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# Water Conflicts in the Elqui River Watershed: New Water Territories Challenging Chilean Water Institutional Framework

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# Water Conflicts in the Elqui River Watershed: New Water Territories Challenging Chilean Water Institutional Framework <sup>2</sup>

Chilean extractive development model remains on a neoliberal water-management institutional framework edified by Augusto Pinochet's dictatorship and perpetuated by the Concertation of Parties for Democracy governments (Tecklin et al. 2011). This model therefore appears as an example of new forms of extractivism in Latin America (Gudynas 2011), which can be defined as a "patrón de acumulación basado en la sobreexplotación de recursos naturales, en gran parte no renovables, así como en la expansión de las fronteras hacia territorios antes considerados como «improductivos»" (Svampa, 2013:33). It was implemented during the dictatorship by means of structural reforms opposed to the Unidad Popular government policies headed by Salvador Allende. Several laws encouraged foreign investments to develop new strategic export industries such as mining, agriculture, hydroelectric energy, forestry or pisciculture (Quiroja 1994). Moreover, the current constitution, enacted in 1980, represents the core of the neoliberal institutional framework currently shaping the Chilean state (Moulian 2002).

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<sup>&</sup>lt;sup>3</sup> "Pattern of accumulation based on the exploitation of natural resources, mostly non- renewable, and the expansion of borders towards territories previously considered "unproductive".

This article aims to analyze the plurality of water conflicts existing at the watershed level in an extractivist context. It is based on ethnography of water organizations from the Elqui River watershed in Chile, realized for my doctoral researches. My purpose is to understand how water governance is associated with a normative and cognitive power structure and generate contradictions between water users. I argue that those conflicts can create new collective actions which may found new spaces of identity and legitimacy, and a new material and ideal definition of water. Those news water territories may become a base for new water governance.

Water and electricity are essential resources for extractive companies, mostly used in production processes, particularly to extract minerals and irrigate lands. The water code of 1981 implemented a commodification of water in order to guarantee the concentration of water rights (Bauer 2002, Budds 2004) into the hands of extractive companies. On one hand, the code separates land tenure from water rights. It therefore creates a water market that incites water right holders to strategically use them, allocating them to business areas deemed to be more productive and beneficial for the country. Nevertheless, the appropriation and concentration of water rights not only results from market mechanisms. In fact, water rights have been distributed by the Dirección General de Aguas (DGA) to extractive companies in 1980 and 1990 (Bauer 2002, Prieto 2015). In doing so, the DGA didn't take into consideration current water rights on watershed, leading to an overexploitation of underground and surface water resources. On the other hand, the code establishes a difference between consumptive water rights and non-consumptive water rights in order to guarantee water access for hydroelectric companies (Bauer & Prieto 2012). The nonconsumptive water rights force companies to return the water to the stream without deteriorating water quality or affecting its amount.

Regarding water resources and drinking water distribution services, the water-management institutional framework grants a prominent role to community organizations. Some of these organizations are in charge of distributing the water resource and maintaining collective infrastructures. At the watershed level, the *Junta de Vigilancia* is responsible for distributing water from river to irrigation canals. *Comunidades de agua* or *Asociaciones de canalistas* have to distribute water from

irrigation canals to water rights holders, usually farmers. In these organizations, the general assembly makes decisions and elects a board of directors. The internal institutional structure is hierarchical: The *Junta de vigilancia's* assembly is composed of the directors of both *Comunidades de agua* and *Asociaciones de canalistas*. Each water rights' holder has the duty to pay a monthly contribution for the *Asociación* de *canalistas* or *Comunidad de agua* and for the *Junta de Vigilancia* in order to finance collective infrastructure maintenance and to fund payment of wages for the person in charge of water distribution.

In rural areas, a distinct kind of community organization is in charge of the distribution of drinking water to its members. Rural Drinking Water Committees or Cooperatives<sup>4</sup> were created in 1964 by the *Programa de Agua Potable Rural*. In this context, the *Ministerio de Obras Publicas* finances the well drilling of Committees, and those one, as non-profit organizations, provide funds for the maintenance and the extension of water network through the benefits of water billings. This reality contrasts with the situation in urban areas where water and sanitation services are guaranteed by water private corporations. In 1998, the government of Eduardo Frei Ruiz-Tagle decides to privatize regional public companies in charge of drinking water services and to establish that new private companies would become the only actor to provide technical and administrative support to Committees (Jouravley, 2007).

In this context of commoditization and privatization of water, water conflicts have increased in Chile in the past 15 years. Carl Bauer (2002) argued that until the year 2000, water conflicts only unfolded in ordinary courts opposing water holders, therefore depicting "judicialization of water conflicts" in the neoliberal Chilean framework. Nevertheless, it seems clear that water conflicts are currently taking different shapes, and appear to follow the patterns of socio-environmental conflicts, involving multiple actors with a higher capacity to intervene within the public and political arenas at the local, regional and national levels (Bauer 2015).

<sup>&</sup>lt;sup>4</sup> In Spanish: Comités and Cooperativas de Agua Potable Rural. We will use Committees as an abbreviation.

Literature about socio-environmental conflicts focusing on water access inequalities or water resource overexploitation and dispossession abound. NGO's reports which identify the main conflicts and confrontations between local residents and extractive companies have certainly contributed in framing new research areas (Programa Chile Sustentable 2010). Numerous studies describe the history of conflicts and the causes of confrontations between local communities and extractive projects (Yañez & Molina 2011, Jimenez 2012, Torres 2009, Carmona 2014, Budds 2012). Other studies focus on a new type of social movements characterized by their territorial and environmental claims (Salinas & Carmona 2009, Romero 2009, Gomez et al. 2014, Bottaro et al 2014). Despite their contributions, investigations too often remain one sided and leave aside some actors involved in water distribution processes. Such investigations posit conflicts as negative social realities, and leave aside their productive aspects (Aliste 2014, Simmel 2010).

Through an ethnography which currently leads me to spend several months within water organizations and among users at the watershed level, a multiplicity of water conflictual situations can be observed (Martin & Justo 2015), some of which are poorly investigated (rural drinking water committees versus private water companies, Junta de vigilancia versus Asociaciones de canalistas and Comunidades de agua). Beyond legal conflicts, daily and informal micro struggles and resistances are important because "water rights embody social and power relations (they organize inclusion and exclusion), they contribute to constituting and profiling power relations in water society (...); and they are shaped by the way power is socially/culturally organized in water governance practices" (Boelens, 2015: 5-6). This article aims to analyze the plurality of water conflicts existing at the watershed level in an extractivist context, in order to understand how the Chilean water-management institutional framework is based on the implementation of a normative and cognitive power structure, which is generating contradictions between several water users. These contradictions may become a source of conflicts which, despite not necessarily becoming important social movements, may be the detonator of local social changes and territorial redefinitions or repossessions (Prieto 2015). Borrowing from the work of Georg Simmel (2010), I adopt a positive vision of conflicts, and as Enrique Aliste and Caroline Stamm (2014,

2015) have proposed, I argue that conflicts can create public spaces for debate and thus generate social and spatial proximity between different water users. New collective actions may lead to a territorialization process, generating new spaces of identity and legitimacy that could reconfigure water governance based on a new material and ideal definition of water. This article questions the way in which water conflicts can be the root of social change through processes of territorialization which question the extractivist mode of accumulation, drawing on the case of the Elqui River watershed, located in the arid region of Coquimbo, 450 km north of Santiago. This valley has been a grape production site, as well as gold and copper for their exportation to Asian and North American markets (Bugueño y Jimenez 2014) since 1980. Currently, 30 Committees, 2 *Juntas de Vigilancia*, 2 *Asociaciones de Canalistas* and more than 200 *Comunidades de agua* manage the watershed.

### The Roots of Water Conflicts in the Elqui River Watershed

## a) A Typology of Water Conflicts

In the Elqui Watershed, I have noticed a plurality of water conflicts. Each conflict could correspond to one abstraction level of Boelen's "Echelon of Rights Analysis" (Boelens 2015), although, as he underlines, each echelon interacts with each other and "the chain of echelons together shows the case-particular elements of water rights struggles: there is a battle over the material control of water use systems and over the right to culturally define, politically organize and discursively shape their existence" (Boelens 2008: 50).

	ACTORS	Conflicts	"ECHELON OF RIGHTS ANALYSIS"
1	Drinking Water Organizations	Inter- organizations: Water Committees or Cooperatives VS Private Water Companies	Regulatory Control: struggle over decision-making authority and legitimacy of rights systems

2		Between members of organizations	Rules: contest over the formulation and contents of water rights and operational norms
3	Water Resources Organizations	Inter – organizations: Junta de Vigilancia VS Asociaciones de canalistas, Comunidades de agua	Regulatory Control: struggle over decision-making authority and the legitimacy of rights systems
4		Between members of organizations	Rules: contest over the formulation and contents of water rights and operational norms
5	Water Users	Inter users	Resources: struggle over water, infrastructure, and other material means
6	Civil Society	Activists VS State	Regimes of Representation: diverging discourses that defend or challenge particular water policies, normative constructs and water hierarchies

First, conflicts arise between different actors in charge of water drinking distribution services: the tension is palpable between workers of the water private company, *Aguas del Valle*, and Committees in charge of drinking water distribution in rural areas (1). Since the privatization occurred, the Technical Unity of the company has to train Committees on technical and administrative aspects. Meetings between workers and Committee tend to become more conflictual. Leaders contest the increase of exigencies on management and the lack of knowledge about local realities. According to them, these developments may lead to "institutional isomorphism", which could facilitate the privatization of Committees in case private company were to acquire them (Laville 2001).

These power relationships, which reveal different water management views, may lead to internal conflicts within Committees (2). For instance, members who intend to modernize intern management and to improve current infrastructures, following Technical Unity recommendations, despite the rising price of water, confront members who would rather keep things simple as they are. Another example revolves around the power conflicts that take shape around the elections of the board of directors. Reaching the position of president of the Committee guarantees an important social position, as the organization is one of most important social

institution on rural areas. These conflicts reveal differences on water management views which are closely related to representations associated to water, which are often narrowed down to an economic commodity or a common.

Secondly, conflicts arise between actors in charge of the distribution of the water resource. On the one hand, the hierarchical institutional structure itself composed of *Junta de Vigilancia* and the *Comunidades de agua* or *Asociaciones de canalistas* are often a source of conflicts (3). Members of the *Comunidades de agua* stress the dysfunction of mechanical doors which should regulate water flows entering in irrigation canals. Sometimes, water flows do not correspond to the farmers allocated water rights. Furthermore, they criticized the "desmarques" measure system, which allocated only a part, defined in percentage, of the total of their water rights. Lastly, the *Junta de Vigilancia* targeted the non-collaborative nature of some leaders, regarded as old inhabitants with outmoded mind and refracting to change.

One the other hand, internal organizational conflicts between members seem to happen (4). Within the *Junta de Vigilancia*, the main power relations oppose mining users to agro-industrial users, thus reflecting water use conflicts. These actors compete for both water access and for the use of the electricity produced by the hydroelectric company in Puclaro dam, which belongs to the organization. In fact, agro-industrial companies use the electricity to propel water on the slopes of the mountains. Moreover, as is the case for Committees, internal *Comunidades de aguas*' conflicts oppose people for power motives (related to leadership) or for contrasting water management and water views. Some members refuse to implement projects to install new technologies in order to improve efficiency in water use and distribution, arguing that the shortage of water originates from water overexploitation. They therefore refuse to pay the monthly increase needed to fund such projects.

Other struggles concern the access to water resources (5). Mining industries, agro industrial companies, the private water company Aguas del Valle, and other users are fighting for the appropriation of water rights. In the Elqui valley, most of superficial water rights are used by the agricultural sector. In a context of a decrease of superficial water flow, caused by the drop of rainfall or upstream water overexploitation, news

conflicts emerged concerning the sharing of superficial and underground resources. In fact, for farmers the underground water pumping by mining and private water companies contributes to accelerate the infiltration of water brought by irrigation canals. In order to decelerate this process, the *Junta de Vigilancia*, with the help of the *Comision Nacional de Riego*, implements projects consisting in getting water from canals to plastic impermeable tubes. Holders of underground water rights, as for instance Committees, argue that this canalization process will impeach aquifer recharge. In recent years, one important conflict illustrates this in the Elqui valley. At El Culebrón aquifer, downstream of the river, water extraction by Carmen de Andacollo mining company leads to groundwater overexploitation and the privation of water access for other users, as particularly Aguas del Valle and Committees whose well drilling where near but less deep than the mining ones (Ferreira and Villaroel, n.d).

Finally, several environmental associations have been created by activists from cities such as La Serena, Coquimbo or Vicuña, to denounce new infrastructure projects which may be harmful for the environment, and to defend the valley's natural resources (6). For instance, they criticize water canalization projects, the construction of a bio-oceanic tunnel called "Aguas Negras" between Argentina and Chile implemented by the *Iniciativa para la Integracion de la Infraestructura Regional Suramericana*<sup>5</sup>, the use of pesticides, and the socio-environmental impacts of mining exploitation. Their main claim is the end of the extractive mode of accumulation in the valley.

## b) Commons Causes: The Extractivist Mode of Accumulation

Despite the fact that, among all actors interviewed, only activists develop a well-constructed argumentation criticizing the harmful effects of extractivism, I notice that this mode of accumulation in Chile has provoked social and territorial

<sup>5</sup> www.iirsa.org

transformations, associated with the modification of water norms and perceptions, which lead to the water struggles evoked earlier.

First of all, the existence of Committees and private water companies, and the conflicts which oppose them, has started with the urbanization process induced by the extractivist mode of accumulation. The installation of agro-industries on the valley is made possible throughout a complex dispossession process of small farmers' lands comparable to an "accumulation for dispossession" process (Harvey 2010). The degradation of livelihoods leads to the impoverishment of local families. Their descendants were often forced to migrate to find employment in the nearest cities. This rural exodus vacates cultivable lands and superficial water which will be later appropriated by agro-industries (Jimenez, 2012). The pollution of superficial water by pesticides and mining toxics residues has been the reason why Committees use only well drilling to give drinkable water to rural inhabitants. Groundwater resources are considered of better quality and need an easy purification process by chlorination. These new community drinking water distribution systems lead to the concentration of population around Committees, thus forming new small urban areas reinforced by the construction of social housing by the Ministerio de Vivienda y Urbanismo close to them. This urban concentration process in medium rural cities lead to a social phenomenon called "neo-ruralization for export" (Daer, 2014), referring to those cities where the economy, and therefore the workforce, is driven mainly by mining, agricultural industries and services associated to them. The same applies to the conurbation of La Serena-Coquimbo which is based on trade activities and development of infrastructures and industries to sustain export, as for instance the port of Coquimbo. Since 2000, a new tourism industry and the growth of population have provoked an urban expansion process.

Since 1990, with the influence of the neoliberal referential thinking, water and sanitation services have been seen as being efficient only while performing a private management pattern (Boelens, 2015). Industries and trade development in the cities as well as the rise of water demand have increased the urgency to install water sanitation that would prevent situations of insalubrities and contamination (Jouravley, 2007). This urgency has legitimized the privatization of regional public

water companies by foreign groups specialized on this topic and are appreciated as more competent to provide sanitation services. According to the law, urban sprawl could lead to privatization of Committees in two cases. Firstly, if Committees become localized in rural areas after land-use planning changes. Secondly, if Committees need to connect their water network to private companies in case they weren't able to respond to increased water and sanitation demand.

Furthermore, the conflicts within the *Junta de Vigilancia* and *Comunidades de agua* are caused by the organizations' decision-making model introduced by the water code in 1981. It allows more important water rights holders to possess power as it establishes that "one water right equals one vote", as opposed to "one member equals one vote". The conflicts, drawing from different water management conceptions, are produced by the will of some members to improve water infrastructures financed through credit. These views rest on the valorization of modern water management by technology integration. This should improve efficient water use, reallocate it for the export industry and legitimize the disengagement of the state in water governance following neoliberal advocations (Vergara Blanco 2014).

Finally, the conflicts between mining and agricultural users' results from the competition for water resource access occurring in production processes. Mining companies utilize water through a leaching process in order to extract minerals from rocks. Agricultural companies utilize water in new irrigation technologies allowing a more efficient use of water. Nevertheless, the consequence isn't a reduced water demand, as it leads to an extension of agricultural land.

## 2. Are Conflicts Challenging the Roots of Extractivism?

## A. Water Conflicts: Making New Territories of Solidarity, Regulation and Contestation

As a result of these disputes, several holders of water rights, or water users, with common interests have founded new water social organizations. Their actions demonstrate the existence of important social changes and new water territories, even though they don't constitute necessarily a critique to the foundation of the extractivist mode of accumulation.

First of all, Committees of the Elqui River have constituted their association in order to create an organization for mutual aid and share experiences. The main goal is to develop a solidarity fund which may help to reduce internal management charges and help Committees in the event of an unexpected problem. Their members underline the harmful effects due to both the lack of State government in water management and to the role of Aguas Andinas's Technical Unity in charge of assistance. It should be noted that the association is built in opposition to Technical Unity itself and not to extractivism or water services privatization.

Following the conflict in El Culebrón aquifer, the *Comisión Nacional de Riego* proposed to create several underground water communities downstream in Puclaro's dam. According to the water code, those communities are composed of holders of underground water rights, whose role is to define water extraction rates in accordance to the level of groundwater table. That would consist of applying "desmarques" measure system for underground water uses. For *Aguas del Valle* Company and Committees, integrating this type of committees may guarantee them a water resource access and consequently the human right to water. It should be noted that this new community is a partial solution to water overexploitation and not an alternative for extractivism.

A few years ago, socio-environmental organizations of the valley started working in a network with other organizations from the Coquimbo's Region. Since 2016, they have created the Macro Zona Norte Chico, a regional organization which gathers local organizations in water national movement called "Movimiento por la Recuperación del Agua", created since 2013. The territorial extension of the mobilization and collective actions lead to the broadening of their claims. In fact, they created a common platform for the sharing of strategic knowledge and juridical experiences and set a baseline on the growing awareness around socio-environmental conflicts throughout the country. The water code and extractivism therefore became the main focus of contestation. Collective thinking between activists peaked in a critic of the whole political and economic system which resulted in the framing of a common claim: the repeal of the Chilean Constitution.

### B. Little Convergence of Struggles and Soundless Water Conflicts

Despite the fact that water conflicts in the Elqui watershed affect a plurality of actors and have common roots, there doesn't seem to be a strong social mobilization against the extractivist mode of accumulation. That may be due to an absence of awareness on the common roots of socio-environmental problems which affect all inhabitants. Thus, one of the challenges for activists from socio-environmental organizations is to bridge the struggles of the working classes forced to sell their labor power to mining and agricultural industries. This challenge seems to be hard to overcome because of differences and contrasts between socio-economic profiles of activists and working class people. Activists are often new in the valley. They have a high level of college education but choose to become artisans or develop tourism activities to live in rural areas. According to Di Méo and Buléon's (2005) typology, they are "transitional actors" in contrast to "endogens actors" formed by social local leaders and local inhabitants who are "born and grown" in the Valley. Their struggles take place within community based organizations as *Junta de vecinos*, Water Committees, Mothers Associations and they share with activists, for now, few common claims.

Despite all those conflicts, until 2016, no NGOs had worked on water conflicts in the Elqui valley. This fact underlines the limited definition which NGOs use to elaborate their mobilization strategies. In this sense, they operate a selection of the causes that seem worth fighting for according to their future work projects or media visibility advantages. These NGOs often play an important role in structuring and amplifying socio-environmental conflicts. In fact, they fund research projects about environmental issues, organize conferences on the topic of conflicts, legal and legislative monitoring, or practical training to reinforce action and mobilization capacities of activists in the juridical or the organizational field. Nevertheless, my fieldwork reveals that their intervention criteria target three specific cases: a model of affirmative action towards ethnic groups in the North; the actors responsible for the issues, such as mining transnational companies; and specific infrastructural projects in rural areas. Those affected populations are often attractive and sensational for the media and represent an opportunity to make visible the organizations defending their cases. The clearer juridical and political qualification to bring claims courts or

authorities is the better. NGOs are rarely interested in water conflicts linked with water communities or water Committees. When they do intervene in local affairs, they support activist discourses and have few relations with endogenous actors from the working classes.

#### Reflections

Conflicts are structuring our societies. At the watershed level, they manifest themselves with more or less violence and visibility, between all water users. Neoliberal legislative transformations implement a new development model throughout natural resource appropriation provoking territorial mutations. To allow this, natural resource management institutional frameworks have been transformed, particularly the one concerning the management of water. Changes affect water rights distribution rules but also, at local level, distribution rules and internal structure of water community organizations, generating new water views.

Despite the plurality of water conflicts, I observe two water views and two water management valorization, both internally opposed to one another, which seem to represent the contradictions of the extractivist mode of accumulation in the field of water. The first one valorizes the improvement of infrastructure employing news technologies in order to realize an efficient use of water - a consumption adjusted to demand and a reduction of water leakage for domestic or productive uses - in order to reallocate water rights to extractive industries able to pay for them. Water is viewed as an economic good because water price - defined by Committees, private companies or monthly contributions - has become the tool for producing fictitious scarcity and is legitimized by discourses - the necessary modernization, minimization of water wastage during drought – which occults its reallocation to extractive industries. The other water view defends recreational and landscape water uses and a consumption without restrictions throughout the utilization of simple infrastructures and traditional irrigations canals, allowing a low water price. Activists and a large part of endogenous inhabitants, who remember passed forms of water distribution, consider water as a common.

Regulation, solidarity or contestation territories propose materials solutions but don't converge in new forms of governance nor do they claim to abolish extractivism, therefore failing to create new common water views. Although the State products the neoliberal normative and cognitive power structure, all solutions are established outside of it, according to the neoliberal thinking which valorizes auto-organization and the disengagement of the State on service production. Activists who are more organized and critical are often disconnected from social bases and advocate for an apoliticism and away from political parties that make it difficult to build a political and massive alternative to break away from extractivism and the neoliberal ideology.

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