community’s areas);
3. Gaining rights by signed agreements or arrangements between communities, etc.

Meizen-Dick and Pradhan (2005) state that ‘water rights are not just the right to use or share water’. It is a narrow definition. According to these authors and in a broad perspective, the concept of water rights involves different types and levels of rights, which needs to be understood as ‘bundles of rights’¹². These bundles vary depending of the property regimes, legal frameworks, cultures, values and uses attached to water. Likewise, the bundle of rights are complex, dynamic and change is influenced by economical, social or political uncertainties (Meizen-Dick and Pradhan, 2005: 241).

In the Andean context, water rights are associated with other community activities which the users have to do, in order to keep his or her rights. Some punishments are applied in cases of failure of these obligations or others within the community norms. (i.e. no access to water). Besides of being a community member, water rights can be allocated through participation in the construction and maintenance of irrigation infrastructure. These activities have a double function: Creation and renewal of water rights for the *comuneros* (Beccar *et al*, 2002).

There is a high diversity and variation of water users, their claims and the law which they use to assert their rights. This variation depends on the type of water source (i.e. river, stream, spring etc),

¹² See the appendix for further information about “Bundle of rights” by Schlager and Ostrom, 1992.

the water use (i.e. domestic or irrigation) and the existing property regime (i.e. common or individual). (Meizen-Dick and Pradhan, 2005). The authors highlighted that those different claims are insufficient if they are not validated as legitimate by a collectivity. However, because of the influence of different legal frameworks (State law, local law, etc) the claims which are accepted as legitimate for one group are not necessary legitimate for others. Mainly government water agencies do not recognize claims from communities as legitimate, whenever they are based on traditional use¹³ or local agreements.

This study is based on the previous definitions of water rights, and also coincides that water rights are the result of interacting process of social, legal, political and cultural aspects. In the Andes, the creation and recreation of water rights is based on the collective work provided by the systems members: *mingas* is an example which is shown in this study. Likewise, one of the key issues of this thesis is the different claims for water rights from multiple users and the specific legal systems that they use to reinforce those claims. This discussion will be continued in chapters three and four.

Legal Pluralism

Apparently there is consensus about the definition of legal pluralism. It is ‘the coexistence and interaction of different legal orders in a social field’ (Pradhan & Pradhan; 2000: 202; Griffiths, 1986; Merry, 1988 cited von Benda-Beckmann *et al*, 1998). In this sense, there is a ‘plurality of legal bodies’ or ‘normative repertoires’ within society which are managed by individuals in daily life (Spiertz, 2000). Thus, people in rural areas, government officers and researchers have to deal with this legal complexity. Also the social actor has the option to decide or choose one or other legal system. It is called ‘legal forum’ (von Benda-Beckmann *et al*, 1998). In fact, Pluralism is not reduced by the State, rather it is promoted by ‘its interventionist habit of overregulation’ (Spiertz, 2000: 180).

In the same line, Meizen-Dick and Bruns (2000) argue that legal pluralism analyses the tensions and contradictions between interacting backgrounds: formal State law and local customary law. It does not just focus on the dualistic opposition of them. Therefore, to understand for instance water rights systems it is necessary to analyze and consider both State and local law, because State law alone does not really explain people’s perceptions about water rights and the way how these are managed in the field. There is a similar problem if just local law would be considered, because local law is not isolated. It exists in the environment of State law (Meizen-Dick and Bruns, 2000).

Boelens *et al.* (2005) argue that legal pluralism or ‘legal complexity’ contributes to the deeper analysis of natural resources management:

1. It recognizes that there are more than one legal system in society; the idea that law is not a exclusive characteristic of the State;
2. It pays attention to the relationship between law and behaviour in specific social situations. Also it looks at people’s interest, options, problems and choices;
3. Legal complexity conceives the interaction of different legal systems. Moreover, it enables the influence from one system to the other generating hybrids which is relevant for the analysis of rights;
4. Legal pluralism shows evidence of the complexity of law in social life. (i.e. the multiple definition of rights).

¹³ Commonly, the State considers water rights as mere water permits to irrigate a certain piece of land. Thus, officially recognized by law, this permission needs to be written and legally binding (Trawick, 2003).

In this study the approach of legal pluralism is essential to understand the background where water users place their claims. This study illustrates that this coexistence of different legal systems makes possible that multiple users choose for one system. In this way they can justify and legitimize their claims. The users select those legal systems which support or reinforce their claims better, in other words that suits their needs most effectively. Likewise, it coincides with the definitions presented above in the sense that it is important to consider the legal complexity in studies about natural resources management. For example, legal pluralism is essential to understand water rights, because it seeks for the comprehension of these rights from local perspectives and not just consider the State's view.

2.2. Power and Water control

Power

There are several opinions about the meaning of power, its sources and implications. For instance, some authors state that power is the ability to execute control over people's actions and over resources. Some others link the concept with segregation, domination and resistance. Others combine power with tendencies of exclusion or integration of social groups in to society. Therefore, in the following paragraphs some of these opinions are presented and discussed.

Foucault explains power as the capacity to influence people's conduct, to modify and control them. Power is a social relation where a group tries to modify the group's actions and at the same time the dominated group tries to avoid to be controlled or even tries to control as well (Crespo, 2005). According to the definition by Weber (1968 cited Calhoun 2002) power is the ability to exert control over people even against their own will. Thus, power is a basic element to the organization of social action and to the search of interests. It is a key concept to understand the diverse forms of social stratification expressed in class divisions, status differences (i.e. unequal distribution of economic power) and parties' differences, etc. Thus, Weber suggests a type of power which implies coercion and is related to domination and subordination.

In the same line, Boelens (forthcoming) explains the Weberian previous definitions as coercive, vertical or exclusive power. Vertical power is possessed by a person or social group and implies the ability to dominate. It involves a top-down, centralized and visible hierarchy. Boelens states that this type of power is exercised through for example despotism, centralism and repression, negation and exclusion process. This power is based on the formal rules. i.e. 'law is a principal mode for representation of power'. Also under this conception of coercive power there are relations of exploitation, usurpation, and use of violence. Boelens analyses these characteristics within the Andean context and links them with the field of water control.

For this research it is relevant to consider the existence of this type of concepts about power, in order to understand some social interactions of the actors involved in the water conflicts. Thus, to create and maintain awareness of the possible situation's background. Some examples are the exclusion of subordinated water users from their water resources, which was a typical practice in Ecuador during past times. Thus, these concepts of power also led to understand the context of the relations and negotiations between *comuneros* and *hacendados*. Finally, it is also relevant to define power in order to understand the performance of State agencies, which are mainly concerned with control resources (i.e. Water) as well as people's actions by assigning water permits.

Other authors elaborate on the previous definitions of power. Patton (in Crespo, 2005) states that power does not necessarily mean the modification of the others' actions. Likewise, according to

Long, power is the result of social processes and can not be just possessed or accumulated by somebody (Teshome, 2005; Long, 2001). In this line the concept of resistance is also related to power, and it arises in order to reduce domination. According to Crespo (2005), in every case where there is power, there is also the possibility to develop resistance to this.

Boelens (forthcoming) in the line with Foucault, explains the existence of a capillary, horizontal or inclusive power. This power does not use outside oppression or direct violence. It is called capillary power because it penetrates all areas of society, it is practiced by everybody and moves 'upwards' when the power is employed towards interaction with, for example, governments. In the context of his studies, Boelens relates that this type of power implies a transition from exclusion to 'inclusion' of the dominated groups into society. This transition is done with the same goal: control of people's action, but without coercion. Moreover, this inclusion can be initiated by dominant and or dominated groups. When this inclusion is led by the dominated groups, Foucault labels it as the 'desire of the individuals' to be included in a model or socially accepted system.

This process of inclusion is seen as imaginary inclusion, because there are still, and even more stressed, processes of differentiation, comparison and self-correction. Also, the beneficiaries of the execution of such power are not the dominated groups. The dominant remain to be the beneficiaries (Boelens, forthcoming; Boelens, 1998). But, water users have the faculty to resist oppression, for example by using the strategy of 'imitating the dominant, but not conforming to them'. Under this strategy, and internally, users can shape their water world according to their own criteria. It is explained by Boelens as '*mimicry*' (Forthcoming: 30).

The concepts of capillary and inclusive power are important for this study to analyze the water users' strategies and behaviours during events of water conflicts. For instance, water users wish to belong to a normative system that is generally accepted, State Law by holding the water permit. Their idea is to be part of this system to claim rights in the same level as other users, but also to somehow mask themselves with such system and internally (in the community) manage their resources according to their own rules.

Coleman (2000:113 cited Marfo, 2006:7) summarized that "power can be usefully conceptualized as a mutual interaction between the characteristics of the person and ... the situation, where the person has access to valued resources and uses them to achieve personal, relational or environmental goals, often through using various strategies of influence". This concept is highly linked to the definition of conflicts.

Water Control

According to Mollinga (1998), water control implies to have access to water. It is also defined as the ability to control an irrigation system through the regulation of water and therefore of people. Water control has three dimensions:

1. Technical;
2. Organizational;
3. Socio-economic and political.

The first implies manipulation and mastering of physical features. The second refers to regulation and control of human behaviour in order to enhance the functioning of irrigation systems. The third one is the socio-economic and political dimension which links the three dimensions and enables the technical and managerial aspects to be in practice. This dimension is also associated with domination of people, as well as to the regulation of social processes. This is understood in terms of

authority to decision-making. In Ecuador, the water agencies based on the Ecuadorian water law execute water control and possess the formal power to determine who has access to water or not.

2.3. Water Conflicts and Conflict Resolution

Water Conflicts

Kriesberg explains conflict using the term of social conflict: 'a social conflict exists when two or more persons or groups manifest the belief that they have incompatible objectives' (Kriesberg, 1998:2). In this definition 'social' indicates that the conflict is among interacting people. 'Two or more' illustrates the position of the actors. They see each other as adversaries trying to achieve their own goals. 'Person or group' supposes the existence of representatives for individuals or collectivities (i.e. classes or ethnic communities). 'Manifest the belief' suggests that the contending groups reveal the idea that their own goals mismatched with those from the other party. 'Incompatible objectives' denotes that the goal from one party is frustrated by the others' goals. One of the results of this incompatibility of goals is the generation of competition, for instance in terms of competition for the same water source.

According to Warner and Moreyra (2004), water conflicts are the results of an interacting high diversity of needs, interests, perceptions and cultures related with water management. Conflict is understood as a natural part of social life. It can also be seen as an opportunity to generate social changes (Urteaga, 2006). Therefore conflict itself can not be categorized as positive or negative. It would occur any time, in any culture and in any place. However, conflict is also defined as the situation in which tension exists between two parties and from which negative feelings, lack of trust and resentment could emerge. (De la Torre and Chañi, 2004). Kriesberg points that 'conflict evokes the deepest emotions and strongest passions' and also requests concentration and efforts from the parties. It is a conscious process, a form of struggle which is intermittent¹⁴ and personal.

Wolf (1995) refers that water conflicts involves *competition* as well as *cooperation*. The first one refers to dispute and blockage of goals among parties. Cooperation refers to the behaviour among parties to realize that at least they have some common goals. When power is exercised to conquer the perceived blockage, this is considered as a "*conflict*". However, Kriesberg makes a distinction between competition and conflict, explaining that competition does not imply awareness from the parties. It is not always a conscious process. Urteaga (2006) explains that conflict can represent an opportunity to generate social changes. Conflict is an innate result of social interactions. In the context of her studies, Urteaga makes a typology of conflicts as evident and latent and others as disputes and disagreements.

Currently in the Andes, there are initiatives that analyze water conflicts. For instance in Peru, the Water Governance Project¹⁵ (IPROGA, 2007) developed a typology of water conflicts. This typology includes some of the factors which provoke conflicts, for example the imbalance between water quantity and water rights permits, inefficient water management, impacts over existing rights, etc. Those problems also occur in Ecuadorian water management.

¹⁴ Intermittent means that conflicts can be interrupted or it stops and starts again, continues or repeats.

¹⁵ Proyecto Gobernabilidad del Agua en el Perú

Conflict resolution

There are different opinions about conflict resolution. Some authors consider that conflicts can be solved. Others argue that there is not possibility for solution but for transformation of conflicts. These opinions are presented and discussed in the following paragraphs.

According to Burton (2000), conflict resolution means the finalization of the conflict. This is done by using analytical methods which are focused on the root of the problem. Conflict resolution does not just pretend to solve the conflict immediately, but it gives inputs about the nature of the problem and contributes to the elimination of its sources. The result is the permanent solution of the conflict. Burton explains that conflict and conflict resolution are universal phenomena. Conflict resolution process has an ethical dimension and needs a deep analysis. Burton highlights the importance of the intervention in a case of conflicts. Intervention in the social relations at different levels implies always accountability about the consequences. Also it is necessary to consider the values and perceptions of the actors before the intervention.

Avruch and Black (2000) explain that culture is a basic element to consider in cases of conflict resolution. Culture is 'a fundamental force of human conscious' which produces every important action. Thus, to understand the reactions of parties involved in conflicts is required to understand first the culture which provokes such behaviour. However, it does not imply the prediction of behaviours during conflicts. In this sense, the authors explain that during conflicts between parties from different cultural backgrounds, it is important to have a good understanding of their backgrounds. Also, during the intervention preliminary judgments of events should be avoided and should be analyzed in their specific context.

On the other side, Huamani (2006) states that conflicts can not be solved, but only transformed. She explains that there are different ways to implement conflict resolution. In relation with natural resources (i.e. water) researchers propose prevention, management, resolution and transformation. According to Huamani a key element is that the parties could reach some mechanisms and capacities to promote dialogue towards conflicts management and prevention in the future.

According to the findings of this study, the approach of Huamani appears to occur: transformation of water conflicts instead of permanent solution. This is possible to state based on the concept by Kriesberg that conflicts are intermittent, can stop and appear again. Also it is apparent because the water conflict explored involved several social aspects, for example trust and respect, which are sensitive aspects that could be contested. Regarding mediation processes as part of conflict resolution, the two cases studied show that the initiative to find a solution or reach a consensus came from one of the parties

(water users) involved in the conflict. However, it is possible that the interest to solve or intervene in the conflict can come from the mediator or external actor.

It is important to remark that although the conflicts can be transformed, there are strong contradictions within society that could increase conflict situations. Those contradictions are about class, ethnic, gender differences, etc. Which are on the background of social relations. Thus, to leave them unchallenged could lead to new conflicts.

In sum, this study is based on the previous concepts: Water rights, Water Conflicts, Power and Conflict resolution. Therefore, the water users based on their respective interests and needs claim water rights over sources (i.e. water streams). These different claims generate forms of struggle, which in this study are called water conflicts. The water users, moved by their own goals, may

initiate negotiation processes. Those negotiations are arenas where power is shown and expressed in different ways as strategies to negotiate. As one of the results of these negotiations a situation of conflict resolution can be reached or the conflict can be transformed in a situation with less competition. Therefore, there is a possibility to generate new forms or arrangements concerning water rights.

Chapter III. Who has the water rights over to the Sanaquinllay creek?:

The struggles of three water users and their power strategies

3.1. Introduction

There is a current conflict situation between three water users, who are claiming water rights over the same creek. The users are the community of El Toldo, a group of *hacendados* (landlords) and settlers from the town of Quimiag. All users take water from the Sanaquinllay creek but for different purposes, thus there is an evident competition between them especially in times of water shortage. Two of those water users have their official water permits from the government agency to use that source, and the third one (Quimiag) is in the application process to obtain it. The conflict emerged at the beginning of 2007 when officially permits were issued. To mediate this conflict the users asked for the intervention of Interjuntas Chimborazo. This organization enabled the discussion among the users and via mediation meeting the users discussed about the final water distribution from this creek – but the dispute is not resolved yet. This existing conflict also provoked tension and damaged the relations among users in the area.



Photo 3.1. Sanaquinllay Creek

This chapter aims to illustrate the conflict situation between three water users and the different ways how they claim their water rights. First, the case presents some physical and social features of the town Quimiag, for example the main livelihoods activities in the area, in order to understand the context of this conflict. Second the case itself, which starts with a description of the water users or actors. Then, the performance of the actors during the mediation meeting and how they claim their water rights by making use of the (different types of) law or parts of this to get benefits over the others. Finally, the chapter ends with an analysis of the water rights and the different forms of power, which reinforce the users' strategies within conflicts.

It also gives a brief analysis of the conflict's dynamics.

3.2. An overview of Quimiag

Physical Features of Quimiag

Table 3.1: Physical Features of Quimiag

<i>Physical Features of Quimiag</i>	
Location	North East part of the <i>canton</i> Riobamba, Chimborazo province.
Area	162.48 km ²
Altitude	From 2000 up 3500 metres
Annual average precipitation	1500mm (highest rates register between February and July)

Source: Junta de regantes Río Blanco-Quimiag.

Consortio interinstitucional para le manejo integral de la microcuenca del Río Blanco, Quimiag- Riobamba.

Social and Economical Features of Quimiag

According to the Census 2001, the population is 5 472 inhabitants, 20% of these live in the *cabecera parroquial* (town centre) of Quimiag and 80% is settle in communities in the surrounding rural areas. The population density is 35 inhabitants per km². The basic services are available in the area such as electricity and water for domestic use. This water is taken directly from the streams by using pipes. Therefore the water is not treated. (Junta de regantes Río Blanco Quimiag. Estatutos y Reglamentos, 1996).

The Parish, especially the upper part, received migration flows of peasants and indigenous families from other Parishes of Riobamba. This created new social organizations, for instance communities, associations, agriculture cooperatives, pre-communities, etc. There are also many large farmers (*hacendados*) in the area. The most important activities are agriculture and livestock production on different scales. There are suitable areas for agriculture in the *paramos* (highlands) which are owned by those *hacendados*, and part of them are also property of community organizations, which manage and use them for pastoralist purposes. The typical crops in Quimiag are maize, beans and potatoes. Because of the introduction of irrigation, other crops such as leaf vegetables and fruits could also be taken into production. Basically, the yield and the livestock's derivatives are for households' self-consumption and just a small percentage is traded in the markets of Riobamba city.

3.3. Claiming rights from different angles

3.3.1. Who are the actors?

There are four actors involved in this conflict; three of them are different water users located in Quimiag. They are El Toldo community, a group of *Hacendados* and the settlers of the town centre of Quimiag. The fourth actor is Interjuntas, who is the mediator in the conflict.

The *El Toldo* community was founded in 1966. This was one of the first organizations present in the Parish. According to the statutes of the irrigators from Quimiag (1996), this community received the lands of El Toldo, an area of 900 hectares in the process of the agrarian reform. It is located in the upper part of the Parish Quimiag. This is a *mestizo* community that constitutes of approximately 80 families or 400 settlers (considering each family with 5 members in an average). In the area, 60% of the population is dedicated to agriculture and livestock production, 20% migrates to cities or to foreign countries and the other 20% have other activities, for instance, work in the land of the *hacendados* or in Riobamba city. The community holds a water permit from the Water Agency

since January 2007 to use some small creeks located in the surroundings or the communal area and to use part of the Sanaquinllay creek. This permit benefits around 80 families with 20.68 liters per second. (See table 3.2 for the details of the permit: water sources, water flow, purposes, etc.) The Ecuadorian Water Law established that the water permit for irrigation purposes are given for 10 years to the users, who have to pay an annual retribution cost to the Agency.¹⁶

Table 3.2: Water permit for the El Toldo community

Water sources	Water flow (l/s)	Purposes	Costs (USD)
Sanaquinllay	15.00	Irrigation	27.75
Puzurumi 1 & 2	1.04	Domestic use and for animals consumption	--
Puzurumi 1 & 2	3.64	Irrigation	6.73
Itzana, Rayoloma and the Y	1.00	Irrigation	1.85
TOTAL	20.68	Beneficiaries: 80 families	

Source: *Agencia de Aguas* (Water Agency) of Riobamba Exp. No. 5594-2005. 2007

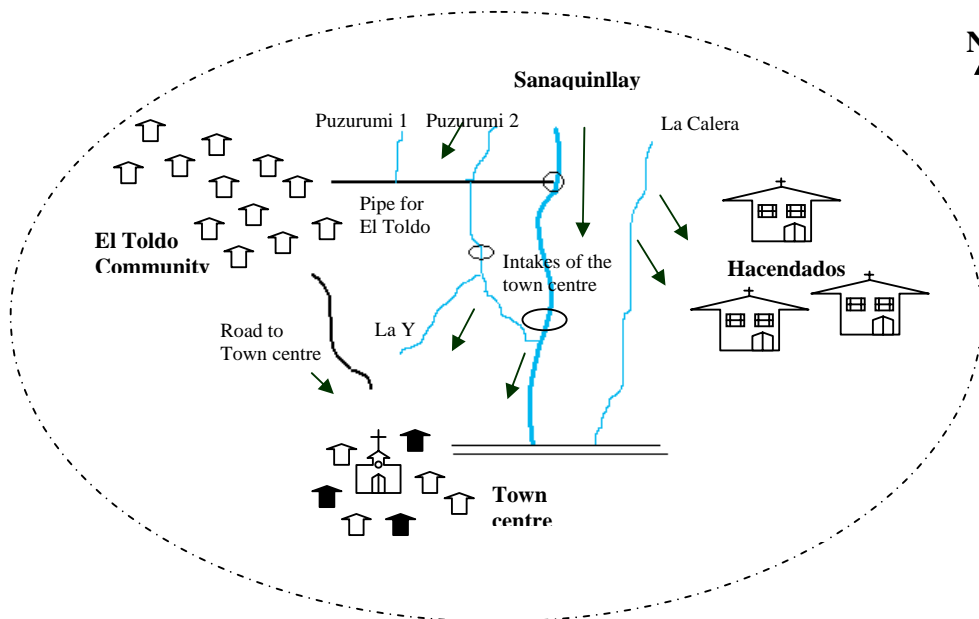
The *hacendados* are mainly large farmers who settled in the area more than 20 years ago. They are very much involved with livestock production, cattle trade, milk yield and large-scale agriculture. They are important, well-known families in the Province's society, with political and economic power. Most of them received the permit in the early 90s to take water from some creeks such as Sanaquinllay and La Calera located in the *Sector Paquisha* of the Parish Quimiag. They hold a permit of 29.28 liters per second for livestock consumption and irrigation. This also included other communities (*Llulluchi, Guzo, Guntus, Cachipata, Cucún, and Guabulag*). After a period of time these communities decided to be separated and get their own permit.

There are about 230 families in the *cabecera parroquial* or town centre of Quimiag, the third actor in this case. Some of these settlers work in the city of Riobamba or have their own business in town (small shops around the main square). They take water from the Sanaquinllay creek for domestic purposes but without permit. Their intention is to legalize this use by applying for water a permit. They hold a water permit since 1994 to use water from *La Calera* (9.62 liters per second) but they do not use this because of lack of infrastructure to convey or distribute the water.

Interjuntas Chimborazo, the *Federación Provincial de Organizaciones de Usuarios de Aguas* is a legal advice centre and the mediator of the conflict. The water users involved approached *Interjuntas* and asked for its intervention. This office starts its mediation with a fieldwork, visiting the different actors and carries out some interviews. In that sense, *in situ* they know the problems and this also validates some comments from the users in the field. In the first stage the purpose of the intervention is to gather information about their positions and claims. The second stage is to call the water users and facilitate a discussion among them to clarify aspects regarding the water conflict.

¹⁶ Annual payment to the Water agency for irrigation purposes.

Figure 3.1: Distribution of the water users and the creeks in Quimiag



Source: Water users from the El Toldo community, the *hacendados* and the town centre. Fieldwork.

Explanation note to the figure: *In the middle of the figure and highlighted there is the Sanaquinllay creek, which is the source in conflict. At the western side of this creek, there is the El Toldo Community, the creeks that this community received in water concession and the pipe used by this community to take water from the contested creek. In the middle of the figure there are the intakes to convey water to the town Quimiag. At the eastern side of Sanaquinllay creek, there are some of the hacendado families. In the lower central part, there is the town of Quimiag.*

3.3.2. Sanaquinllay: The water conflict

The conflict became evident around January 2007, when the El Toldo community received the water permit for some small streams and for part of the Sanaquinllay creek located in the parish Quimiag. El Toldo takes this water already for about 15 years without water permit. This is possible because the community made an oral agreement with the *hacendados*, who hold a water permit over Sanaquinllay and they allow the community to deliver water to its lands. However the *hacendados* are complaining because the newly issued water permit for El Toldo consists of 20.68 liters per second which is more than the community normally needs, takes and uses. The *hacendados* hold their permits over Sanaquinllay for a long time already, some for more than 20 years. This water permit consists of 29.28 liters per second and it is for irrigation and livestock consumption of four large families. Thus, there are two permits given to two different water user groups on different dates for the same creek. Additionally, the town centre of Quimiag is also applying for a water permit for Sanaquinllay, to be used for domestic purposes.

According to the Ecuadorian Water Law, at this stage, there is not a problem to give more than one water permit to the users when there is enough water in the creek¹⁷. However, accordingly to the measurements done by the *perito*¹⁸ of the Water Agency, the Sanaquinllay creek has 24.6 liters per second. This was calculated in February 2006 and according to the expert the water flow was already incremented at that time. This is one of the main concerns for the water users involved in this case, that during times of water scarcity they will not have enough water to satisfy their needs

¹⁷ See: Ecuadorian Water Law, Art. 7th

¹⁸ Engineer, expert from the Water Agency

and production. As a result and at this stage the conflict is about competition of water users around the same water source. However this case involves more issues than only those related with water, and in the coming paragraphs every water user explained to *Interjuntas* their thoughts around the conflict.

The *El Toldo* community addressed the problem in the following terms: the situation is aggravated by the current tensions and bad relationship with the users of Quimiag town and also their inefficient water management practices. The community wants to show that they respect the other users and that they are not taking water from anybody. However, they comment that the neighbors from the town centre are treating them in a bad way, based on the idea that *El Toldo* wants to deprive them of the water. The *El Toldo* representatives are very suspicious of what the town centre and its representatives are thinking and planning to do with the Sanaquinllay creek. The representatives consider that if somebody wants to claim their water rights, they should have the papers, i.e. the water permit from the Agency. The community considers that they followed the whole application process to receive a water permit in a proper way and that in the end they hold a convenient and rightful resolution. Also, they express that there was not opposition from other water users during the process and that the Water Agency proceeded according to law. Actually, they know that the water permit is the discussion point with the *hacendados*. However, *El Toldo* comments that even that with this permit, their water requirements are not totally satisfied. This situation is even more extreme during summer season, when there is almost no water in the creeks.

The conflict situation according to the *hacendados'* representative is about the feeling of mistrust among water users of the area. Based on an oral agreement between the *hacendados* and the community of *El Toldo*, the community could derive water from the Sanaquinllay using a pipe. This was allowed by the *hacendados* and it was arranged many years ago. Then, according to the *hacendado*, *El Toldo* applied for a water permit without saying anything to other water users about that. This is considered by the *hacendado* as a lack of respect for the oral agreement. Likewise, the community did not communicate on time to the Water Agency that there were other water users as beneficiaries of the same source (i.e. other *hacendados*), and in the *hacendado's* view, the community even received water rights over more water than the community needs or will use. The *hacendados* are also suspicious about the application process, specifically about the announcement of the *El Toldo's* request. It is established by the Ecuadorian Water law¹⁹, that all of the applicants for a water permit have to publish their request in the most public place of the Parish, and for a certain period of time. This place is usually the office of a local authority (*Teniente político*). The *hacendados* feel that there is a lack of trust and lack of consideration with them and their first water permit was already given to these families long time ago.

The situation between these two actors and the users from the town centre is the other side of the conflict. The Sanaquinllay creek is also used by the town centre which has its infrastructure installed to convey water to the town. It is located downstream of the *El Toldo* community. They have no water permit for Sanaquinllay. On the contrary, these users have a water permit for parts of another creek, La Calera (9.62 liters per second). However, the town centre does not take water from it as it is quite far from the town. The town's representative approached the Water Agency in 2005 to start the application process for the water permit, and then claim water rights over the Sanaquinllay creek that it is currently using. The application is still in process. The representatives commented that, currently, people from Quimiag downtown do not use water efficiently; people even use this water for irrigation purposes, but this situation will change as soon they have the water control devices and a cost per cubic meter of water. This deficient use is also criticized by *El Toldo*

¹⁹ See: Ecuadorian Water Law, Art. 87, Inc. a.

and by other water users. Recently, the relationship between Quimiag and the community has been changing; there is miscommunication and lack of trust among them.

Therefore, according to the water users the increasing pressure over the water resources in the area, specifically over the Sanaquinllay creek produce a tension situation between them, which will get worse during the dry season or summer (as they called it) when the water flow decreases significantly and can not cover the water requirements of all the water users. In that case, some of the water permits can not be put into practice.

3.3.3. Initiating negotiations: The Meeting

The interview meeting for this research was organized by *Interjuntas*. It constitutes part of the research and intervention of this office towards a mediation process. In this way, the meeting started with a short introduction by *Interjuntas* to present the findings of some field work in the area, observations and interviews with the actors. The main conclusion was that water rights and distribution of the Sanaquinllay creek are not clear among the water users. There is an increasing conflict situation among them.

Daniel Porras²⁰, the representative of the *hacendados*, is the first one to speak. He expects that other users could respect his *sentencia* or water permit and the ones of the other families. He also questions the representatives of the town centre, “How much water does Quimiag need with a projection of some years?” and also “the town has to define, from which source they want to take water from? Because it is known that Quimiag has already one water permit, which it does not use, and the *hacendados* and other users will not allow them to take water from many more sources!” Likewise, Don Daniel Porras also points at the situation of the community El Toldo, expressing his surprise that they received the water permit from the Water Agency in a very short time, in more quantity that they in fact need, and without saying anything to anybody. “You did not even specify in the Agency that there are more water users: the *hacendados*”.

“No, no Don Danielito, how can you think like this? You know us, we are friends. All of us we are *Quimianos...brothers*”. This is the intervention of Julio Ramirez. He is one of the oldest representatives of El Toldo community and attended the meeting together with 21 other farmers (five women among them). He states that people from El Toldo could not deny water to anybody. However, as a community they expect some respect from the other users in some aspects... “We want you to respect our water rights and our properties. For instance, at least let us know when you want to enter to our territories to check your pipes or clean them”. The creeks which supply drinking water to the Parish Quimiag are in *El Toldo's* communal areas, and they feel that if people from the town centre want to enter they should ask for permission (or at least inform the community). People from El Toldo will not deny access but just request for a bit of respect. The representative together with other community member agree that if water is not enough to satisfy their needs it is normal to start looking for extra sources and then make claims and intake official with the water permit. In the province, this is a common procedure undertaken not only by indigenous or peasant communities but also by groups of *mestizos*²¹.

Then other *comuneros*²² intervene supporting Don Julio's participation, but also point out that there is a deficient water management in the town centre, “Nobody cares about water and how much of this is wasted” and also “The pipes of the Parish in the upper part are located close to the surface

²⁰ The names of the actors are changed in order to protect their identities.

²¹ Person who comes from a mixture of culture or Parentage (European and indigenous or non- European)

²² Community's member

and when these are damaged nobody from the Parish pays attention”. Also women from El Toldo expressed that during summer there is not enough water for domestic purposes - that is why water from Sanaquinllay is very important for them.

The representatives of the town centre then start their participation in the meeting. First Don Felipe Castro explains that there is an interesting project for the Parish. This project is funded by the Japanese government and is going to supply and install water devices to measure water quantity in every house. “In this way people in the town centre will take care not to waste water because it will cost them money”. Then, he highlights, “We are going to use water that is already in the pipes, we are not going to take more”. Also Doña Maria Cespedes, the other representative of the Parish, explains that she is very much aware that people do not use water efficiently, that is why the project of water devices is very important, ... to have a good water control”. Her idea is to use water that they are

already taking; “let us unite efforts and share Sanaquinllay creek”. At the end the Parish representatives agreed that they will talk with the users in the Parish and also with the other representatives of the water committees. They will respect the community territories or ask for permission when they want to work in *mingas*²³ and protect their pipes. However, when the representative of the *hacendados* asks for taking decisions about from which creek the town wants to take water, she says that as a representative, she can not take any decision without previously consulting with the people from the town. This point highlights that the Parish has already a water permit for a neighboring creek, but it is still using water from Sanaquinllay.

At the end of the meeting, together with *Interjuntas* the water users state that there are three main agreements: First, all of the water users recognized that there is a tension situation among them and also many misunderstandings that form part of the conflict. To avoid them the users agree that they need to continue and increase holding dialogue among each other. Second, they are going to respect the water permits that every user holds up to that moment. Third, they agree that during times of water scarcity, they are going to share the water resources of the area in a proportional way. It means that they will distribute the existing water from the source based on the amount of water given in each of the water permits. However, according to Don Daniel and other water users, in order to come up with this point, there is a need of a technical study which can show that there is enough water in the Sanaquinllay creek to be shared.

During the meeting, the parties expressed the limitations of the Water Agency in terms of capability to deal with many water permits applications because of lack of personnel. Likewise all of them and even the Water Agency are very aware of the real limitations to execute a strict water control over the sources given in permits within the Province. They said that this is impossible. In this sense, it is apparent, from the meeting, that some of the water users are willing to achieve consensus and agreements without any intervention of the Water Agency.

²³ Collective work

Photo 3.2 Different irrigation structures and lands in Quimiag



Pipe usdes by the El Toldo to deliver water from Sanaquinllay creek to the community

The intake of the twon centre to delever water from Sanaquinllay creek to the town



The lands of the Hacendados

3.3.4. Who has the rights?: The Claims

Water users expressed that nowadays it is necessary to get the papers (Water permits) from the Water Agency. In this way, they feel that they have water rights and are officially secure. Likewise, during the negotiation meeting the importance to have those papers was also taken into consideration by the parties.

In the case of El Toldo community, it is apparent, that in some way the facts of the existing water permit give its leaders the security to negotiate. Its representatives claim for respect for their water rights over the small creeks that they are using already and for part of the water from Sanaquinllay creek. They express that they need water for domestic purposes, livestock consumption and irrigation. Likewise, they claim respect for their communal territories. In this way, one of the last agreements of the meeting, “Respect to the water permits already given”, is a good point in favour of *El Toldo*.

In the case of the *hacendados*, most of them hold the water permit for a long time already -at least longer than the other parties- and mainly for irrigation and livestock keeping purposes. They express that they were the first ones to have the water permit, and they are therefore protected by the law, specifically by the Civil Ecuadorian Procedure Code. It says that when there is a water user who holds the permit, and is also using the water resources properly, and fulfilling all of the legal requirements established by the water law, then this user can ask for the nullity of the second or latest verdict or water permit²⁴. In this sense this user has priority over the others. It gives the *hacendados* a good position: a powerful stake from the point of view of water resource control and legal arguments during negotiation times, which even could be used in case that they need to go to court afterwards.

The town centre of Quimiag is claiming water for domestic purposes and from the water source that it has been using already for about 15 years. From the interviews with the representatives, they commented that because of population growth in the area, there is more pressure on water sources now and that it is necessary to get the permits, to make sure that nobody is going to deprive them of the resource. The water permit application is in process. There is a high chance for these water users to get the permit because their claim is for domestic purposes, which is first in the priority order for water permits. Concerning the Water Agency, which is a legal department, is like a judicial court as well, and in this sense it can never refuse a water permit application because all of the users have the right to apply. The Agency follows the criteria and priorities established in the Ecuadorian Water Law, thus decides if the water permit will be given or not. However, in the case of the town centre, even without permit it is considered as a water user by the other parties.

3.4. Conclusion: Water rights and power strategies during conflicts

Analyzing every party and their positions, it is clear that in the case of *El Toldo* community the permit gave the community the power to be considered as a legal actor in the process and with a voice to intervene and claim their water rights during the meeting. The other additional source of power of this community is the communal territories, where the water creeks are located. Using the possession of their land rights they are able to claim respect from the other water users.

²⁴ See: Civil Ecuadorian Procedure Code, 2nd Book, 1st Title, Section 10^a

During the meeting with Interjuntas the *comuneros* expressed that there is not enough water for them. The *hacendados* opposed to this and said that there actually is more than enough water for the community. In the water permit the community received 19.64 liters per second, from these 15 L/s are from the Sanaquinllay creek and this is to irrigate 300 has. The calculations about the water flow done by the Water Agency supported the community's complains. In this sense, according to the Agency, to irrigate 2 ha of Clay loam soil with allocation of 0.5 liters per second per ha, it is needed 1 liter per second. Thus in total the community needs 150 liters per second.

Photo 3.3. *Comuneros* from El Toldo Community and the Sanaquinllay Creek



In this case, the *hacendados*, despite the traditional allocation of economic power (rich owners) or social power to influential people, they use another kind of strategy: law seeking. In this sense, they claim respect for their water rights using the fact that they are the first users with water permit for the creek as an argument. This fact is protected by the Law. This position is seen under the prior appropriation doctrine of water rights: 'first in time, first in right', where the oldest users have priority to have access to water (Gould, 1988). It is apparent that the economic and political power was not a totally effective tool for the group of landlords.

The town centre of Quimiag has a very convenient position, because of the purpose of its water rights application which is for domestic use. This, according to the Ecuadorian Water Law, is the most important water use in the priority order for giving water permits in the country²⁵. This aspect places the town in a powerful position to intervene as an actor in the process and to negotiate as well (even without official permit). Although the other water users do not accept that the town is taking water without permit, they do not or will not stop them. It seems to be because there is a socially accepted rule among the *Quimianos*: nobody is able to deprive of drinking water to anybody.

Although, this case of water conflict involves different actors, each of them with different cultural backgrounds (*hacendados*, *comuneros* and citizens), it shows that those actors use similar strategies

²⁵ Title IV About the Water uses, Art. 36: The concession of water sources is based on the following priority order: a) Domestic purposes and raising animals, b) Agriculture, c) Energetic, industrial and mining purposes, d) Other uses. The National Council of Water Resources could vary this order with exemption of the first literal (a).

to claim and defend their water rights. These strategies are mainly concerned with the opportune use of the water law (or parts of this) as a tool to reinforce their claims. In this way, the law itself becomes a resource for water users in certain situations, such as competition, disputes or other cases where water is a contested issue.

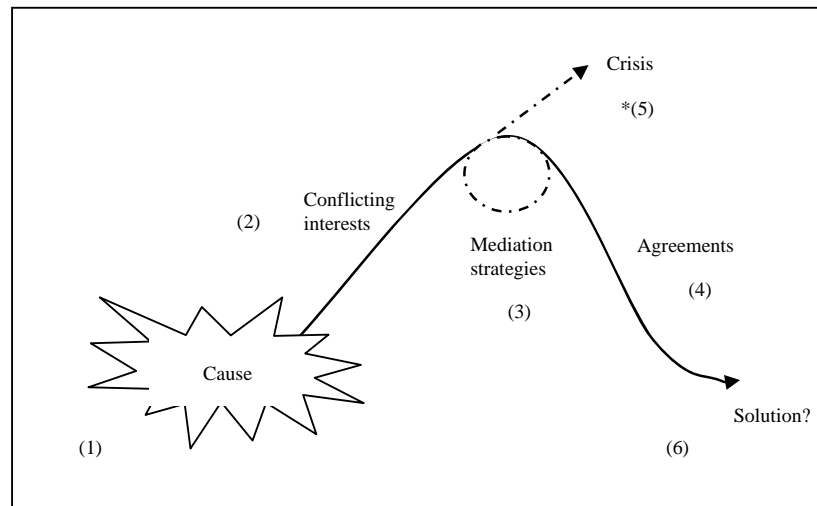
The actors involved in this conflict achieve powerful positions as soon as they link to a wider system, already established and considered by their society as a politically recognized model: the law. There is an urgent need for the users to apply to this system to defend their positions and apparently they agree and behave according to some rules. This kind of events in the Andean contexts is discussed by Boelens (forthcoming) and denominated as mimicry mechanisms and strategies.

However, during the assessment of this case, it is evident that not all of the actions and decisions of the water users fit into law, even more, some of them are out of its range. For example, some of the decisions that are taken after the negotiation meeting do not correspond with water law norms or even do not include the participation of the Water Agency; those decisions are based on local rules and practices. This situation where users choose strategically some parts (norms, or regulations) of different legal framework is explained by F. and K. von Benda-Beckmann (1998) as forum shopping.

The conflict dynamic to this specific situation is described in the figure 4.2. The detonator of the conflict seems to be the appearance of the water permit in the form of *sentencia* (or verdict) for the users. Essentially, there are no new water users, but to break down the *status quo* already established for long time ago provokes tension among the old water users: the *hacendados*. The fact that the El Toldo community acquires a permit could be analyzed as the emancipation of a marginalized group. This group reaches, with achievement of the water permit, a superior level officially recognized by law, and is now unavoidably recognized by the other users. On the other hand, there is a shared fear among the *hacendados* and *El Toldo* about the permit for the town centre, because if this has already power to negotiate without any official paper, after they get it, this will be even stronger.

Following the analysis of Huamani about conflicts, this case of water conflict could be categorized as a *constructive conflict*, because of the predisposition of the actors involved to come together and discuss about their needs and differences towards achieving a possible transformation of the conflict situation. The escalation of the conflict was because some problems of miscommunication and misunderstanding among the parties, their interests around the water stream. Along the process – not necessary in the crisis point - *Interjuntas* mediated and there is a high possibility after this mediation that the conflict is going to scale down. However, this point allows for further discussions because there is always the option of increasing tension which would provoke the conflict to become a crisis situation.

Figure 3.2: Dynamic of the Water conflict in Quimiag



Adapted from Huamani, G. 2006

Explanation note:

- (1) *Cause*: The appearance of official water permits and the consequence fear among users that some of them could take more water than they were normally taking.
- (2) *Conflicting interests*: Several water users from different backgrounds with divergent purposes and interests about the water sources. The conflict was aggravated because of misunderstandings, miscommunication and lack of trust among users.
- (3) *Mediation & Strategies*: In this stage Interjuntas Chimborazo intervened with the mediation process, bringing the users together to discuss their problem. During this process the water users formulated multiple strategies to pursue and achieve their goals.
- (4) *Agreements*: Based on their interests, trying to keep their own positions but also trying to understand the situation of the others, the users negotiated and could reach agreements.
- (5) * *Crisis*: There is also the possibility that the users will not accept the conditions or in the future they will not recognize agreements because those affected their interests. Then the conflict could reach a crisis point.
- (6) *Solution?*: In the case that users will respect the agreements, the conflict could be transformed. This point is considered for other authors as solution of the conflict.

To conclude, this case shows that a water conflict means more than just struggles to access to the water source; rather it involves other social aspects and it fits under the definition of social conflict given by Kriesberg (1998): 'A social conflict exists when two or more persons or groups manifest the belief that they have incompatible objectives'. Therefore in this conflict three interacting groups of water users with different goals, manifest their claims and each of them uses different strategies during the process; even though most of these strategies are related to the use of law.

Chapter IV. A tale of Two Communities:

Water conflict between two indigenous communities

4.1. Introduction

The adjacent communities of Cobshe Alto and Gulag Huayco are engaged in a conflict over the same water creek for more than 10 years. Both of them hold their water permits so both can claim for their water rights over the water source: water rights are legally authorized. There is one water creek; for Cobshe Alto the creek is called *Machay rumi* and for Gulag Huayco this is *Amo caparina*. Indeed, there are two communities, two water permits which overlap each other. Moreover, there are many years of high tension and struggles between these two indigenous communities. These communities at the end could reach a conflict resolution stage based on their own rules. Using partially official rules and always seeking for their own benefits.

This chapter aims to show how two indigenous communities dealt with a water conflict. First, the case presents some physical and social features of the communities, for example their economic activities and their main constraints, in order to understand the context of the case. Second, the case itself, which starts with the description of the actors, involved in the conflict for instance some particularities about their water permits, claims and positions. Then the conflict and the negotiation process are also presented. The case ends with the signed local agreement.

Finally the chapter concludes with an analysis of the different strategies of the actors for example the premeditated use of official rules in a mixture with local rules to solve the conflict.

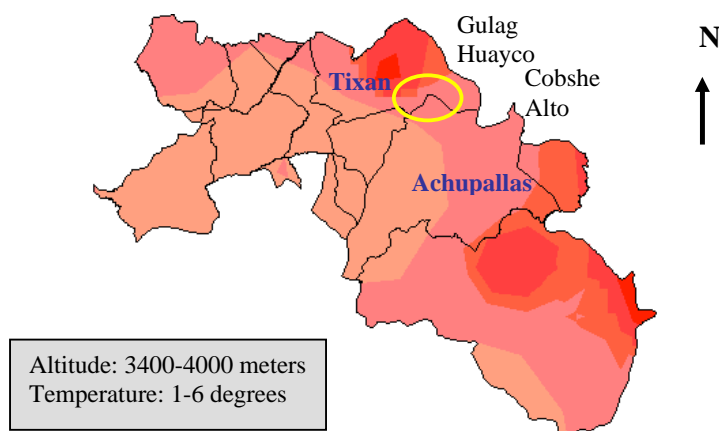


Photo 4.1. Water sources in the *Paramos* of Cobshe Alto community

4.2. An overview of the communities

Social and Physical Features

Figure 4.1. Location of the communities in the *Canton Alausi*



Source: Delalande, L. 2004.

Both communities are located in two rural parishes of the Canton Alausi in the southern part of the Chimborazo Province. They are neighboring communities but Cobshe Alto belongs to the Achupallas parish, and Gulag Huayco to the Tixan parish. The main activities in the rural parishes are agriculture (i.e. cereals and roots vegetables production) and livestock production. The indigenous and peasant communities trade their products and cattle on fairs located in Alausi or other cities within the province. It constitutes an important income for the communities. For example in Tixan, the activities in terms of percentages that a household carries out is 40% in livestock production and 20% in agriculture (Monnier, 2002).

However, because of population growth, there is an increasing pressure on natural resources, for example on land and water resources. This provokes that some people (mainly young men) decide to migrate to the cities to look for jobs. There is an increasing fragmentation and over exploitation of lands. These problems are related to local practices of land tenancy and transfer within families, from parents to the new generations i.e. *minifundios*²⁶ (Delalande, 2004). Another problem affecting the lands is the increasing of the agriculture frontier. Natural pastures, *paramos*²⁷ are sacrificed and this also implies a detriment of water sources and areas for livestock activities.

4.3. Living in arenas of conflict

4.3.1. Who are the actors?

There are two main actors involved in this conflict, two indigenous communities: Cobshe Alto and Gulag Huayco. The two of them are dedicated to the same activities: agriculture and livestock production. However, in the Gulag Huayco community it seems that livestock production and trade of the cattle in the markets are some of the most predominant activities. In Cobshe Alto it is

²⁶ Small plots.

²⁷ Highlands. Common name for mountains in Ecuador and Venezuela.

apparent that the community and its leaders are more engaged with agriculture activities and development of projects. For instance, they improved the irrigation system with the construction of a reservoir with micro membrane.

Cobshe Alto and Gulag Huayco have organizations which manage the performance of each community. For instance, among others, they have the communal general assembly and the water directories which are types of water users organizations and deal with water rights, allocation, turns, water fees, etc. In the case of Cobshe Alto the strong organization of the community influences the performance of the water directory and the decisions that it takes. These decisions are highly related to moral and religious principles. For example, the allocation of water rights to one *comunero* (community member) depends also on his or her personal behaviour: 'good or bad *comunero*'.

The two communities hold water permits from the Water Agency of Riobamba. The community of Cobshe Alto received the permit in 1994 over 4 creeks located in the neighboring areas. Those creeks' water is for domestic and agriculture purposes. The permit of Gulag Huayco holds the same number of water creeks and also for the same purposes. The difference was that Gulag Huayco received the permit in 1999.

In table 4.1 the characteristics of the permits for the two communities are listed. This information is also detailed in the description of the conflict.

Table 4.1 Characteristics of the water permits of the two communities

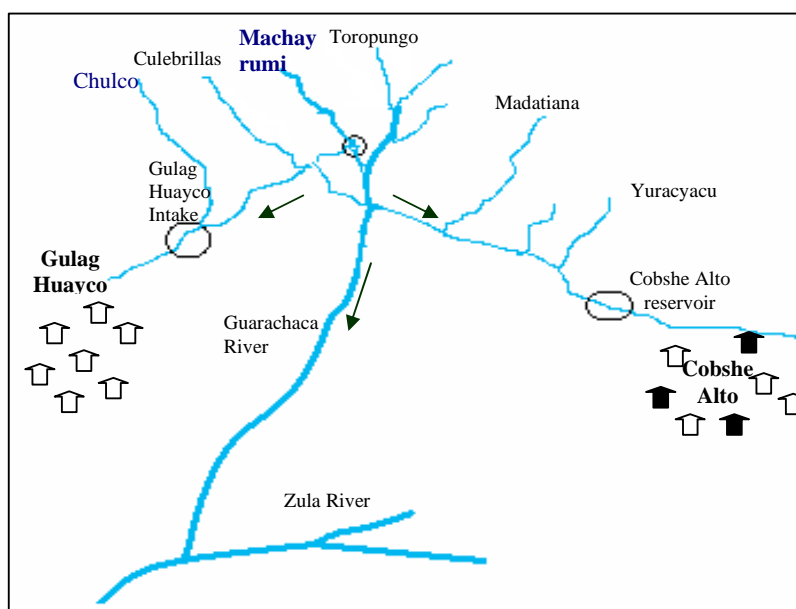
<i>Characteristics of the water permits for the two communities</i>		
	Cobshe Alto	Gulag Huayco
Water sources	Toropungo Madatiana Yuracyacu Machay Rumi (*)	Puguche Pucara - Huaico Chuscu Amo Caparina (*)
Water flow (L/s)	22.1	13.59
Date of issue	June 1994	December 1999
Purposes	Domestic use (0.68 L/s), agriculture (21.42 L/s)	Domestic use (0.79 L/s) and agriculture (12.80 L/s)
Annual Costs (USD)	815.00	500.00

Source: Consejo Nacional de Recursos Hídricos (CNRH). Exp 46473, 3380

(*) This is the disputed quebrada or creek: It is the same source with different names

The legal advice office, Interjuntas Chimborazo, played the role of mediator in this conflict. It was an external actor which mainly guided the two communities in legal aspects, for instance the conditions and requirements of the signed agreement or extra judicial agreement. The agreement highlights that the leaders of the two communities freely and voluntarily concur and submit to the called community mediation process, with the unique objective to end this conflict peacefully and orderly.

Figure 4.2. Location of the water users and the creeks



Source: Community leaders from Cobshe Alto

Explanatory Note: In the left side of the figure the territories of Gulag Huayco, highlighted the two creeks that they use: Chulco and Machay rumi. This last one is the disputed creek of this conflict.

The community, Cobshe Alto, takes water from the others creeks: Culebrillas and Toropungo.

This is the current situation after the *Acta* or consensus agreement.

4.3.2. Disputing a water source: The conflict

In June 1994, Cobshe Alto received the water permit. Thus, Cobshe Alto acquired this to use a total flow of 22.1 liters per second from 4 creeks: *Toropungo*, *Madatiana*, *Yuracyacu* and ***Machay rumi***. Those sources are located at 3880 meters ASL and increase the water flow of other creeks in lower areas. (i.e. *Culebrillas*, *Chulco*, *Yacupitina*). From these sources Cobshe Alto irrigates a small scheme system of 43 hectares constituted by the *comuneros*' lands, benefiting 70 households. The creek *Machay rumi* is the source in conflict, which is mainly used for irrigating those communal areas in Cobshe Alto.

Five years later, in December 1999, the neighboring community of Gulag Huayco received a water permit, over other 4 creeks: *Puguche*, *Pucara Huayco*, *Chuscu* and ***Amo Caparina*** (*Machay rumi* in Cobshe Alto). These are located in the community's territories. The first two creeks are for agriculture purposes and the other two for domestic purposes. The permit for agriculture purposes is for 10 years to be renewed after that period²⁸. It also demands an annual payment to the Water Agency.

One of the creeks of Cobshe Alto is the same water source for Gulag Huayco but with different name. Thus, the water rights and access to this source was the main point of discussion and conflicts between the two communities. Besides the problem about water rights, these communities also faced problems about land rights. More than 70 years ago the leaders of Cobshe Alto wanted to buy the land that currently belongs to Gulag Huayco, but because of problems of disorganization within the community and lack of decision from the population they failed in their purposes and

²⁸ See: Ecuadorian Water law, Art 23.

Gulag Huayco acquired the lands earlier²⁹. Now *comuneros* from Cobshe Alto regret that failure because the contested source is located on those lands.

The conflict degenerated in different kinds of struggles not just about access to water and land resources, but also there was an increased feeling of mistrust between neighbouring *comuneros*. There was even use of violence for example aggression to some youngsters that crossed the community boundaries and entered into the areas of the contrary community. More than ten years and many more problems passed before the two communities reached a negotiation stage. This was an initiative of Cobshe Alto.

Leaders from the two communities expressed that the problem was created by the Water Agency. The agency did not have a clear inventory or picture about the streams which are already given in permits and created this kind of problems.

4.3.3. Process of negotiations: The rights

To be a *comunero* in Cobshe Alto means that there are some rules to fulfill. For instance, concerning water rights to get and keep them it is necessary to be a water user, contribute with labour during *mingas*³⁰, pay the contribution to the water directory (25 USD cents per month) and pay the annual water fee to the Water Agency. Besides those requirements it is very important, according to the leaders, to behave as a good *comunero*. It demands to act under moral principles, respect to your family and other *comuneros*, involvement in conflicts within the community, etc. If some of these rules are disregarded the *comunero* is at risk to lose his/ her water rights³¹.

In Gulag Huayco, water rights are very much related to the financial contributions. For instance, every *comunero* has to pay to the water directory and to the Water Agency, the annual water fee. Besides that, a new water user has to pay a minimal quota to get his or her water rights. The water fee for each irrigation turn is 25 USD cents. Some contribution with labour is also accepted by the water directory in the form of *mingas*.

There is also a *multa* (fine) for example in case that the water users do not attend meetings or *mingas* (i.e. fine of 2 USD). When the water users do not pay the fees on time or have many delays in the payment they could lose their water rights.³²

Box 4.1. *Mingas* in Gulag Huayco

Mingas in Gulag Huayco:

The *comuneros* were called to work together in the “Minga del canal”. They were grouped in couples and distributed along the canals every 20 meters approximately. The idea was that every couple had to clean their part. Some couples were mixed: a man and a woman and others only men or only women. Provided of beaks and spades they started the work which is controlled by the president of the community and other leaders. At the end of the work the couple stood up next to the canal and see if water could flow smoothly. This is the proof of good cleaning and it is verified by the leaders”.

²⁹ Woman leader in the community of Cobshe Alto.

³⁰ Type of collective work typical of Andean countries.

³¹ President of the Water directory in Cobshe Alto.

³² President of the Community Gulag Huayco.

Although there are some differences concerning water rights in Cobshe Alto and Gulag Huayco, there is a common idea among indigenous communities: The need to go into the formal system and receive permits from the Water Agency. “*Currently without papers we can not do anything*”. This is the opinion from an indigenous woman, a community leader in Cobshe Alto. At the present time it is very important to acquire the water permits from the Water Agency. In this way the *comuneros* are officially recognized by law as water users and feel empowered to negotiate about their water rights during conflict events.

In spite of the fact, that Cobshe Alto held the first *permit* (1994) which according to the Civil Ecuadorian procedure code has priority over the subsequent permits; the community could not enforce the game rules of this conflict. Gulag Huayco had a stronger position based on the fact that the creeks emerge in their territories. They legally own the lands so they also feel they have water rights over the water sources. Therefore, Gulag Huayco placed the conditions according to their interests and required to stick to them, otherwise negotiations were not possible: ‘*If they had not accepted our conditions, the problem had not been solved, and we had fought*’³³. Gulag Huayco used their water and land rights strategically to be in a convenient position.

Photo 4.2. Before and during *Mingas* in the Community of Gulag Huayco



Another aspect that pushed Cobshe Alto to look for negotiations and try to finish this conflict was the possibility to be beneficiaries of government projects. Nowadays it is highly important for the indigenous and peasants communities in the Chimborazo province to qualify to get some funding from the government or NGOs (i.e. Provincial office or Regional Development Corporations, etc) to improve their canals' infrastructure. For this reason, the communities need to have all of their documentation completed: Permit, payments to the Water Agency, etc. But also their creeks or water sources should not be involved in any conflict with an adjoining community. Otherwise the funding is not given. Gulag Huayco knew that Cobshe Alto was trying to get one of this financial supports from the Province office, so they used this in a strategic way to push Cobshe Alto to accept their conditions.

³³ Community leader in Gulag Huayco

4.3.4. Ending the conflict: The local agreement

In December 2006 the community of Cobshe Alto took the initiative to find a mediator, and invited the legal advisors from Interjuntas Chimborazo to the negotiations. Interjuntas guided the two indigenous communities and after 5 months of discussions between them, they reached a consensus. In that way, the two communities decided the future and rights over the contested creeks. They signed a mutual extra-judicial agreement based on their interests and conditions. The leaders promised that their communities would follow the decisions of this agreement as rules. Finally, they established that they will legalize and reform their permits in the Water Agency of Riobamba.

The main point or requisite for Gulag Huayco to negotiate was to keep access to *Machay rumi* or *Amo Caparina* creek. Because they argued that mainly they use this creek for domestic purposes. Meanwhile Cobshe Alto uses it for agriculture. Also, because this water source is located within the lands or *paramos* of Gulag Huayco. In this sense, the local agreement established that Cobshe Alto gives up its water rights over *Machay rumi* or *Amo Caparina*, and now this belongs entirely to Gulag Huayco.

Gulag Huayco allows Cobshe Alto to still take water from *Toropungo* and *Culebrillas*. Although, Cobshe Alto has water rights over these two creeks, they are originated in the lands of Gulag Huayco - that is why there was a need for permission to enter the lands of the other community. With this agreement Gulag Huayco will not disturb to or interfere with Cobshe Alto, when they are going to do their *mingas* or maintain their canals.

4.4. Conclusion: Water rights and conflicts within indigenous communities

The two communities expressed their urgent need to get the permit from the Water Agency. Thus, they are not outside of the State legal system and somehow by adopting this set of rules they feel empowered to claim their water rights (Boelens, forthcoming). Apparently, it seems that all the *comuneros* want to proceed according to the official rules, but the way how they established their own rules is not necessarily according to the State law. Also the way how they create, maintain and organize or deny their water rights, for example by working in *mingas* or behaving as a good *comunero*; these actions belong to a different set of rules: their local rules.

Water rights are closely related with different ways of power. Water rights are themselves powerful elements. Thus it is very important for the two communities to be recognized as legitimate water users by the state with official water rights. But also, inside each community, is important to be legitimate water users and take part of decision-making.

The previous paragraphs illustrate an example of a recurrent practice in the Andes: forum shopping (F. and K. Von Benda-Beckmann 1998). Actors choose elements of different legal systems according to which one reinforces their positions or their claims within the conflict and places them in a convenient situation³⁴.

In this way, externally, or at a macro level (with the government offices) the communities use State law to protect their water rights for example with the formalization of water permits. But also internally they still apply local rules for defending and keeping rights. For instance, the local strategy or argument of Gulag Huayco about the possessing rights over lands provides them rights over the creeks gave this actor a strong position.

³⁴ See: More examples in Pradhan, R. and Ujjwal Pradhan. 2000.

At certain points the communities attach great importance to the State rules. For instance, the argument from Gulag Huayco that they use water from the contested creek *Amo Caparina* or *Machay rumi* for domestic purposes. This purpose has priority over the purposes from Cobshe Alto, which were to use the creek for agriculture. This is also seen as a different type of claim, based on the use and its priority accepted by law but also by society.

In this case it is interesting to remark that water users from both communities named their water sources according to their own communal background. The fact to identify and give names to their creeks generated among them a sense of property and rights over their water sources. Thus, both communities claimed rights over their water sources that are already identified as community's property. Box 4.2 gives a description of the names and their meanings.

Box 4.2 The names of the creeks and their meanings:

Box 4.2 *The names of the creeks and their meanings:*

Gulag Huayco : *Quebrada donde crece la planta Gulag or*

Creek where Gulag plant grows (*Lengua de vaca*)

Amo caparina : *Amo gritón* or Shouting owner

Yacupitina : *Cortar el agua* or To cut the water

Yurag Yaku : *Agua Blanca* or White water

Machay rumi : *Hueco bajo la piedra* or Hole under the stone

Toropungo : *Puerta del toro* or Bull's door

These are different names that the communities gave to the creeks or to the communities themselves. Some names seem to be related with the natural resources animals, plants, water, etc. which surround their territories. For example the name of the community Gulag Huayco refers to the presence of the plant Gulag in the area. Other examples: "Yacupitina" and "Yurag yaku" seem to talk about their water resources in terms of quantity and quality. "Amo caparina" it is a curious example because it could refer to the existence of a drastic landlord during the times of the *hacienda* or as the name of the creek, it could refer to the sound of the water flow.

Currently, the conflict is considered by Interjuntas as a solved case. However in the context of some studies, for example by Huamani (2006)³⁵ the water conflict can just be transformed but not solved. In this sense, and considering conflicts as dynamic and recurrent processes it is likely to occur again. This is also probable because of the increasing pressure over water sources in the Ecuadorian *paramos* generated by population growth, increasing water demands and water scarcity.

In other cases, the signed agreement could be broken when some *comuneros* in the future question their leader's decision or simply consider that those agreements affect them for example in economic terms. The leader of the *directorio de aguas* (water board) from Cobshe Alto tried to avoid this possible situation explaining his community's partners about the conditions and benefits of the agreement. However as Nuñez (1995) pointed out, it is common to find cases of dissidence among *comuneros* and non-recognition of agreements is possible to occur within communities.

³⁵ See: Chapter 2 of this report and for further information

Chapter V. Analysis and Conclusions

This thesis has shown two examples of water conflicts in the Ecuadorian Andes where the actors involved used different strategies to claim and defend their water rights. These strategies are implemented within an environment of legal pluralism and power expressions towards water control. This section aims to analyze and discuss in a broader perspective the findings from the two cases by dividing them into three main parts:

- *Water rights and Legal pluralism,*
- *Power and Water control,*
- *Water Conflicts and Conflict resolution*

5.1. Water rights and Legal pluralism

The cases illustrated how the multiple water users during water conflicts choose and even combine different legal systems to defend and support their claims for water (Meizen-Dick and Bruns, 2000). This legal forum is practiced within an environment of legal pluralism (Benda-Beckmann *et al.* 1998). This combination of normative systems coexists in any society. Therefore local laws as well as State law are used strategically by the water users depending on which one is the best legal system, or which are the most strategic element of several legal systems, to support their claims. This practice is not only restricted to indigenous or peasant communities. Hence, among multiple water users, water rights are claimed using as a tool, among others, the formal water permits officially recognized by law and generally accepted by other users. This is seen in the first case of water conflicts between different users. Between (and within) communities, however, the communal work (*mingas*) also is a strategic way to create, maintain, recreate and ensure water rights (Beccar *et al.* 2002). However, this practice is not necessarily recognized by the State law as a legitimate way to obtain or to claim water rights.

Government institutions often consider water rights as merely concessions or water permits to use part of a water flow. However, the two cases demonstrated that such conception is practically narrow. Water rights are combined, in practice, by different types of rights. For instance claims for water rights are related with land rights. Also water rights can vary according to different property regimes. This is seen as “bundles of rights” (Meizen-Dick and Pradhan, 2000; Schlager and Ostrom, 1992).

Despite the fact that different and even opposite or contradictory laws coexist within a specific territory (i.e. community, parish, province, etc), this complexity does not necessarily generate problems. The reason could be the strategic combination of some elements from the several legal frameworks. However it is not possible to state that this complexity will not produce or aggravated conflicts.

5.2. Power and Water control

There are different ways, expression and trends of power within society. These expressions are specially highlighted and exercised during conflict events. For instance, ‘State law is a particular way of expressing power relationships’ (Nuñez, 1995). The type of power exercised by the State is vertical power which aims at control and limits the independency of social actors. This can be illustrated by the two cases where Government offices execute water control over the users’

behaviours and resources (Boelens, forthcoming). The water users, conscious of the effects that this power executes over them, and other actor, use it strategically. The water users obtain the water permits and therefore feel empowered to claim their water rights at the same level as other legally protected users during negotiation process.

The previous paragraph illustrates an apparent reason which justifies the urgent need from users to receive the water rights permit. It is explained by Boelens (forthcoming) as the desire to become part of a generally accepted system. The author theorizes this behaviour as mimicry mechanisms and strategies implemented by water user to resist forms of power. These mechanisms are present during daily life events but are even more evident during process of negotiation for water rights. Therefore, water users alter the mechanisms of execution of coercive and inclusive power in order to achieve the control of their own water resources.

Water rights are closely related to power relations. For the State it is expressed as ownership of water sources and resources and the capacity to confer or deny access to water. However the State fails to implement its power in practice. For the water users, to hold water rights, implies the power to decide the real destiny of water flows at field level.

Claims for water rights during water conflicts are based on and legitimated by different sources of power. For example, water rights based on the water use, which from the findings of this study is supported by the State law in the case of water rights for domestic purposes. The claims for water rights can be based on the perceptions and local rules of the users. For instance, the combination of water and land rights and the sense of property, the customary use and the prior appropriation of water sources.

5.3. Water Conflicts and Conflict resolution

It is reflected from the cases, that water conflicts are the result of interaction of multiple social actors with different needs, perceptions, interests and who dispute a common resource. However it is also clear that water conflicts reveal more than just competition for access to water. They are a mixture of struggles for water rights, respect, recognition and consideration among multiple users and which evoke parties' deepest emotions. During water conflicts, and during process of negotiation, power and its expressions play an important role to guide the situation to a convenient point for certain users.

Despite the fact that the two cases of water conflicts that are demonstrated in this report are apparently 'solved', it does not mean that this is a general rule for water conflicts after a process of mediation. This can be explained by the intermittent nature of conflicts (Kriesberg, 1998). Then, it is better to consider the transformation of the conflicts, to a less contested situation than a total and permanent solution with the respective signed agreement. It is realistic to consider the possibility that the conflict could emerge in any time even after reaching consensus. For example it is explained by Nuñez (1995) that within peasant communities usually there is obedience of the communal agreements. However the author also indicates that there is 'a place for dissidence' (1995:14), especially when the *comuneros* perceive that decisions from their representatives affect their interests.

Likewise, Guerrero explains that "if there is a diversity of conflicts and each of them with a particularity. It has to be consider as well that the strategies and process employ to solve them should be diverse" (1998:70). This thesis with its cases tried to illustrate this explanation. Mainly showing the strategies employed by users involved in water conflicts to solve or transform them

according to their own interests. However as it is explained during this study leaving basic contradictions of society (social, class or ethnic differences) unchallenged could lead to new or even deeper conflicts.

The process of mediation or intervention in water conflict towards dispute resolution is possible with the acceptance of at least one of the parties. This process can be initiated by the water users, who are motivated by different reasons from personal, social to economical purposes. (i.e. the need to negotiate water rights in order to maintain good relationships among users, beneficiaries of a irrigation project).

Final Note

As a mode of recommendation; I considered that it is valid that water users involved in water conflicts will employ a diverse set of strategies to ensure their water rights. However, it is important to understand water rights not just as a permit or as a paper, but as a relationship between users and their resources and as an element of power among users' daily life. Also it is necessary for mediators or others to understand the backgrounds of the actors and the context within the conflicts are produced. Considering as well that there are different ways and angles to intervene and look for the solution or transformation of the conflict.

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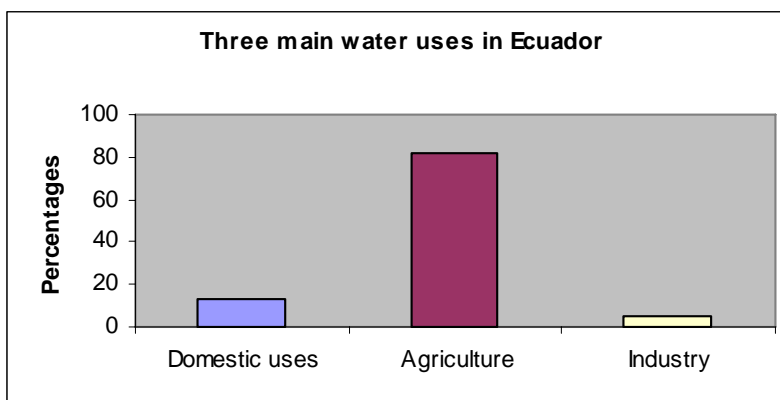
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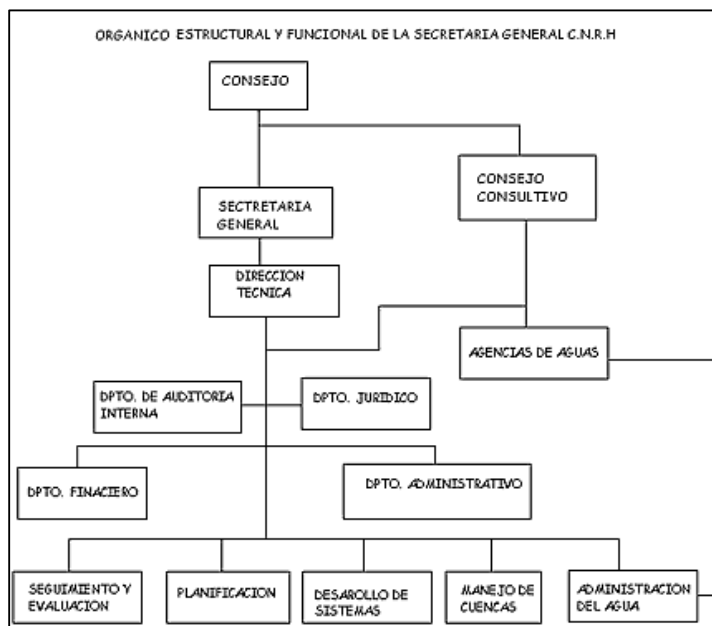
Appendix

Appendix 1 : Main Water uses in Ecuador



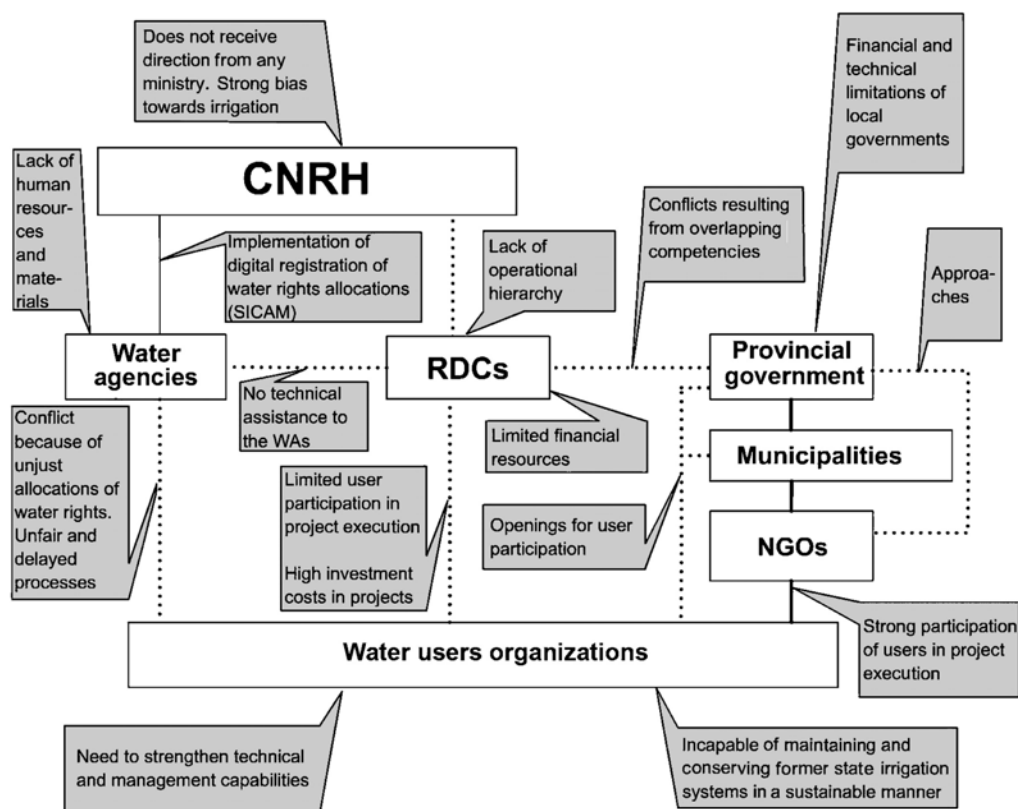
Source: Zapata, A. 2006

Appendix 2: Organization of the CNRH



Source: www.cnrh.gov.ec/docs/organigra.htm

Appendix 3 : Institutional relations and limitations in actual water resource management in Ecuador



Source: Cremers, L, M. Ooijevaar and R. Boelens. 2005.

Appendix 4: ADRs, and degree of decision making

ADRs and the degree of decision making:

	Methods often used	
Maximum		Minimum
Level of influence of the parties in the conflict resolution process	Individual actions of the parties involved in the conflict Negotiation Facilitation Mediation Conciliation Neutral evaluation Arbitration Court decision	Level of participation of the third actor in the conflict resolution process
Minimum		Maximum

Source: Adapted from Femenia and Afanador, 2000.

Appendix 5: Conflicts intervened by Interjuntas Chimborazo (Spanish text)

Conflicts intervened by Interjuntas Chimborazo**Conflicto 2: Derechos por el aprovechamiento de Agua.**

Actores Comunidades Pull Chico y Pull San José, (Guamote); “ Interjuntas Chimborazo” (mediador).

Ubicación Parroquia La Matriz, Cantón Guamote

Causas La Zona alta del páramo de Guamote (Pull San José), suspendió el agua a la Comunidad (Pull Chico) zona baja del páramo de Guamote, aduciendo que la Comunidad “Pull Chico” tiene acceso, uso y aprovechamiento de agua de otras fuentes.

Conflicto 5: Adjudicación total de las fuentes de aguas por la persona de poder económico.

Actores Usuarios de agua para consumo humano, abrevadero de animales y riego de la Comunidad Surupata (Pallatanga); persona de poder económico de la zona; “Interjuntas Chimborazo” (mediador),

Ubicación Parroquia matriz, Cantón Pallatanga.

Causas La persona de poder económico se adjudicó legalmente y a su nombre tres vertientes de aguas de la comunidad Surupata venía utilizando por más de 100 años.

Conflicto 7: Horario de aguas e inequidad en reparto del agua.

Actores Usuarios de agua para riego de la Comunidad Pacchag (Tixán); persona de poder económico; representantes de Municipio de Alausí, (Mesa de Recursos Naturales); representante de Ong's; Agencia d aguas de Riobamba; “Interjuntas Chimborazo” (mediador).

Ubicación Parroquia Tixán cantón Alausí

Causas Una persona de poder económico e influencia, utiliza 19 días al mes el agua para regadío de sus predios, mientras que los 11 usuarios se repartían los días sobrantes del mes. (En la zona; los 11 usuarios tiene mayor cantidad de terreno bajo riego que la persona de influencia y poder). Inconformidad con la resolución tomada por el titular de la Agencia de Aguas de Riobamba.

Source: Adapted from Dávila & Olazával. 2006 &
<http://www.interjuntachimborazo.org.ec/>

Appendix 6 : Physical and social features of the Chimborazo Province

<i>Physical and social features of the Chimborazo Province</i>	
Location	Centre of the Ecuadorian highlands
Area	6,600 km ²
Political division	10 <i>cantones</i> (municipalities) 16 urban districts and 45 rural <i>parroquias</i> (parishes)
Climate	Tropical, humid, semi-humid, and cold, which is the most common.
Altitude	195 to 4600 metres
Temperature	13 degrees
Population	421,600 inhabitants (33.9% in urban areas, 67.1% in rural areas)
Economic activities	Agriculture and livestock production
Poverty rate	87% in rural areas and 70,1% in the cities. It is the second province with the highest poverty rate in Ecuador.
Illiteracy rate	The highest rate in the country, 23% and mainly population over 15 years old.
Migration	The fifth at national level with high rate of migration.

Source: CODERECH. 2005

Appendix 7 : Interviews in 'Atypical settings'

Looking for a leader

The location was the "cattle fair" of Riobamba, where all of the farmers of the province bring their cattle to trade. The place was full of cows, bulls, pigs, and people and me in the middle of the main park. You may wonder...what I was doing there? because I had to find the president of the Directorio de Aguas (water board) of the Gulag Huayco community. At that moment the information that I managed was that he brought some of his community partners with their cattle for trading at that place. So I decided to start asking many people for this person. Nobody paid attention to my questions, of course, because I did not ask about the prices, ages or weights of the cattle.

After many questions, at least, I could get from the sellers in which corner of that park the Gulag Huayco' farmers are located and offer their cattle, so I decided to wait there. After more than 2 hours I learned about cows, prices, etc. Finally the president of that water directory appeared. There we started talking a bit about my research and could arrange to visit his community for next week.

Appendix 8: Schematic explanation of Bundle of rights

BUNDLES OF RIGHTS ASSOCIATED WITH POSITIONS				
	Owner	Proprietor	Claimant	Authorized User
Access and Withdrawal	X	X	X	X
Management	X	X	X	
Exclusion	X	X		
Alienation	X			

Source: Schlager and Ostrom, 1992