

POLITICS AND POLICY: POWER AND PERFORMATIVITY IN MEXICAN LOCAL WATER MANAGEMENT

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ABSTRACT

Water management requires the participation of governmental and non-governmental actors, which occurs in local contexts with different conditions for collaboration. In this paper, we argue that in Mexico water is not treated as a natural resource but as a political one and that its management is strongly influenced by socio-political elements related to power. Starting with the identification of three general issues concerning water, we use research results from four cases to outline five socio-political aspects influencing water utilities' performativity. All those elements and their relationships are finally synthesized in a general scheme. The analytical framework is provided by the approach of public action, institutional analysis, and the concept of collaborative governance.

Keywords - collaborative governance, institutional analysis, water management, Mexico, public action analysis.

INTRODUCTION

Water management is not mainly a technical problem it is a social and political issue since, to have an efficient and sustainable management system, we need cooperation and coordination of governmental and non-governmental actors. According to Saleth and Dinar:

The emphasis on engineering solutions, the treatment of water as a free good, and bureaucratic allocation and management are now inconsistent with the requirements and challenges of the new era (Saleth and Dinar, 2004: 8).

International literature about water, included reports from the United Nations and academic publications, underline that water management is a governance issue that every nation faces in a particular way (UNESCO, 2006; Finger, Tamiotti and Allouche, 2006; Castro, 2007; Biswas and Tortajada, 2010). In their report about the water global crisis, Guppy and Anderson, (2017) mention that by 2017 water scarcity affected

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more than 40% of the global population, and by 2050, an additional 2.3 billion people can be expected to be living in areas with severe water stress (Guppy and Anderson, 2017: 3).

At the same time, local communities inside each nation are facing particular challenges concerning water, a condition that will continue and could be even worse in the future, since water issues are part of a wider, integral system (Biswas and Tortajada, 2010).

It is fair to say that water issues are not only a matter of national security but also a question of domestic stability. In a federal system, coordinated actions around water should be a major priority for governmental authorities and it should be clear the need for integrating social actors in order to face the multiple challenges posed by water management. This article discusses the case of Mexico to sustain the thesis that actors involved in water management take it not as a natural but as a political resource. Consequently, its access is determined by political relationships and not by efficiency considerations.

At this point, the concept of governance becomes relevant. Following the definition of Finger, Tamiotti and Allouche (2006)

Governance—as opposed to government—defines the phenomenon of societal problems (in our case water) appearing to be too interlinked, too complex, but also too overwhelming for any single nation-state to address them alone. (...) ‘governance’ defines a function—i.e., the function of collectively solving societal problems—, as opposed to government (...) which defines a structure (Finger, Tamiotti and Allouche, 2006: 1).

The National Association of Water and Sanitation Companies (ANEAS, by its acronym in Spanish) in Mexico, defines water governance as a managerial solution to water problems: “Water governance consists primarily of good water management and social participation in shaping decisions regarding this resource” (ANEAS, web site). According to Castro (2007), this emphasis on water governance as a positive managerial model could represent a risk he identifies as the depoliticization of governance, consisting in adopting an idealistic conception of the governance process (Castro, 2007). According to this perspective, the pursuit of an idealistic view of good governance on behalf of analysts or public servers could limit the understanding of how real governance processes work.

For the purposes of this paper, it is more useful the concept of collaborative governance proposed by Purdy (2012) which refers

to processes that seek to share power in decision-making with stakeholders to develop shared recommendations for effective, lasting solutions to public problems (Purdy, 2012: 409).

From this perspective, power relates to economic, political, and social aspects; it is possible to identify its sources and characterize its dynamics. In reviewing the political elements that influence water management, we discuss the conditions needed to achieve collaborative relationships between governmental and non-governmental actors at the local level in Mexico.

During these processes, actors guide their actions not only by following their interests but by considering mutual benefits, actors recognize their mutual interdependencies. This is

a point of coincidence with the public action analysis (Duran, 1999; Thoenig, 1997; Cabrero, 2005), which provides a sociological perspective of public issues and constitutes the core analytical framework of this paper. We also apply institutional analysis to outline the co-existence of formal and informal institutions, with different evolving rhythms, framing public issues and making them much more complex. The analysis focus on the following research question: which are the most relevant socio-political elements influencing water management?

We offer insights based on research results from four cases of both public and private local water systems: Aguascalientes, San Luis Potosí, Naucalpan, and Cancún.¹ Aguascalientes and San Luis Potosí represent municipalities that are, at the same time, capitals of the corresponding state. Naucalpan and Cancún are not capitals, but important municipalities from an economic point of view, since the former is a relevant industrial location in the State of Mexico, and the latter is an internationally recognized touristic center in the state of Quintana Roo. In percentage terms, these four cases represent 13% of the existing states in Mexico; however, their importance lies in their economic profile and the fact that they illustrate different management models and different geographic locations, Aguascalientes and San Luis Potosi belonging to the central-north region, Naucalpan located in the center and Cancún located in the south of the country.

Although the generalization capacity of findings in the case study methodology is limited, the elements that we identify and their relationships represented in a final scheme are very likely to be present in any Mexican local water system because of their similarities in structure and legal framework. The aim of this paper is to identify critical situations involving negotiation, coordination, and citizen participation. The analysis contributes to a better understanding of how local water systems face critical situations and which socio-political elements should be observed to enhance collaboration among public and social actors participating in water management. The analysis is based on documentary research reviewing local water legislation, and interviews with local actors.

First, the paper proposes three general subjects identified as empirical issues we must consider in an analysis of Mexican water management. Then, we discuss the need for a pluralist theoretical approach in order to understand the impact of political issues on the implementation of Mexican water policy. Five aspects of water management are described once this general context is established, showing how political considerations and interests have an important influence on decision-making related to water management. Then the discussion refers to how all these elements confirm that Mexican actors see water as a political resource and that social actors are the best positioned to boost a pluralistic approach to water issues. We finally discuss how political constraints imposed by the features of Mexican political culture, could be overcome only through active citizen participation in water issues. To achieve the goal of effective public action it is important to generate an open deliberation between the governmental and the social sphere, to recover the essence of politics as a mechanism of conciliation, in this case, around water.

GENERAL ISSUES IN MEXICAN WATER MANAGEMENT

After a review of four local management systems, we have identified three specific local issues on water management as well as three general subjects related to water problems:

1. The notion of water.
2. The role of the municipal level.
3. The Mexican political culture.

The first relevant general subject is the notion of water, this discussion is important since the definition of any public problem relates to the image that decision-makers have about it. Following Muller (1990):

defining a public policy implies the construction of a representation, an image of the reality upon which we intend to intervene. It is according to the reference to this cognitive image that actors will organize their perception of the system, compare their solutions and define their proposals for action (Muller, 1990: 42).²

In Mexico, we observe the opposition of water as a human right³ versus water as a political resource (Amaya, 2018). Although, water as a human right has been included in the Mexican constitution since 2012⁴; in practice, water has been increasingly used as a political resource not only for electoral campaigns but also in order to construct or maintain clientelistic⁵ relationships with different social groups (Kloster and De Alba, 2007).

A second general subject is how the municipal level has become the most relevant policy arena for water issues, given the specific elements related to water problems in each community, such as water availability, demographic evolution, economic activities, governmental budget, and the nature of the relationship between local governmental authorities and social groups. We will find different water systems not only in reference to the management model adopted but also concerning the combination of geographical, technical, and socio-political elements articulating them. The local level is increasingly relevant not only because of the decentralization policy (Rolland and Vega, 2010) but also because specific dynamics emerge in each local scenario (Barkin, 2006).

A third general subject concerns how water management reflects the current state of Mexican political culture. Considering the classic categorization proposed by Almond and Verba (1989), political relationships around water resources in Mexico show the difficulties of moving from a model of subject culture to a participant model based on strong citizenship.⁶ Since we consider that all environmental policies –including water management– are strongly based on the cooperation between government and society, the consolidation of a participant culture would be required in order to have a more efficient and sustainable water policy. Although participation issues have been gradually included in water regulation (Sandoval, 2008), a systematic involvement of citizens in water debates is still needed.

In developing our arguments about the socio-political factors identified in this paper, we will keep in mind these three fundamental subjects of the general context for water management in Mexico. Since our focus is on social and political relationships around water,

we will adopt a conceptual framework with the guiding concept of collaborative governance combining elements of the public action approach and institutional analysis. We will then develop the empirical part of the paper starting with the identification of the local actors involved in the water sector, emphasizing urban water management. Then, we will list the social and political factors that affect in a more significant way the performativity of local water management systems. We will illustrate each point with specific examples. Finally, we will propose some reflections on the three general subjects we have just mentioned and their relationship with the five elements we will discuss, always within the framework of public action and institutional analysis.

PUBLIC ACTION AND INSTITUTIONS: RELEVANT CONCEPTUAL ELEMENTS FOR UNDERSTANDING WATER MANAGEMENT

With significant sociological roots, public action proposes to conceive the treatment of public affairs in terms of collective action constructed by governmental and non-governmental actors linked by clear strong interdependencies. Patrice Duran defines public action in terms of:

the capacity of defining collective goals, to mobilize the resources needed to achieve them, to make the decisions required to get them and to assume the resulting consequences” (Duran, 1999: 27).

On the other hand, Jean-Claude Thoenig considers that public action relates to

the way in which a society builds up and qualifies collective problems and elaborate answers, contents, and processes in order to approach them (Thoenig, 1997: 28).

The public action concept emphasizes the role of society in treating public issues, recognizing that the State has to establish a permanent dialogue with different social actors if effective actions are to be undertaken. As pointed by Thoenig:

society recurs to multiple forms of treating collective problems, among which the public sphere represents only one possibility (Thoenig, 1997: 28).

Thus, there are no dominant actors defining the sense of a public policy, governmental and social spheres complement each other constituting a continuum with several power centers (Duran, 1999; Thoenig, 1997; Cabrero, 2005).

It is also remarkable the importance that this approach gives to power issues (Thoenig, 1997). Public action analysis conceives power from a relational point of view its exercise is accomplished by specific individuals or groups, acting inside specific local frameworks (Friedberg, 1997). The recognition of interdependencies is relevant since all actors have power resources –even if not to the same degree – that they can use depending on the situation, that is why we cannot understand power without consideration of those interdependencies. We must keep in mind that such individual or collective actors do not come exclusively from the governmental structure since public action is co-produced by the government and society actors. From a collaborative governance point of view,

organizations and coalitions with varying degrees of cohesiveness, resources, and political clout interact in complex relational webs (Purdy, 2012: 410).

In this joint action, a degree of flexibility is required to construct coordination mechanisms corresponding to particular situations and resources of each territory. Thus, the public action approach is a territorial one (Duran, 1999), and it is clearly pertinent and useful in order to analyze decentralized public policies.

Concerning institutional analysis, a first element is a distinction between formal and informal institutions⁷, the former referring to rules as a part of an incentives scheme establishing constraints for individual and collective behavior, as well as the corresponding sanctions in case of disobedience. Formal rules relate to the rational choice approach of institutions, conceiving them as

aggregations of rules with members of the organizations (...) agreeing to follow those rules in exchange for such benefits as they are able to derive from their membership within the structure (Peters, 1999: 47).

On the other hand, authors like Douglass North have outlined the relevance of informal institutions (North, 1993), recognizing that in combination with formal rules they constitute a framework of social constraints. Informal institutions are

socially shared rules, usually unwritten, that are created, communicated, and enforced outside officially sanctioned channels” (Helmke and Levitsky, 2006: 5).

These institutions emerge from social constructions, beliefs, and roles. They are social norms that prevail among generations because they are associated with relevant values for specific societies in specific historical periods. Informal institutions are associated with extra-rational, symbolic aspects, they are signification systems related to cognitive elements (Peters, 1999). In this case, obedience has more to do with the internalization of social norms than with the rational cost-benefit analysis. According to Helmke and Levitsky, informal rules

reinforce, subvert, and sometimes even supersede formal rules, procedures and organizations (Helmke and Levitsky, 2006: 2).

In any case, both formal and informal institutions are permanently mixed and influence human behavior at the individual and collective scale.

An important subject of institutional analysis is the question of how institutions change. North considers institutional change as a complicated process:

Even if formal norms can change overnight as a result of political or judiciary decisions, informal constraints embedded in custom, traditions, and behavior codes are much more resistant (North, 1993: 17).

In this sense, Roland (2004) established a difference between fast-moving institutions (laws) and slow-moving institutions (culture). As we stated before, they are permanently influencing human behavior and the difference in their evolution often generates social tensions.

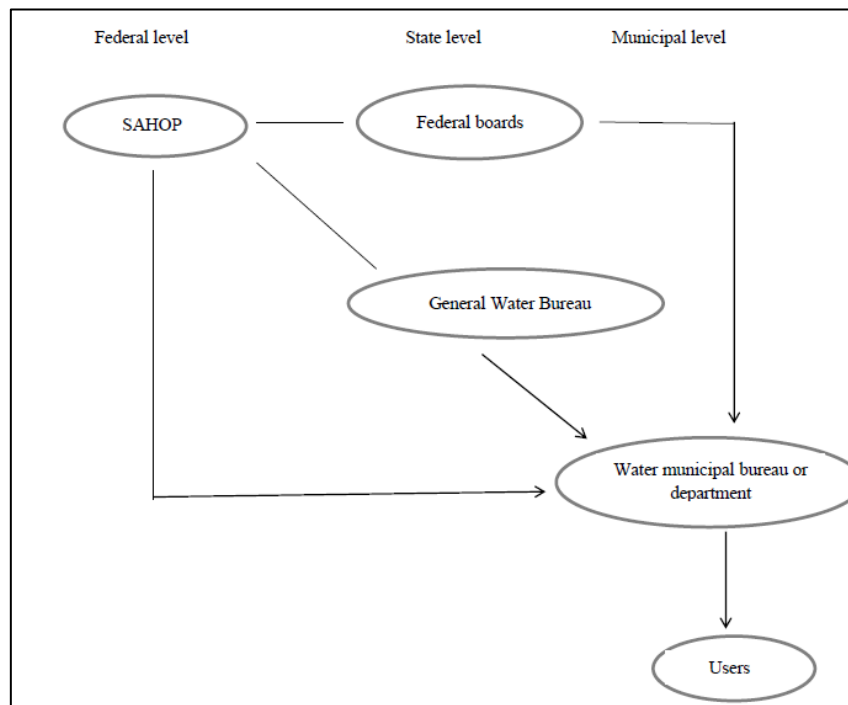
Finally, a brief note about information and collaborative governance is needed. The relevance of communication to achieve efficient coordination is mentioned by administrative classics such as Simon (1972). In collaborative governance, information is an element of what Purdy (2012) calls resource-based power⁸ referring to those resources that actors

can use to enhance authority, promote participation or empower other participants. In a collaborative scenario, information should be shared to the extent of allowing balanced, reasonable participation among governmental and non-governmental actors. In order to integrate these conceptual elements into our analysis of Mexican water management, we will start by describing the relevant changes in its institutional framework after the implementation of a decentralization policy.

INSTITUTIONAL FRAMEWORK: ACTORS RELATED TO WATER MANAGEMENT IN MEXICO ON THE 21ST CENTURY

The transformation of the institutional framework for water sector in Mexico started with the creation of the National Waters Law (LAN by its acronym in Spanish) in 1992, which introduced a decentralization policy for water issues. Before adopting this decentralized model, Mexican water policy was designed following a top-down model, there were some local actors but they did not have a relevant role in fundamental decision making. In general terms, policies and programs were designed and formulated by the federal and state governments, while implementation was mainly executed by municipal offices (Pineda and Salazar, 2008).⁹ Before the LAN, in 1989, the transformation of the water sector started with the creation of the National Water Commission (also known as Conagua according to its name in Spanish). Figure 1 shows the relationships that prevailed before the appearance of Conagua and the implementation of a decentralization policy.

Figure 1: Institutional Structure of Mexican Water Sector before Decentralization



SAHOP refers to the federal ministry called the Ministry of human settlement and public works. Since there was no specific ministry charged with water issues, the Ministry for housing policy was responsible for their management. Federal boards were the main local

water authority, despite their name they were public offices at the state level, in coordination with the General water bureau, they controlled the water bureau or department at the municipal level (Amaya, 2005). This general and simple relationship scheme prevailed in the water urban sector until the nineties when a decentralization policy was implemented, as part of a new economic model: “It was a political decision, taken by the federal government. Local water authorities were not consulted about the best way of implementing decentralization”.¹⁰

The new National Waters Law (1992) established a different framework for urban water management. Besides Conagua, which is a federal figure, new regional and local actors were included and the fundamental decision about which management model to adopt was now in the hands of municipal authorities. Water utilities are a relevant actor in this new structure, they can have a municipal or an inter-municipal character, they can be state commissions charged with all water systems within a state, and finally, they can be private utilities regulated by a concession contract. In this new structure, we find also regional actors such as the basin councils, created for the different hydrologic-administrative regions.¹¹

As a result, the institutional framework for water management became more complex. Figures 2 and 3 illustrate two structuration models for water systems emerged from the decentralization policy.¹² We can easily observe how the network of relationships has increased in complexity. As we pointed out before, it is remarkable the presence of the National Water Commission (Conagua); also, we can observe that the ministry charged of water issues changed continuously, passing from the Ministry of Agriculture and Hydraulic Resources to the current Ministry of Environment and Natural Resources (SARH and SEMARNAT respectively, by the acronym in Spanish). An additional actor at the local level is the State Commission for Water Supply and Sanitation, created for each state throughout the country.

Figure 2 represents the water system in San Luis Potosí, a city with an inter-municipal model involving three municipalities (San Luis Potosi, Cerro de San Pedro and Soledad de Graciano Sánchez). This is the structure immediately generated after the creation of the inter-municipal water utility called Interapas, which is subject to relationships with several governmental actors of all scales, from the municipal water council, the water commission of the State Congress, and the state commission for water supply and sanitation. In this case, there is also another federal ministry involved in water policy, the Ministry of social development (SEDESOL, by the acronym in Spanish), and its state-level office (SEDESORE, by the acronym in Spanish). The dotted lines in some arrows represent occasional and mainly informal relationships between the actors.

Figure 2: Institutional Structure of Water Sector after Decentralization San Luis Potosí

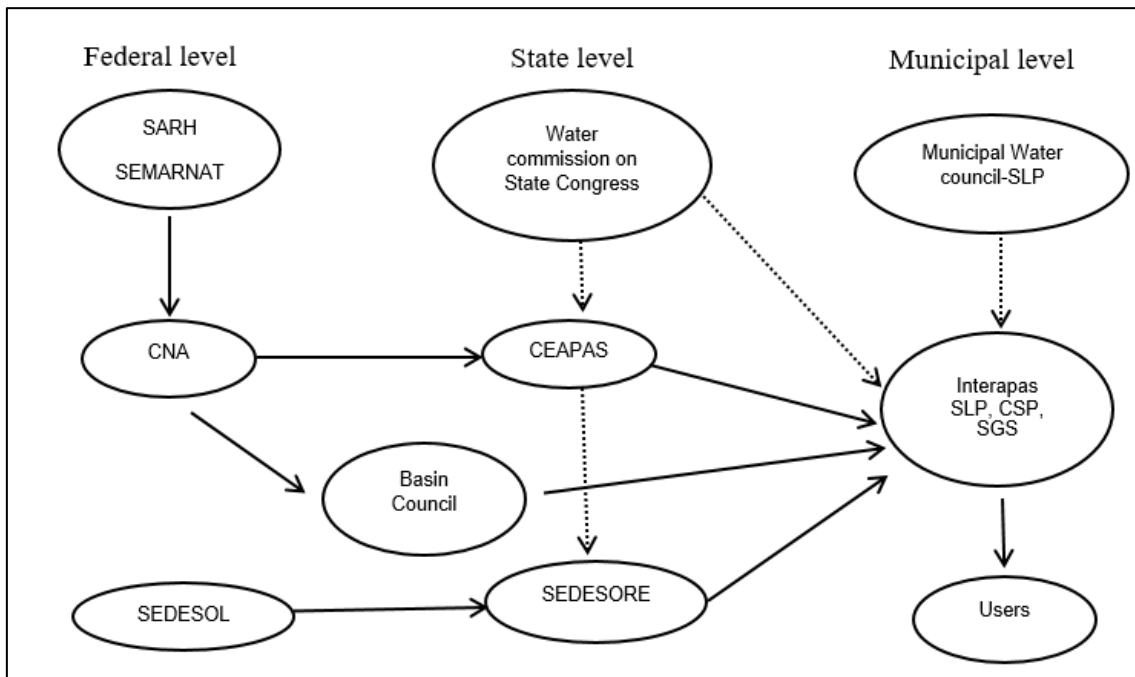
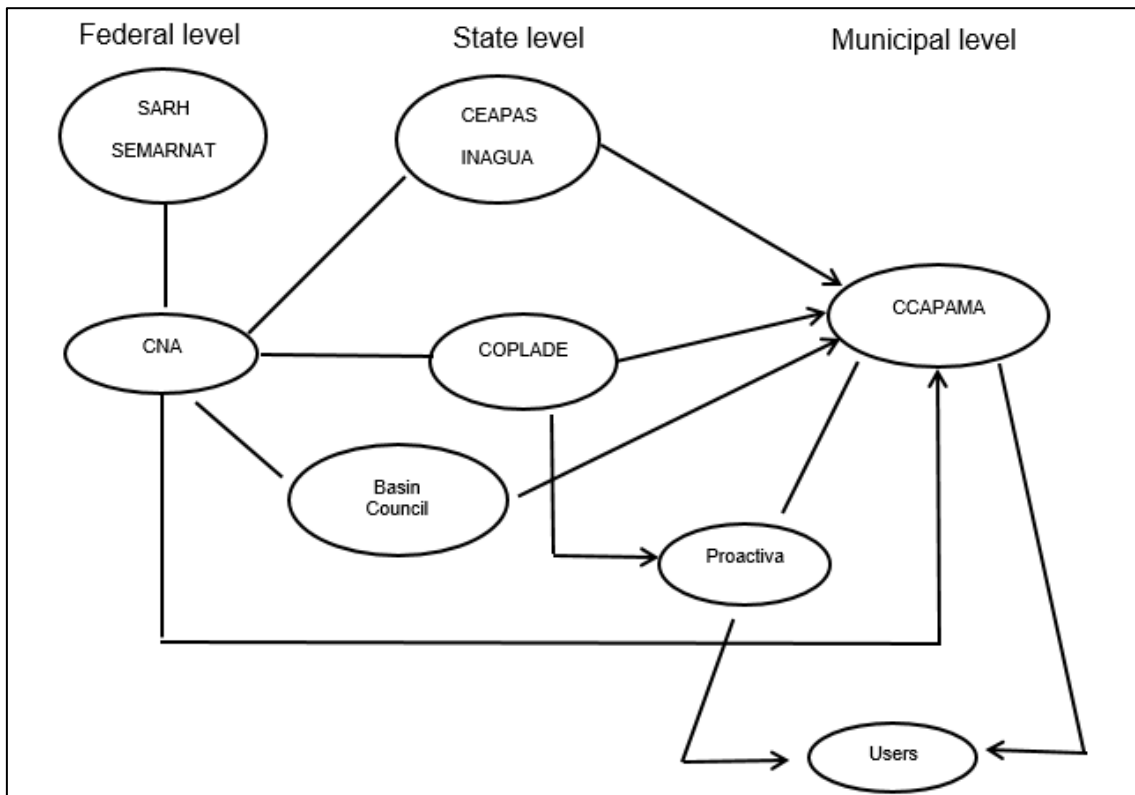


Figure 3 shows the management model in the case of a concession contract with a private enterprise. It is the example of the city of Aguascalientes, which was the first one to sign a concession contract for private participation in urban water management. In a similar way as in Figure 2, looking at Figure 3 we can see how the participants in the water system have increased. In this case, the enterprise named Proactiva is charged of water management but it is not subject to the multiple relationships that we observed in the case of Interapas. The main relationship of the enterprise is with the municipal office called CCAPAMA (Citizen Council of Water Supply and Sanitation, in Spanish), which is sensed to accomplish regulation functions towards Proactiva. Another state actor related to the enterprise is the COPLADE (Commission of Planning and Development, in Spanish), a commission of state government charged with urban planning. We can also observe that in this model, users relate both with the private enterprise and with the municipal authority, meaning a divided responsibility over water issues.

Figure 3: Institutional Structure of Water Sector after Decentralization Aguascalientes



All these changes show the new configurations that local water systems adopted after the implementation of a decentralization policy. From an administrative point of view, these structural transformations can be just managing decisions. However, the emergence of new actors generates new relationships. In this sense, those changes established new interdependencies between both governmental and non-governmental actors, consequently transforming public action around water and increasing the need for negotiation capacities.

POLITICAL AND SOCIAL ELEMENTS IN MEXICAN WATER MANAGEMENT

We will now review the socio-political elements that we have identified as relevant in influencing water management in Mexico.

1. The appointment of water utility directors, since most local water utility structures have an administrative council chaired by a general director. Even if every state has its own water law, many of them are similar and establish that those general directors will be in charge for a period of four years. Often, the general director is appointed by a local elected official (governor or mayor) or by the administrative council, which in turn is integrated by representatives of civil society and by the major or majors¹³ making part of the local water system. The problem is that most of the time the mayor or the state governor chairs the administrative council. Consequently, even when this council appoints the general director, local governors or mayors play a key role in the decision. According to some water public servers, this situation affects the water utility's autonomy. A political compromise emerges, because the appointment becomes a political favor by which the appointee is in debt of loyalty. Even if state laws establish professional requirements for the position of general director, given the relational bases of the Mexican political system most of the time the decision is based on the proximity of the candidates to an elected official (the governor or the mayor) thus to a political party. In the same sense, even if there is no formal compromise of obedience, there is a tendency to establish a sponsorship relationship of the kind godfather-godson, it is a non-spoken, informal agreement of Mexican political system.

Among the cases that we have reviewed, we can find the case of the second general director of the inter-municipal water utility of San Luis Potosi, called Interapas. After a first period under the direction of a recognized hydraulic engineer, two political parties disputed the final decision of appointing his successor. A period of incertitude followed this dispute, with an interim director breaking the continuity of an efficient first administration. On the other hand, the general director of OAPAS, the water utility of Naucalpan, pointed out: "The general director is not appointed by consensus, but by the sacred finger of the mayor. The general director is in fact an employee of the local mayor".¹⁴ To illustrate this point, Table 1 shows a brief list of some state laws establishing the mechanisms for the appointment of general directors of municipal water utilities.

Table 1: Who decides the appointment of the general director for local water utilities?

State	Appointment of general director or manager
Aguascalientes	The administrative council of each water utility, presided by the municipal mayor (Art. 29).
Campeche	The government board of each water utility, presided by the municipal mayor (Art. 26).
State of México (Naucalpan)	The municipal major (Art. 38)
Oaxaca	The government board of each water utility, presided by the municipal mayor (Art. 32).
Quintana Roo (Cancún)	The administrative council of each water utility, after proposal of the state governor (Art. 26).
San Luis Potosí	The government board of each water utility, presided by the state governor (Art. 12)
Sinaloa	The administrative council of each water utility, presided by the municipal mayor (Art. 17).
Sonora	The government board of each water utility, presided by the municipal mayor (Art. 79).
Veracruz	The State governor (Art. 21)
Yucatán	The State governor (Art. 8)

Source: Local water laws in Mexico

We can observe that the dependence relationship that prevailed before the decentralization policy is still there, even if with some nuances, mainly because of the weight of political elements surrounding this apparently professional decision.

2. The political use of water rates under a clientelistic model, since it has been a classical interaction mechanism in the Mexican political system. Politicians and citizens are used to exchanging benefits against votes on a regular basis it is an expression of the subject culture described by Almond and Verba (1989). Water has become a political resource, distributed considering power relationships. A clear way in which water is involved in those exchanges is the definition of water rates. These rates consider the different uses of water: agricultural, domestic, industrial, and service purposes. When in electoral periods, political campaigns increasingly include water issues with the candidates making promises like lower water rates or even the cancellation of water concession contracts with private enterprises.

Several analyses of different rate schemes applied by local governments have shown that sometimes low-income users subsidize high-income users. In Aguascalientes, a study made by Zentella (1999) compares the average incomes of the population and the percentage that they spend on water services. Since changes in water rates are not salary based, he has observed that users of lower income are paying a bigger percentage (Zentella, 1999). The amount paid for water services can be related to political loyalties or the purpose of maintaining privileges for certain social groups linked to economic or political local elites. Thus, water rates are often an expression of power relationships and not an instrument for achieving efficiency in water management.

According to the general director of OAPAS:

Water service has been historically used from a political perspective and not from an economic one, not from the perspective of the service itself, but as an instrument of political manipulation. That is why water rates have always been under real costs.¹⁵

This issue clearly reflects the interweaving between power and performativity on local water systems since the lack of financial resources is a big constraint for water utilities. In terms of public action, it reflects the interdependencies between elected officials and citizens, the former needing votes and the latter needing water at a reasonable cost. This is where they can find the opportunity for a clientelistic exchange.

3. The corporatist model¹⁶ most of the time, frames citizen participation given the specific historically constructed characteristics of the relationship between society and governmental authorities in Mexico. The National Waters Law includes citizen participation as a relevant issue for water policy and local water laws include forms of citizen representation in the administrative councils of water utilities. However, the general director of Naucalpan's water utility points out that "these people are appointed by the local major, they are not real representatives."¹⁷

Other official figures created by this Law, such as the basin councils, included citizen representation. However, those basin councils function at a regional level and their relevance for water decisions has been less than significant, a phenomenon that could be understood in the light of the centralized tradition of the Mexican political system. In this sense, water management policy shows the difficulties of implementing decentralization measures and the influence of power relationships on water utilities' performativity. Local water management requires strengthened federalism, allowing the conciliation of different interests to achieve efficiency in the service.

However, moving from a corporatist network to a federalist model, which enforces local autonomy and citizen participation, is not easy. Mexican corporatism is a strong mechanism of social control and in this sense, it is incompatible with citizens participating moved by their own initiative. There

is also the problem of representation, a water official in San Luis Potosí mentioned that when citizens' organizations need to choose a representative they do not have clear mechanisms for his designation: "at the end, they send the one who has free time the day of the meetings."¹⁸ It is worth mentioning how participation is included in local water laws. Most of the time, local water legislation considers social participation mixing citizens and enterprises Table 2 shows the inclusion of participation issues in local water laws.

Table 2: Participation Issue Inclusion in Local Water Laws

State	Does local law include citizen participation?		Does local law include private participation?	
	Yes	No	Yes	No
Aguascalientes	X		X	
Baja California	X		X	
Baja California Sur	X		X	
Campeche	X		X	
Chiapas	X		X	
Chihuahua		X		X
Mexico City		X		X
Coahuila		X		X
Colima	X		X	
Durango	X		X	
Guanajuato	X		X	
Guerrero	X		X	
Hidalgo	X		X	
Jalisco	X		X	
State of Mexico	X		X	
Michoacán	X		X	
Morelos	X		X	
Nayarit	X		X	
Nuevo León	X		X	
Oaxaca	X		X	
Puebla	X		X	
Querétaro		X		X
Quintana Roo	X		X	
San Luis Potosí	X		X	
Sinaloa		X		X
Sonora	X		X	
Tabasco	X		X	
Tamaulipas	X		X	
Tlaxcala		X		X
Veracruz	X		X	
Yucatán		X		X
Zacatecas		X	X	

Source: Local water laws in Mexico

Thus, the impact of citizen participation is constrained since there is not an accurate definition of the term, in local water laws there is no distinction between citizen involvement on water issues and the investments made by private enterprises. In addition, the presence of organizations in defense of water has been diverse, and they have not been able to replace the corporatist mechanisms institutionalized in Mexico, again an issue of political culture and power relationships.

As mentioned before, formal institutions can easily change but it is not the case for informal institutions. Water laws may include citizen participation

very quickly; however, the transformation of the strongly institutionalized corporatist mechanisms could take several generations. Meanwhile, representation problems and limited citizen participation continue influencing the performativity of water systems.

4. The political use of information concerning water issues. As stated before, information is a key element of collaborative governance. In this case, water utilities should share information between them (especially when they use the same water sources), with state agencies, and with water users. However, data about water availability, water utilities' performance, bidding processes, or the bargaining of concession contracts is not open to the public. Moreover, different public offices related to water issues use to work with different indexes and different criteria to collect information. In order to have effective participation, citizens need to know the real situation of water resources. For instance, which is the specific water issue of the municipality or the community. Is it scarcity? Distribution? Water quality? The answer to these questions relates to transparency and accountability issues, particularly in the case of a decision such as a concession contract with a private enterprise. However nor transparency neither accountability have been major features of the relationship between state and society in Mexico.

Water utilities do not have unified information systems, and some of them do not even have an information system since not all the local laws establish the obligation of creating one.¹⁹ This is a significant problem when we consider that most water utilities have serious difficulties maintaining an updated user registry. The General Director of OAPAS pointed out that: "a deficient user registry has allowed clandestine connection to the service and increased corruption related to it, which is a big problem for all water utilities."²⁰

The creation of information systems would contribute to controlling the influence of political interest over the performativity of water utilities since the decision of sharing information would not depend on the political will of elected officials or public servers. Recommendations about the necessity of these information systems for improving the commercial efficiency of water utilities have been included in the Program for the Modernization of Water Utilities (2008). Table 3 shows how the information systems issue has been included or not in local water laws and at what governmental level it should be located.

Table 3: Information Systems Inclusion in Local Water Laws

State	Is the figure of the information system included in local water law?		Local level
	Yes	No	
Aguascalientes		x	
Baja California	x		State
Baja California Sur	x		State
Campeche	x		State
Chiapas	x		State
Chihuahua	x		State
Mexico City			
Coahuila			
Colima	x		State
Durango	x		State
Guanajuato		x	
Guerrero	x		State
Hidalgo		x	
Jalisco	x		State
State of Mexico		x	
Michoacán	x		State
Morelos		x	
Nayarit		x	
Nuevo León		x	
Oaxaca	x		State
Puebla	x		State
Querétaro		x	
Quintana Roo		x	
San Luis Potosí		x	
Sinaloa		x	
Sonora	x		State
Tabasco		x	
Tamaulipas	x		State
Tlaxcala	x		State
Veracruz	x		State
Yucatán		x	
Zacatecas		x	

Source: Local water laws in Mexico

We can observe that only 16 states include the figure of an information system in their water legislation, however, the system is included as part of the state government. There is no intention of requiring the creation of an information system for water utilities, at the municipal level. We consider that this is a failure of local legislation since water utilities could benefit from an information system to improve their performance. On behalf of the federal government, the National Water Information System (Sistema Nacional de Información del Agua, SINA) is still under construction. The information issue is a piece of evidence showing that decentralization in the water sector has not reached the municipal level.

According to Peters (2002):

the first and perhaps most important resources of the bureaucracy are information and expertise. To the extent that government has information at its disposal, this information is concentrated in bureaucratic agencies. (...) This relative monopoly of information can be translated into power in several ways (Peters, 2002: 234).

Consequently, information plays a key role in water management and the construction of collaborative governance, becoming a political resource managed through power relationships.

Information issues relate to the nature of the relationship between state and society, and the level of trust or distrust between them. We consider that the use of information in local water systems reflects the subject political culture that prevails in Mexican society, users are not citizens having the right to access information, but subordinates that only deserve the information that the authorities decide to grant them.

5. The difficulty of constructing consensus between different political actors. It refers to a limited bargaining capacity of governmental actors and an incipient participative culture in Mexican society. These difficulties are more significant when we find different political parties at the three levels of government. Political plurality has increased in Mexico since the last decade of the 20th century consequently this situation appears more often in the political scenario. The clientelistic and paternalistic features of the Mexican political system do not help to develop an open dialogue, a collaborative attitude, or efficient administrative planning and that is true not only for water issues but for several dimensions of public affairs. We can once again observe the interweaving between power relationships and organization performativity. Political struggles and local water law reforms have affected water investments, thus influencing water utilities' performativity.

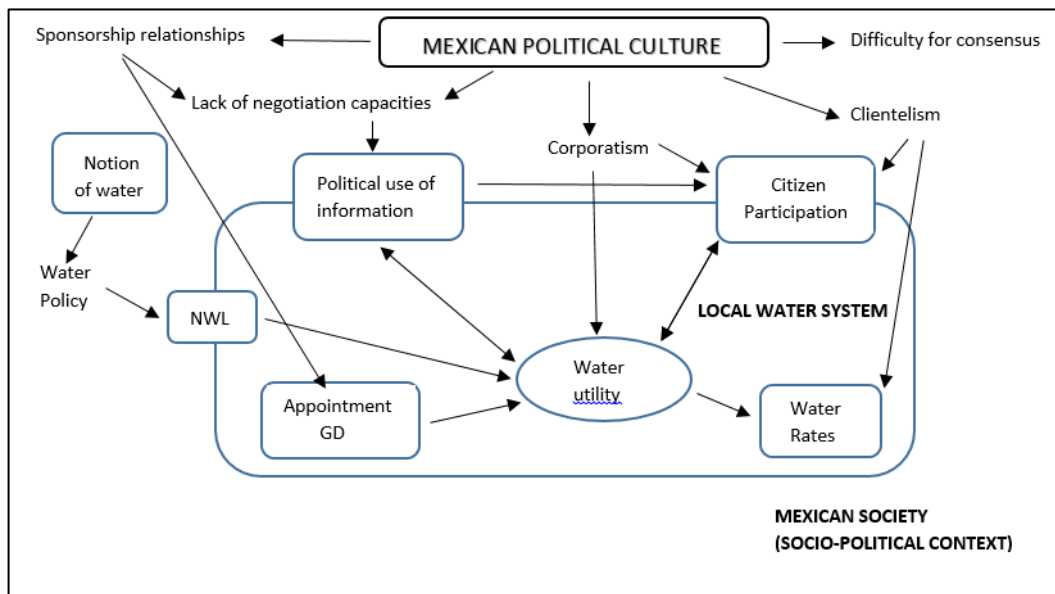
The city of Aguascalientes is a clear example of how political interests and power relationships have interfered with water local management. Being the first city with a concession contract for a private firm concerning urban water, it is a widely documented case, particularly the critical moment when the major tried to recover control over the water system from the hands of the private enterprise. That crisis was also a result of partisan competition since it was a major of the Institutional Revolutionary Party (PRI, in Spanish) who signed the concession under state and federal governments of the same party, and it was a National Action Party (PAN, in Spanish) major who tried to take back the concession contract. In fact, the promise of remunicipalization of water supply was an important issue during the electoral campaign of this major, who finally was not able to accomplish this goal. Water concession was not a result of a debate searching for the best management option but a decision made possible by power relationships, and it is still an electoral issue for local politicians.

A second example is the concession contract granted to the enterprise called Aguakan in the touristic zone of Cancún-Isla Mujeres. It has been criticized since the Mexican enterprise associated with the concession (Cancun hydraulic developments, also known as Aguakan) is owned by the Ballesteros family, well known for their political relationships with the local economic elite.²¹ It is another example of how political and economic elites exclude social society from the discussion and the negotiations around water.

According to the public action approach and collaborative governance, in order to have more efficient local water supply systems, it is important to overcome the political differences between governmental levels and also, to incorporate new non-governmental actors recognizing them as legitimate participants in the policy arena. A major transformation of power relationships prevailing in the Mexican water sector is required to facilitate consensus construction around relevant issues.

After reviewing the socio-political elements relevant to local water management in Mexico, we would like to make a brief note about the performativity of the local water systems reviewed. All four cases have gone through different crises the ones with a concession contract to a private enterprise (Aguascalientes and Cancún) have received critics concerning privileges, corruption practices, and deficient service. About Aguascalientes, a former Director of the regulation commission (CCAPAMA,) said that even if they have good indexes “they would be better if some decisions had been taken about investments. Unfortunately, there was never a master plan for the long run, neither from the municipality nor from the citizens, nobody elaborated it.”²² In the case of Aguakan, in Cancún, a representative of the enterprise pointed out the deficient regulation capacities of public authorities: “The problem is not to bring more water but to make better use of water. There is not a national regulation system because neither Conagua nor the state commissions have faculties in this sense.”²³

Concerning Naucalpan, the General Director of the water utility named OAPAS considers that an important constraint for a good performance is that “water service has been historically used from a political point of view (...), water rates have always been inferior to the costs of providing the service and this generates a chain of backwardness.”²⁴ Finally, in the case of San Luis Potosi, the good performance of the water utility is recognized but the main criticism is that economic local elites push for a development model based on industrial activity. However, “this model is not sustainable according to the zone conditions, since water availability is diminishing and, at the same time, pressure over the resource is increasing, following the current consumption patterns” (Stevens, 2012: 155). Among the four cases, San Luis Potosí is probably the water utility with the best performativity but we cannot consider any of the four cases as a successful example. In order to synthesize the socio-political elements discussed above, we represent them and their relationships in Figure 4. Normal arrows show one-direction influence, two head arrows show an influence in both senses.

Figure 4: Socio-political Elements Influencing Local Water Management in Mexico

We identify the sponsorship relationships, corporatism, clientelism, and the difficulty in constructing consensus as the main derivations of Mexican political culture with important consequences for the performativity of local water systems. We consider that the lack of negotiation capacities results at the same time from Mexican political culture and the sponsorship relationships strongly embedded in it. Those political elements affect at least two major technical-management issues discussed in this paper: the appointment of water utilities' general directors and the definition of water rates. Concerning the socio-political elements of local water management, we observe citizen participation affected by corporatism, clientelism, and the political use of information about water issues. In addition, in the general context of Mexican society, we find the notion of water determining water policy, reflected in the National Waters Law. It is worth mentioning that the appointment of water utilities' general directors and the definition of water rates are internal issues for each local water system. Finally, citizen participation, the political use of information, and the National Waters Law appear on the borderline between local water systems and Mexican society, since they are elements related to social values and customs.

CONCLUSIONS

In this paper, we have argued that, in Mexico, water is not taken as a public resource nor as an economic commodity. Even if recognized as a human right, water is considered and treated as a political resource; consequently, its management is strongly influenced by power relationships. We mentioned examples of public officials at all governmental scales using their positions for political purposes, making it difficult to create conditions for collaborative governance and for efficient performativity of local water systems. In addition, this political use of the resource goes against the recognition of water as a human right and an efficient and sustainable management model for water utilities.

Governmental actors must overcome their interpretation of water as a political resource and move toward a vision of water corresponding to its definition as a human right, and Mexican society should be able to demand this transition. Even if public policies could not be neutral, it is possible and necessary to put aside partisan interests surrounding water management. A different power relationships framework is required to facilitate collaborative governance and improve the performativity of water utilities. Recognition of access to water as a human right is the first step, but it has to be accompanied by measures enforcing collaborative governance in water policy. This is a clear example of the incompatibility of institutions since the formal notion has already changed with the constitutional reform; however, the notion of water that prevails in the mind of the actors participating in water management corresponds to a social conception that will not change easily.

Several modifications to local water systems are needed to hasten citizen participation and facilitate collaborative governance. It is important to generate or improve information channels in order to facilitate interactions between governmental and non-governmental actors and, at the same time, in order to reduce uncertainty concerning the real situation of hydric resources in each location. Another relevant issue is to establish clear requirements for each position in public offices related to water management, water local systems will not improve their performativity if those positions are still granted on the basis of personal relationships or political interests that is, on the basis of power. New mechanisms for citizen participation are also needed, different from the distorted corporatist model that has characterized the Mexican political system to limit the use of water as an element of political exchange. Concerning the definition of water rates, it would be relevant to integrate advice from academic experts to establish clear criteria in the categorization of users and the amounts to be charged. Key decisions such as the negotiation of water resources, the appointment of general directors of water utilities, or the decision of granting a concession contract for water supply, should be treated with transparency. The political use of water should be sanctioned or at least discouraged through a new institutional design, defining gradual sanctions for this behavior. A promising measure to create conditions for collaborative governance is the inclusion of information systems on local water laws but in practice, it requires better articulation.

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It is necessary to explore policy measures conceived to constrain the influence of political parties in water management and, at the same time, oriented to enforce citizenship to construct collaborative governance and effective public action for water issues. As we pointed out before, it has to do with a transformation of power relationships between governmental and non-governmental actors involved with water management. While these conditions are not accomplished, water will continue to be treated as a political resource subject to power relationships, and not as a human right, no matter the official speech. This misconception of water as a political resource not only goes against collaboration and efficiency but also against the sustainable use of the resource, making worse the water crisis that has already begun in Mexico.²⁵

Public interest in water issues has increased and the crisis could lead to greater citizen participation. We consider that Mexico is going through a critical moment since current decisions will define if future arrangements will contribute to collaboration or if they will worsen the conflict between users. Political and power-related elements cannot be completely removed. It is important to generate an open deliberation between the governmental and the social spheres, to recover the essence of politics as a mechanism of conciliation of divergent social interests. In this sense, we consider water management as an example of how Mexican political culture is slowly moving from a subject model to a participant one, and all the challenges that this transformation implies.

We have described some characteristics of four local water systems in Mexico, showing how water management is strongly influenced by political relationships. We observed how the essential features of the Mexican political system constitute an obstacle to collaborative governance. However, our analysis outlined some relevant aspects to work on, to limit the impact of political practices in water management and enforce citizens' participation. The recognition of access to water as a human right, as well as the increasing relevance of information issues, could be starting points for an institutional design with a pluralistic orientation.

NOTES

- ¹ Aguascalientes and San Luis Potosí represent municipalities that are, at the same time, capitals of the corresponding state. Naucalpan and Cancún are not capitals, but important municipalities from the economic point of view, since the former is a relevant industrial location of the State of Mexico, and the latter is an international recognized touristic center in the state of Quintana Roo.
- ² This is what Muller (1990) calls the policy reference (*le référentiel d'une politique*), a notion that also sustains the ideational branch of institutional analysis. Although it is relevant for this paper to outline the importance of a policy reference, we will not go further into an analysis based on the ideational institutionalism, since it is not the purpose of our argument to discuss how the different actors position themselves around the two notions of water.
- ³ On 2010, through resolution 64/292, the United Nations recognized "the right to safe and clean drinking water and sanitation as a human right that is essential for the full

- enjoyment of life and all human rights” (<http://www.un.org/es/comun/docs/?symbol=A/RES/64/292&lang=E>).
- 4 Nowadays, the Article 4 of the Mexican constitution states: “any person has right to access and sanitation of water for personal and domestic use in a sufficient, healthy, acceptable and affordable way. The state will guarantee this human right and the law will establish bases, supports and forms for access and equal and sustainable use of water resources, defining the role of federal government, state authorities and municipalities as well as citizens participation through the pursuit of this goal” (Political Constitution of the United Mexican States, Art. 4).
 - 5 The concept of *clientelism* refers to “informal power relationships useful for the mutual exchange of services and goods between two socially unequal individuals or groups” (Schröter, 2010: 142). Such exchange generally involves political support.
 - 6 In their classic study about civic culture, Gabriel Almond and Sidney Verba (1989) identified three pure forms of political culture: parochial culture, subject culture and participant culture. The first one was the most elemental form of political culture, where political and religious orientations are mixed; the second one, where a differentiated political system exists but the individuals relate to it in a general level; finally, the participant political culture emerges when individuals are explicitly oriented towards the system adopting an activist role, based on citizenship. The authors emphasize that these categories of political culture may appear mixed in real political life.
 - 7 Here we try to synthesize the main ideas of the multiple definitions of institutions provided by different approaches. It is not the purpose of this paper to achieve a definitive definition of this elusive concept, but to take a position useful for the analysis of water issues.
 - 8 Purdy (2012) identifies three types of power in collaborative governance: authority, resource-based power and discourse legitimacy.
 - 9 In their historical review of the institutional evolution of urban water services in Mexico, Pineda and Salazar (2008) identify three stages, the first one going through 1948 to 1983, called the centralized stage. The next two stages are the municipal one from 1983 to 1989; and the entrepreneurial one started in 1989. We will discuss how nowadays both municipal and entrepreneurial actors are mixed in different local scenarios.
 - 10 Interview water official of the State Commission of Water Supply and Sanitation, Aguascalientes (2012).
 - 11 In adopting a decentralized model, the Mexican territory split into thirteen hydrologic-administrative regions.
 - 12 We present both structures with the elements identified in the early years of the 21st century to emphasize the transformation suffered by local water systems in the early years of decentralization. Since there has not been a major transformation of water sector after this modification, later changes in both local water systems have not significantly altered these structures.
 - 13 In the case of an inter-municipal management model, several municipalities integrate the water utility. For example, in the case of Pachuca, capital of the state of Hidalgo, the water utility includes eleven municipalities; also, in the case of San Luis Potosí,

capital of the state with the same name, they are three municipalities covered by the same water utility.

- ¹⁴ Interview with General Director of OAPAS, Naucalpan water utility, during the period 2009-2013.
- ¹⁵ Interview with General Director of OAPAS, Naucalpan water utility, during the period 2009-2013.
- ¹⁶ It is important to say that in Mexico the notion of corporatism has derived in a particular concept of *corporativism*, meaning a misinterpretation of the original concept where a governmental power creates and controls corporations. We could then use the term of *corporativistic model*, but for the sake of clarity in this paper, we will maintain the original terms used in English literature.
- ¹⁷ Interview with General Director of OAPAS, Naucalpan water utility, during the period 2009-2013.
- ¹⁸ Interview with public official of Interapas, the water utility of San Luis Potosí, 2012.
- ¹⁹ For a deeper insight about information systems and their different uses in public and private organizations we can see Arellano (2008).
- ²⁰ Interview with General Director of OAPAS, Naucalpan water utility, during the period 2009-2012.
- ²¹ In different moments, Mexican press has reported that the concession contract was signed with Cancun hydraulic developments without any bidding process, and that the Ballesteros family had at the end of the 20th century close relationships with the national political elite. As a reference: <https://www.noroeste.com.mx/nacional/empresas-duena-del-agua-en-quintana-roo-desde-1993-con-salinas-JBNO1221954> and also: <https://noticiascancun.mx/noticias/los-ballesteros-duenos-de-aguakan-una-historia-familiar-de-fraudes-y-rescates-millonarios/>.
- ²² Interview former director of CCAPAMA, Aguascalientes (2018).
- ²³ Interview Aguakan representative, Mexico City (2014).
- ²⁴ Interview with General Director of OAPAS, Naucalpan water utility, during the period 2009-2013.
- ²⁵ There are several examples on this matter, such as the Mazahuas movement around the Cutzamala system, which provides water for Mexico City or the conflict around the Zapotillo damn involving two states. A large literature exists already about these cases.

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