

TROUBLED WATERS.
IDEAS TOWARDS A NEW REGULATORY REGIME OF WATER IN MEXICO

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1. Introduction

Water management in Mexico is a complex problem that requires urgent answers. According to the OECD, despite the fact that nowadays 91.3% of the population has access to safe drinkable water and 89% has access to sanitation water, the available amount of water *per capita* within the Mexican territory has been drastically cut down over the last decades, mostly due to demographical factors: the rise in the population and its massive migration from rural to urban areas. Furthermore, water distribution (through rainfall) in the diverse regions and zones of the country is very dissimilar and the rain/drought patterns have diverged even more radically in the last years. As a result of this, more than 75% of the population inhabits in regions with relatively scarce water compared with the arising demand. On top of this, a significant part of the rivers, lakes and groundwater is being threatened by different pollution sources¹.

If these problems are not faced promptly and effectively there is no feasible expectation on improving drinkable water availability. There is a clear tendency towards the worsening of the conditions and possibilities of a solution since, nor the tendencies and the demographic patterns in the country seem to be experiencing any sensible change, nor the governmental capacity for executing public policies (budget, technical capacity, etcetera) seems to be

¹ OCDE, (6/11/2012), *Making Water Reform Happen in Mexico*,
https://www.oecd.org/gov/regionalpolicy/Making%20Water%20Reform%20Happen%20.%20Mexico_Jan18.pdf.

improving. In the next 20 years, Mexico will have to provide drinkable water services to an additional 36 millions of persons, as well as sanitation water services to over 40 millions more², and there seems not to be any good news in this realm.

Along to the deep-rooted –structural- problem regarding water demand, its management faces the risks of floods, droughts and other kinds of extreme environmental contingencies that affect the “safe” and “stable” supply of drinkable water. Due to global phenomena like, e.g., climate change, these problems are also unlikely to improve in the future; on the contrary, it is reasonable to believe they will get worse. Between 1980 and 2007, 8 millions of people were affected by floods and hurricanes; which also caused 130 billion pesos in material damages and not yet valuated impacts in population wellbeing³.

The above-described situation poses important challenges for a regulative regime that, as we will explain in detail later on, faces, on the one hand the demand of satisfaction of the right to water -prescribed on the 4th article, sixth paragraph of the Mexican constitution- and, on the other, a lack of infrastructure. This tension has being one of the main reasons for the implementation of mixed regulation measures, which introduce private schemes to the public service management and that, as we will see, has being the source of complex and heated debates regarding the horizon and the operative mechanisms of a new water regulatory regime in Mexico.

For example, the 1989 reforms to the regulative water regime in Mexico City had their origins in two precise demands: to re-establish the groundwater accumulation levels and to improve the infrastructure to set up better distribution services for drinkable water. The Federal District Water Commission, and more recently, the Mexico City Water System were created in order to achieve these goals. Also, as a by-product of this reform, the privatization process speeded up. Four major entrepreneurial groups got the concessions for the managing of the water system and three big phases were set out: 1) the development and regularization of an inventory of consumers, water outlets and infrastructure which belonged to the net; 2) the construction of

² Ídem.

³ Ídem.

new outlets and drainage connections, as a new billing system based on the water usage measurement was implemented (which, allegedly, guaranteed that the payment was handed to the local authorities and not to the private enterprises); 3) the repair and maintenance of the whole infrastructure⁴ Despite this “radical” experiment on regulative policy regarding the water services, the supply system have shown some slight improvements in outlets and gauges, in the inventory development and the billing system. The privatization also generated an income increase regarding the water usage (27.1% between 1995-1999), it has not yet achieved financial self-sufficiency, not even the reduction of the historical financial deficit (Romero Lankao, 1999). Moreover, some regressive elements in the billing system still remain, aggravating the existent inequality access in the water provision service caused mainly by the uneven physical settlement of the “public” services (Libreros, 1999). In this context, the representatives of the companies that operate the concessions have given diverse explanations for their poor performance: the groundwater over-exploitation has raised the supply’s price; the drainage maintenance is recurrent and expensive because people and businesses alike through hazardous residues through the drain on a regular basis; the quotas haven’t had a substantial raise for local users and therefore it is impossible no develop new water management strategies or tools which can help guarantee payments linked to consumption. To all this we have to add up the no consequence regime for the lack of payment of water service and the reticence of Mexico City authorities – regardless its political allegiance- to enforce any measure in that direction in light of its effect in electoral processes.

The water management system in Mexico City lacks of a clear labour and responsibility division between authorities and enterprises. For example, despite the efforts to improve the infrastructure to prevent leakages, the water pumping only increased from 35.2m³/s in 1993 to 35.31m³/s in 1999; also, Mexico City groundwater remains one of the 15th most polluted around the country; just 6.8% of the drainage water has being treated (Presidencia de la República, 2003; Zentella, 2000). As a consequence of this scenario, Wilder and Romero conclude that Mexico City water reform has failed to fulfil the expectations on efficiency, and has not achieved

⁴ Margaret Wilder y Patricia Romero Lankao (2006), “Paradoxes of Decentralization: Water Reform and Social Implications in Mexico”, Elsevier, 34, 1977-1995.

a reduction on the groundwater extraction nor an improvement in water quality, financial sufficiency of the system or a more fair access to the service⁵.

Rather surprisingly, regarding the efficiency of the drinkable water service management, the OECD considers that Mexico posses a well developed public policy frame to manage this public good⁶. Diverse institutions in both local and national level use diverse “economic” tools, ranging from fines for illegal extraction to the development of water “markets”. The operational problem consists in a lack of governance of the system, which is shown by the fact that the public investment has proved irrelevant to the management of several “problems”: 1) Lack of coordination mechanisms that helps to cope with the institutional and territorial fragmentation which, in turn, is the main cause of the unbalanced public policies implementation; 2) the ineffectiveness of some groundwater administrative councils –in some cases these have not operate in the 20 years they have existed-; 3) the atomization and division of the regulatory frame on water and hygiene matters and drinkable water which is commissioned to a multiplicity of actors. Also, there are some gaps and legal contradictions that impact in a deficient implementation in matters as a water reuse and recycling policy; the existence and effectiveness of conflict resolution mechanisms; a “overreaching” public policy regarding water intake, land use permits, construction permits and civil protection; regulations and standards regarding water quality; “systems” to regulate measuring, inspections and sanctions...

⁵ Regarding the inventory we have to point out that the case of Aguascalientes its a little bit more promising. In 1993 the water services of the capital city of the state were licenced to Sistemas de Agua Potable (Mexican construction company linked to one of the main enterprises of the sector: ICA). The mayor sustained that the prices would go down and the service in general will show improvements. In 1995, the company has virtually fulfilled all its contractual responsibilities. However, in the electoral process in the city right after the 1994 crisis, allegedly 75% of the polled population resented the surge in water services, which caused the next elected mayor to quit the increase in the prices and, because of this, to entangle in a political conflict with Sistemas de Agua Potable. The contract was renegotiated, the company was recapitalized and an extension for 30 more years was confirmed. According to an investigation, despite the increased costs, the billing fees did no rise, this set limitations for the company for obtaining efficiency gains that could translate in consumer benefits. In addition to this, in spite of the privatization process, income produced by the water services decreased 39.9% between 1995-1999. Finally, the contract omitted to point out the distribution of responsibilities, right and duties of the contracting parties and failed to establish an independent revision organ and a fulfilment guarantee. Pineda, N. (1999^a). Actores sociales y distribución de costos y beneficios en la privatización del agua potable en Aguascalientes. Ciudades, 43, 57-64. As it is correctly pointed out by Wilder and Romero, this case is an example of the gain the transference of a public service to a private management scheme has, but also exemplifies the difficulties for transferring this benefits to the whole population.

⁶ Op. cit., OCDE. (6/11/2012).

From an alternative vision to that of the OECD just synthesized, other analysts consider that the main cause of the present state of the drinkable water management system is the “neoliberal” restructuring of the sector has recently undergone⁷. This vision questions a diffused opinion, which sustains that the decentralized management of the water achieves better standards in efficiency, sustainability and accountability. A series of research projects carried out in different urban areas around the country have concluded that those “market” oriented policies have failed to satisfy the expectations raised by the neoliberal rhetoric: efficiency and sustainability⁸.

The problem persists: if the series of reforms over the last decades are not “the” solution, what is the alternative? Which principles, objectives, mechanisms, etc., must be promoted by a “new” regulatory water regime in Mexico?

The analysis of a diverse set of answers given throughout the debate towards a reform the regulative water regime in Mexico is the topic of this paper. Therefore, this paper is structured as follows: first, I will make a brief presentation on the three stances that, I think, can distinctively show the controversy regarding the horizon the reform has to head to. Secondly, I will try to expose briefly the aspects in which diverse strategies oppose and reinforce reciprocally. Lastly, taking the identified those tensions and reinforcements as a departure point, I will try to outline the basics of a regulatory policy that, either by synergy or by friction reduction, would increase the possibility of a sustainable regulatory regime⁹.

⁷ Margaret Wilder, Patricia Romero Lankao. (2006). “Paradoxes of Decentralization: Water Reform and Social Implications in Mexico”, Elsevier, 34, 1977-1995.

⁸ That is the case of the Distrito Federal –now, Ciudad de México–, Aguascalientes, Tijuana, Mexicali, Tecate, Ensenada y Puebla. There have been quite many experiments, but results are rather similar.

⁹ In February 2012 the constitutional reforms that recognized the human right to water, and that established the congressional duty to issue a national law of the matter: the “Ley General de Aguas” had to be enacted. In March 2015, the United Commission of Drinking Water, Sanitation and Hydraulic Resources, passed a draft of the “Law” that regulates the 4th and the 27th articles of the general constitution. Against the will of the Executive, due to social pressure, the draft was not subject to an allegedly *fastracked* approval process. Some of the most polemic points about this legislative process were: 1) To consider some subjects as “public interest” and, therefore, to reduce the possibilities of defence for the communities where the water is located –some of these subjects are: the transference of national waters from a watershed or water-bearing to others; the use of national waters to produce electric energy for public services; the acquisition or exploitation of the appropriate real state for construction, operation, maintenance, conservation, rehabilitation, etc, of hydraulic public infrastructure and its corresponding services-. 2) To establish the goal of full financial auto-sufficiency, that it is to be assumed that will deem in higher costs and tariffs for users. 3) The enhancement to private investment was also subject to criticism, since, through dispositions as article 129, which authorizes the National Water Commission to perform contracts regarding public work and

2. Perspectives

Naturally, the debate around the “best” regulative regime for water in Mexico has being propelled from diverse perspectives. Each one of those perspectives endorse, in complex ways, diverse underlying values, distinct public policy objectives and the preference for alternative regulative techniques. In order to deal with that vast universe, we can reduce the complexity of the debate by assuming that its arises out of different ways to protect -or, as it can also be said, to “promote”- the “right” to water. However, each of those ways has particular outstanding features that, in my opinion, need to be taken into account if we want to incorporated those perspectives into a regulative regime that, as a result of its effectiveness and efficiency, can aspire, while enforcing the guarantee to the right to water, to be a legitimate response to deep social, economic and political problems.

Renouncing to the precision of an exhaustive analysis I will quickly present the three stances that I believe can be identified in the public debate on the right to water in the current context of the reform to the regulative regime.

- a) The economic, social and cultural rights perspective, which basically states the human right to water as a legal obligation for the states, based on the Constitution and various international treaties ratified by the Mexican state.
- b) The public interest governance perspective, which proposes that the state is the “manager” of the national water and that in the end the responsibility of the guarantee of the right to water lies on the different governmental levels, but based on their public prerogative.
- c) The “economic” perspective, which emphasises the need for investment in infrastructure and the urgency in a rationalization of the alternative, uses of water; this stance also

services –i.e., to allow the grant of total or partial concessions to operate, preserve, maintain, rehabilitate, modernize or enlarge the hydraulic infrastructure on behalf of the Federal Government; as well as granting total or partial concession to design, build, equip, operate and maintain the federal hydraulic infrastructure and to provide the services related to it.

The PRI and David Korenfeld, at the time Director of CONAGUA, actively propelled this initiative. Therefore, this initiative has been tagged as the President initiative, and some media refer to this initiative as Korenfeld’s initiative.

proposes that water distribution schemes must be supported through private investment, enhanced by the creation of some sort of water market.

2.1 Water as a human right

The right to water is commonly defined referring to public international human rights law¹⁰ as follows:

The human right to water entitles everyone to sufficient, safe, acceptable, physically accessible and affordable water for personal and domestic uses. An adequate amount of safe water is necessary to prevent death from dehydration, to reduce the risk of water-related disease and to provide for consumption, cooking, personal and domestic hygienic requirements”¹¹.

In this context, given its supply character, the obligations derived from the right to water can be identified through the following statements: i) Availability: that every person has continuous and enough supply; b) Quality: that every person has access to safe drinking water with acceptable colour, odour and flavour for personal and domestic use; iii) that this water is accessible in both physical and economical terms, that is, that every person has access to water without any sort of discrimination. In other words, the physical accessibility entails the direct access of one person, while the economical availability presumes that the prices are accessible to everyone regardless their income¹². In this context, the access to water, or the right to water imposes to the states the obligation of guaranteeing the availability, quality, and physical and economical accessibility under no discriminatory basis.

¹⁰ A/RES/64/292 “El derecho humano al agua y el saneamiento”, United Nations General Assembly, 28/07/ 2010.

¹¹ Comité de Naciones Unidas de Derechos Económicos, Sociales y Culturales, *Observación General 15, Aplicación del Pacto Internacional de los Derechos Económicos, Sociales y Culturales, El derecho al agua (artículos 11 y 12 del Pacto)*, 29º periodo de sesiones, 2002, U.N. Doc. HRI/GEN/1/Rev.7, 2002, párrafo 2. En la Observación General No. 15, se interpretan el artículo 11 y 12 del PIDESC, que reconocen el derecho de toda persona de tener un nivel de vida adecuado, así como alimentación, vestido y vivienda, y la mejora continua a sus condiciones de existencia; y el derecho de toda persona al disfrute del más alto nivel posible de salud física y mental, el cual establece que toda persona tiene derecho a servicios de salud eficaces, así como a otros elementos determinantes de la salud entre los que se incluye el derecho al agua potable. En consecuencia, el derecho humano al agua es resultado de la progresividad de los derechos humanos. Véase también párrafo 11 de la Observación General No. 15

¹² Véase párrafo 12 de la Observación General No. 14.

Since we are dealing with a “human” right, the access to water poses to the states the obligations of respect, protection and satisfaction of a series of specific rights and duties, aroused out of the preconditions to the above mentioned “characteristics” of the supply. Thus, as it is widely acknowledged in relation with the economic, social and cultural rights, this kind of requirements entail certain obligations for the states to carry out public policies, mostly in the category of social benefits or services¹³.

The right to drinking water was considered a Millennium Development goal for 2015 which stated that, to that date, the number of people with no access to drinking water or that could not afford it would be cut in half. Today (2016), the right to drinking water has been acknowledged as a Sustainable Development Objective: to guarantee water availability, and the sustainable management and sanitation for everyone. The main goal of this agenda is “to achieve universal and equitable access to drinking water at an affordable price”¹⁴. As we have seen, we are far from stating that this threshold has been achieved or that we are close to. Here lies the necessity for a system reform.

Even though, as I have stated, the right to water as an economic, social and cultural right, is most commonly addressed through the international public human rights law, in the Mexican case, article 4 of the Constitution reinforces and specifies the obligation for the Mexican state on its 6th paragraph that:

Every person has the right to access, disposition and water sanitation for personal consumption and domestic use in sufficient, safe, acceptable and accessible manner. The state will guarantee this right and the law will define the grounds, benefits and procedures for the access, equitable use and sustainability of the hydrological resources, setting out the participation of the federation, the states and the municipalities, as well as citizen participation on the achievement of these ends.

Therefore, according to different participants in the water debate in Mexico, particularly the OCDE –which is somehow puzzling–, this constitutional layout provides an opportunity for

¹³ Véase considerando séptimo de la Resolución A/RES/64/292.

¹⁴ UN General Assembly, *Transforming Our World. The 2030 Agenda for Sustainable Development*, A/RES/70/1, 21/10/2015
http://www.un.org/ga/search/view_doc.asp?symbol=A/RES/70/1&Lang=E.

reviewing the whole federal legal frame and, consequently, helps clarify the scope of the water regulatory regime as a whole. So, as this international organ focused on development and economic growth emphasises the water supply and sanitation regulation is not only a matter of establishing tariffs that deem the system financially sustainable, but also in creating a whole operative regime to control the functions such system; as, e.g., the establishment and supervision of quality and access standards on the services provided¹⁵.

2.2 Water as a public good

This perspective can be considered the legal canon on the subject. For example, Roman law conceived the water in rivers and lakes as *res publicae in public uso*, while in Mexican Colonial Law, waters were considered as part of the Royal state¹⁶. This idea prevailed through the country independent life and, after the revolutionary momentum, the constitution 27th article set out that the “nation” is the “original” –as in initial- owner of lands and water, with the “prerogative” to transfer the control over them to private owners¹⁷. In this context, in the construction of the right to water built from the public law paradigm, we are not talking about a “free” good, but of a kind of public good that requires that in its usage and exploitation the public interest and the social benefits entailed by its “ownership” must take into account at all times¹⁸.

Consequently, paragraph 5° of the above mentioned constitutional article sets out an inventory of what is considered as national waters: waters that are nations “property”:

Territorial seas waters, inland marine waters, those belonging to lagoons and estuaries which connect to the sea, inland lakes of natural origin, those of the rivers and its currents, those of the water springs originated in beaches, maritime zones, currents, headwaters, or lake rivers, lagoons or estuaries...”

In the same article it is crystal clear established that the public domain on water is an inalienable and imprescriptible prerogative of the Nation, and that its exploitation and usage has to be performed under a concession scheme granted by the federal executive branch.

¹⁵ Op cit., OCDE (2013), p. 14.

¹⁶ Vergara Blanco, Alejandro, *Las aguas como bien publico (no estatal) y lo privado en el derecho chileno*, p. 65.

¹⁷ Art. 27, 1°, Mexican Constitution.

¹⁸ Art. 27, 3°, Mexican Constitution.

Following the same path, article 14th *bis* of the National Waters Law, which provides further regulation to article 27th, states:

Water is a federal public domain good, vital, vulnerable and finite, with social, economical and environmental value, which preservation, in quality and quantity as well as its sustainability, are fundamental tasks of the State and the society, as well as a matter of national security.

As we can see, according to the way in which the legal paradigm of the public domain of water is stated in the Mexican legal system, water (s) is (are) part of the national state. This makes them public goods of common use for all inhabitants under certain usage restrictions written down in legal documents, favouring sustainability on its usage in order to preserve them for future generations. The federal executive is in charge of the national waters management, which can be enforced directly or through the National Water Commission (CONAGUA). On the same track, the National Waters Law itself states that the national hydrological policy must delve with the national waters management, in order to streamline water necessities and to aid on the water's economical and financial improvement. The National Waters Law also states that the exploitation and use of water can be free only when it is related to domestic use, meaning the particular usage of persons and in homes, gardens and trees irrigation, otherwise, it has to be performed under a concessions scheme.

At the same time, for this work proposes it is important to point out that according to this particular legal frame which considers water as a public domain good, the creation of a financial system for the water, under the administration of CONAGUA and Ministry of Finance (SHCP) it is also intended. The purpose of this system is to set the basis for the actions regarding the comprehensive management of the hydrological resources in the whole national territory. This system will determine the various financial sources, the concession schemes for the hydrological resources, the expenses as well as the accountability and the achievements reached through financial schemes/policies.

2.3 Water as an economic good

As a part of the “*Zeitgeist*” in Mexico – and, I think, also in some other countries of the region- there is a common wisdom that every time that someone points out the need for investment regarding a public good, there is an implicit claim for privatization. Nevertheless, letting aside the our ideological preferences –which is, at the end of the day, impossible to do- in economies with little growth and poor tax recollection, the main obstacle to the infrastructure investment needed for universal public services is, sadly, on the investment side. As we said earlier, in the Mexican case, the argument in favour of more “innovative schemes” for funding of water infrastructure, comes from the need for rehabilitating, enlarging and maintaining a system that, from decades –centuries, can be said-, has suffered from sensible investment deficits and that, as I already stated, is far from achieving the public policy goals regarding the satisfaction of the duties related to the human right to water.

In this context, it is not too hard to imagine that the main argument against the governmental “innovation schemes” through different kinds of private investment schema is that, in the end of the day, since this models lie ultimately in some kind of profitable business –i.e., schemes that produce some profit in return for the investment-, those models are compatible with the “water to all” motto.

On the other hand, almost every time the need for “investment” is mentioned, it is accompanied by the need of “rationalization”; it is useless to invest if you don’t manage diligently afterwards. We are talking about the scarcity that, if understood properly, can and must be dealt with through combined strategies aimed to increase the availability and improving the distribution of the good through alternative methods. As it is obvious, by focusing in the scarcity dimension the policy central matter rises: the problem of managing social costs. From this perspective, the problem with the distribution of costs derived from the access to water starts as soon as we assume the state “incapacity” to provide the good through social distribution mechanisms based on a centralized tax system and if this problem has to be solved by using market mechanisms. Thus, as it is not too hard to acknowledge, the matter of the costs

management through market mechanisms presents two aspects: on the one hand, the prices must reflect the actual social costs and, on the other, the lack of capacity to pay for the service must determine the access to water.

In legal rhetorical terms, what I just said seems liable to multiple contradictions with respect to what I have said in previous paragraphs: in the best scenario it seem incompatible with the fair aspirations of the population and, in the worst, it perverts the “nature” of the said “public good”. However, as we will see in more detail later, once stripped down from likes and dislikes, and from its mere emotional use –for good or for bad-, the need of investment and rationalization turn into normative problems of great importance, which, most importantly, must be taken care of as demands, or, if it suits better, as “conditions” for the exercise of rights and for the procurement of public interest.

As I stated before, a water reform must be understood as a need to improve “systemic” governance. Mexico faces deep problems of drinking water shortage, lack of physical and economical accessibility, but above, a lack of the infrastructure (physical, normative and organizational) required to “manage” those problems. Taking this into account, there seems to be consensus about how investment must be oriented. It must focus on the four objectives or goals Mexico has planned to achieve before 2030: to balance water’s supply and demand; to clean the water bodies; fulfil the universal access to water services and; lastly, to safeguard human settlements from the risk of catastrophic floods. It is also agreed that these objectives must be carried through the five principles for water management: 1) Sustainability 2) Holistic, long-term vision; 3) Watershed conservation vision; 4) Local control and, 5) Subsidiarity. In order to achieve these, 38 public policy initiatives regarding water have being put forward. These attack a wide range of subject including hydrographical watershed institutions, polluting behaviour, waterbed preservation, land use, role of local governments, capacity generation, tariff establishment, normative frameworks and surveillance and information systems, just to name some of the topics. Also, this plan aimed towards 2030 contains strategic guidelines related to governmental structures, water management capacity and responsibility and competencies distribution for the three governmental levels. An estimated 60 billion pesos yearly (about 3.5 billions of American dollars), through two whole decades, are required to fulfil these tasks.

As I already announced, the just described perspectives imply gross simplifications from debates and stances since these positions are almost never, or seldom, unequivocally stated. However, I think the “reconstruction” of this debate has its propose as it helps identifying and somehow, exposing some salient aspects of the reform of the regulatory regime of water in Mexico which, are actually set against each other in the consensus process, even if they are stated in other terms or in a less clear manner.

In the following section I will try to outline the debate even more by using and analytic strategy which tries to rebuild the complex debate on the redefinition of the regulatory regime of water in Mexico from the analysis of the underlying tensions and reinforcements between the said perspectives or positions regarding three main elements: principles, public policy objectives and regulative techniques

3. Tensions and reinforcements

I would to talk about “tensions” and “reinforcements” instead of, for example, “oppositions” or “incompatibilities” on the one side, or “conditions” or “requisites” on the other, in order to move away from the binary language that characterizes legal discourse -allowed/forbidden; right/duty, and so on-, to refer to the usually fuzzy relations between the elements of regulative systems which, in case of an arising tension, turn the arguments towards the presence of another element less acceptable, robust, effective, legitimate, etc. Meanwhile, in the case of reinforcement, the presence of an element in relation to the arguments favouring the presence of another becomes more acceptable, plausible, effective, robust, etc.

Of course I will not try to be exhaustive in the description of all the possible tensions and reinforcements that can exist between each and every one of the elements of the possible regulative regimes. I will limit myself to show just some of the tensions and some of the reinforcements between some principles, public policy objectives and regulative techniques, in order to, in the next part, some proposals about how can sustainable regulative policies can be

formulated in this sector, in the understanding that in this case “sustainability” does not limit to formulating appropriate regulative regimes, but extends to the task of designing such regimes in a way that reduce the tensions between the elements of any system at a minimum and, at the same time enhance said the reinforcement to its maximum.

Taking into account this caveat, let’s then consider some tensions and some reinforcements between the elements and their perspectives through the following table:

Perspectives		Principles	Public Policy Perspective	Regulative Technique
Human Right		Everyone’s right	Universal access	State obligation to provide Public Management Market incentives (price system)
Public Domain		Nations property	Common interest	
Economic good		Scarcity management	Investment and rationalization	

3.1 Tensions and reinforcements on principles

In the principle dimension, it seems that the most evident tension lies in the “ownership” of the right to access to water. That is, the tension lies between those who claim that, being a human right, the access to water must be guaranteed universally, regardless any public policy consideration (environmental, urban, industrial, etc.) that may limit or set conditions to such access, on the one hand, and those who consider that, even acknowledging such human right to water, the satisfaction of that right can and must be constrained by particular public policies, on the other –particularly, they sustain that that is the case in Mexico, since the “nation” is the owner of the “good”, and there is a constitutional to the federal government to protect such “property”.

In this context, it seems important to point out that in spite that many of most of the heated debates about alternative regulative regimes have circled around the opposition to a vision of water as an “economic” good, and particularly, around the “privatization” as public policy strategy –we will return to this later-, in matters of principle, the “economic” perspective does collide with the other alternatives. In the principle arena, the prevailing tension is the one that can be set out between “individual” right –as in the human rights perspective- and “national” prerogative –as in the public prerogative to control its access according to certain criteria that can be different from individual benefit. Thus, it seems obvious that between the appropriate management of scarcity and the possibility of universal access or conservation and rational use of a public good, we are in the presence of a mutual reinforcement not a tension.

Once that this has been clarified, what I find more interesting in the arena of the tensions between principles is the presence of two alternative conceptions on public law –particularly, the ideal of rule of law- which are subjacent to the theoretical construction of the “policy” problem. I am referring to the idea of public law as a tool of the individual or collective rights *vis à vis* the idea of public law as an instrument for execution and control of the public powers –in particular, of the power of the State to control scarce resources. In the first conception of public law, the

condition for legitimacy of any regulative strategy depends on its correlation with a right; put in another words, with a specific good that can be ascribed to a person or group. In the second conception, the regulatory legitimacy depends on the “proper” exercise of the public power, constrained to the competency and procedural limits established by the constitution. This opposition can also be presented as an opposition between substantial conceptions and formal conceptions of the rule of law. In my opinion, from the regulatory perspective, the relevance of this matter does not lie in the contrast between substance and form, but in the implicit conceptions regarding the limits of law towards other sources of social legitimacy. According to a substantial conception of public law, legality –particularly, the “rights” discourse embedded in this idea- constitute privileged sphere of legitimate public action, which eventually defeats any other form, expression or embodiment of preferences or social values. Consequently, the legal sphere exhaustively colonizes the space and precludes any alternative public speech, and particularly that of “collective interest” as public reasons. On the other hand, the formal conception constrains legal legitimacy to the kind of state actions that “emerge” through the regularity of the authoritative activity (legislation, adjudication, regulation, etc.), constructing through the notion of “legality” a stamp, among others, of legitimate social power. In this sense, it can be said the legal sphere inhabits among other legitimacy sources (political, cultural, traditional, etc.) without having a privileged position.

3.2 Tensions and reinforcement between public policy goals

Since we are dealing with benchmarks regarding the state of the matter –i.e., material and social facts-, and not only with conditions for public action legitimacy, when it comes to public policy objectives the tensions do not appear as neat as in the principles arena. It seems obvious that there are reinforcements between the investment and rationalization, and the general interest and universal access. The problems arise when we consider two aspects of such “virtuous” relationship: the nature reinforcement and the strategy problems that inevitably arise in the incremental nature and, thus, the temporality of any transformation process in this realm.

Concerning the reinforcement problem it can be said – metaphorically speaking- that it arises because this is not a lineal; that is, that there is no a constant and unambiguous reinforcement. Even if *prima facie* there is a positive relation between the public policy objectives, that is not all the stages of such policies –not all the cases- have the intended effects, moreover, they can produce results which are indifferent to the relation or even worse they can have counter effects, at least when analysed separately –in other words, the positive relation is not distributed homogenously-.

In normative terms, this is relevant because the universalization of the access to water does not necessarily exhausts the content of the public interest notion, and because even a substantial growth in investment and improvements in rationalization may not produce universal access –and, of course, under some circumstances, at least theoretically, it does not has to be a requisite to get it. A human rights stand can be incompatible with many plausible formulations of the general interest ideal. In another words, if, departing from what I stated in the past section, we do not take for granted the “juridification” of the social sphere through the “mystification” of human rights discourse we can find justifiable restrictions to the universal access to water sustained in general interest and, more noteworthy, in the need for investment and rationalization –I can’t stress that enough, I am not only talking about obvious inevitable or inescapable restrictions, but also of those that are arguable in terms of public reasons. To state it more clearly, even if we assume the existence of the reinforcements between public policy objectives, because we are talking about “policies”, it is inevitable to make zero sum decisions that can have outcomes that can be legitimate within the specific regulative regime.

Naturally, this conclusion takes us to the second problem: the strategic dimension of public policy. The strategic dimension is particularly bind with the regulatory regime since it has to have incidence in the agents and allocation decision in three aspects: who does what, what it is done and when it is done. Assuming that the universal benefit of the right to water is a general interest objective, and that in order to reach this goal investment in infrastructure and rationalization are required, the problem on how to achieve this objectives remains; or rather it becomes even more present than in the mere enouncement of the objectives. No one can turn the blind eye on the necessity of establishing priorities and balancing legitimate interests: the limited

amounts of drinking water *must* be used for human consumption and *must* be used for agricultural and cattle production; very often the hydraulic infrastructure works transfer the natural resources through long distances, generating not only a redistribution of the good, but also environmental effects that risks the own sustainability of the places where the extraction is made; the massive water distribution based on the “necessity” foreseen policy (supply) distorts the incentives for rationalization of the consumption (demand) favouring, amongst other anomalies, human settlement patterns and “irrational” economical activities –as the proliferation of “megapolis” or agricultural and cattle activities in deserted or semi-deserted areas. Who is in charge of the public decisions concerning these problems?; how are these decisions reached?; how are the public decisions articulated through time, in a way that a public “policy” is formed instead of a series of incoherent, ineffective decisions accompanied by actions unsustainable in the medium and long term? I will return to this later.

3.3 Tensions and reinforcements between regulative techniques

In contrast with the case on tensions and reinforcement between principles in which, as we noted earlier, the reinforcement between “everyone’s” right and “national” state is clearly misleading, and that the tension between these principles and the scarcity management is only apparent; in the case of the reinforcement and tensions between regulative techniques things really do seem to run in the most predictable direction: historical experience shows that “public” management of water is usually an effective formula for satisfying the state obligations on the matter. Egypt and Babylon are remote examples –non pertinent in many ways-, but the water supply infrastructure of the roman and medieval cities –identical to those of the large human settlements in the pre-Columbian America, incidentally- show that the construction of public infrastructure in the industrial society undertaken through accelerated processes of enlargement of universal benefits in the XIX and XX centuries in cities like Mexico City –which still remains as “the” basic infrastructure nowadays- is a product of massive public investments and of the development of sophisticated public management systems. Even in countries with more advanced “privatization” processes, the public services related to water depend in its majority of

connections and systems with an ample proportion of public ownership goods and public management (damns, canals, purification systems, drainage systems, etc).

Despite its effectiveness as information “transmitters” and of the complexity “simplifiers” –in this sense, as rationality “helpers”–, incentive systems based on market mechanisms are, within their own logic, incompatible with the aspiration of universal benefits. The more a benefit depends on a “counter-benefit”, the universal access less probable; and in societies with great income inequality such as the Mexican, it is not only improbable but with all certainty ignominious. Nevertheless, in this context the more interesting question does not lie in finding this obvious constraint, but in the possibility of disassociating some ideas that are usually put together and whose association, I am afraid, can entangle the debate about the alternatives for a new water regulation regime in Mexico. Often, when a positive correlation between the public management and universal benefits is pointed out, it is usually done with too much emphasis and, paradoxically, in a very superficial manner too. The emphasis consists in some kind of “ontologization” of the State and the government as autonomous entities from the “society”, disregarding that when we talk about “public management” we are talking about certain specific form of “social” management. “Social” because of its subject, “social” because of its means, and “social” because of its purposes. Concerning the subject, we must take into account that the public entities (state, governmental, etc.) are social organizations that manage (administer, maintain, distribute, etc.) goods, which belong to the “societies” –from peace and social order, to access to drinking water. The incommensurate projection of the legal distinction between what is “public” and what is “private”, departing from the legal sphere towards the social sphere, is a mistake to say the least; if not one of the worst and more effective expression of neoliberal ideology. The Mexican state –as any other state- is not an entity in itself and by itself, but an expression of specific forms of organization of the social power (centralization, supremacy, regularity, etc.) within a specific territory. Thus, even if in certain contexts it is convenient to set a distinction between state and society, when we are talking about the attributions of the first (sovereignty, state, identity, etc.) in relation with the problems concerning the nature of the exercise of the “public” power, it is impossible to distinguish a state dimension from a social dimension of social action. This is so because the subject in question is no other than different expressions of “social power”. Also, concerning social means, we must not forget that state

entities operate through the use of resources that come from a variety of “social” agents: in fact, the degree of state presence within a territory is a variable which, in great proportion, depends on the capacity of certain types of organization of the social power -usually called “states”- to obtain or extract resources (material, intellectual, symbolic, etc.) from “its” societies. Finally, nor the states, nor the governments, nor the public administrations are subjects to which we can attach some kind of attribute that “justifies” any public action: when we talk about common interest, public welfare, public utility, etc. we do it as a reference to the interest, the welfare, or the utility of a group of persons, usually related through some kind of social organization.

To denounce the “ontologizing” emphasis of the public speech would not be anything more than a secondary interest for the subject of this paper if this would not be related, paradoxically, with the superficiality that usually accompanies the analysis of the conditions for effective public action. One of the most dangerous consequences of the disassociation between the notions of state and society consists in the systematic neglect of the conditions necessary to make the first serves the interest of the second. Societies who have achieved universal benefits – or at least widely provided- of goods and services through public management have done it by the accumulation and the effective implementation of enormous amounts of both tangible –e.g., infrastructures- an intangible social resources –e.g., wealth and technology- through the exercise of state power: military, bureaucratic, ideological, etc. As I pointed out, the state does not have its own means; its power lies on the effective extraction of other social organizations and individual resources. Universal benefits and public management become something more than mere rhetorical formulas when certain goods to be distributed and managed “come into existence”, and for such goods to exist it is necessary certain amount of social power that only can be “produced” thru an specific form of social organization: the State. The water that needs to be distributed and managed is not –at least not in the way prescribed by the right to water- the one cumulated in watershed or the one that flows through the rivers, but the water that comes out of the faucet potable and in sufficient amount for its hygienic use, in places which are usually far away from those watershed and those rivers. Societies that have accomplished “to have” enough of “that” water in outlets around their towns and cities have done it by assigning serious amounts of resources to that end; and this has been accomplished through, as we stated, the centralized and authoritative state extraction of society’s resources.

In a nutshell: just as many other “structural reforms” in Mexico, the viability of the reform to the water regulative regime depends on a great scale in the reform of the Mexican state, more particularly in a reform to its taxing system. I will dedicate the next and last section of this paper to explain in more detail this conclusion.

4. Towards the possibility sustainable water regulative regime in Mexico

Water is a scarce and fundamental good; every person needs an appropriate minimum supply of drinking water to fulfil its needs; urban and rural populations, agricultural and industrial activities, compete amongst each other for the access to water; thus, water management entails deep demographic and environmental impacts... As we have seen all throughout the previous sections, there are different perspectives, all legitimate and partially confronted on the one hand, but partially encountered on the other. Any water regulation regime with the intention of being “sustainable” –that is, a regime which achieves its short term objectives without deteriorating the conditions of possibility of fulfilling its medium and long term purposes- has to delve with the solution of various water management problems, through “systemic” processes and instruments that reduce the tensions and favour reinforcements emerged from the different legitimate perspectives.

In this context, I cannot outline the specific institutional arrangements required to materialize the said regulative regime; I cannot do it because, among other things, I do not have all the answers, and because, even if I had them, this work does not have enough length to develop any moderately appropriate and detailed way. Therefore, in my remaining space, I guess the only thing I have left to do is to try to outline some of the main axis of sustainable water regime in Mexico. To do this, I will elaborate on two fundamental aspects of sustainability of water management that cannot be disentangled, but that I will treat separately for explanatory purposes: the economic and the social sustainability.

Probably, the least popular but nonetheless most basic element concerning performance viability in a new water regulative regime in Mexico is the economic axis: although we live in a

somehow different set of circumstances, Carlyle's revealing epithet of the economy as a "dismal" science in the XIX century is still somewhat in force. As I have pointed out, the provision of water in sufficient quality and quantity for alternatives uses of "all" Mexican population involves huge challenges concerning the infrastructure deficit suffered by the country in this area. This objective also demands processes for rationalization in the consumption that, in addition to the requirement of a great display of governmental capacity, implies an unprecedented redistribution of social benefits and costs. In this context, the economical sustainability of water regulative regime in Mexico seems to go through three interdependent "nodes": investment, savings and reallocation.

As it has been stated in multiple forums, Mexico needs massive investment in hydraulic infrastructure. What is usually left out of these statements is that this demand for investment does not come solely from the social dynamics –the accelerated change in the human settlement patterns, which, in the past decades has inverted the proportion between rural and urban population, for example-, but it is also the outcome of a long dragging deficit of the Mexican state. Over centuries Mexican state has incurred in a continuous shortfall in providing infrastructure to catch growing population demands –this insufficiency patterns are not exclusive of the hydraulic infrastructure, it replicates in transportation, housing, energy, etc.- Therefore, the sustainability of any "system" in this realm not only requires investment oriented to "foresee" future demand, but also investment oriented to "compensate" a substantial lag of investment. The investment challenge demanded by the water regulative regime in Mexico is enormous; so large it looks like an impossible task. Nevertheless, we have to face the fact that any "economic" strategy that does not cover the historic deficit **and** foresees the demand satisfaction is unsustainable in the long run.

Mexico requires an unprecedented public investment which, because of its scale, because of the widespread character of its benefits and because of its pay back periods, it will hardly be managed through investment markets, domestic or international. Thus, it has to be a public funding: that is, money extracted from the Mexican society by the Mexican state through taxing instruments. Of course, generating sufficient investment levels is a necessary condition for sustainability, but not a sufficient condition. We need a rationalization of the actual system,

based on the marginal improvement of the service management through a representation of cost –e.g., by a price model- and its proportional allocation –e.g. through the tariffs-. Once this information is available, a choice of the financial scheme could be made on the base of its distributive effects.

Obviously, the savings capacity that makes taxing possible is intimately related with the investment capacity that is required for economic growth. The rationalization strategies need investment, but investing and then squandering is pointless. But, beyond the burden of this basic arithmetical exercise, what I find more interesting in this context relates to the state capacity for implementing convergent public policies in this realm. I can think of various relevant public policies on this topic, but I will mention two that, I believe, illustrate my point accurately. First, regarding its public expending dimension, the economic sustainability of water regulative regime is necessarily related with an effective and efficient public expenditure management system, particularly regarding the resources allocation towards investment to the highest social value. This strategy requires, first, that water is managed beyond the urgencies imposed by current expenditure or political timing and, second, that flow from income units –the federal government in general- to expending units –both local and municipal- operate according to long term planning strategies –again, beyond political calculations, in the local, state and municipal spheres.

Sustainable public investment must be accompanied with “governmental” policies –or for those who prefer more contemporary terms: “governance” processes- that concrete and amplifies the expenditure impact, instead of diluting and obstructing it. I can think, for example, in an urban land allocation that bolster “verticalization” in cities, and in construction regulations that enhance rainwater harvesting and hydric waste reduction, in order to reduce the pressure put on the sanitation and depuration systems.

Analysed as a whole, the economic sustainability in a new water regulative regime lies in Mexico lies in two governmental platforms: taxing system and governance. The market regulatory tools are, *stricto sensu*, marginal elements in the effectiveness of the system. Despite that, sadly if you ask my opinion, they have focused the attention in the public debate for

ideological more than technical reasons. The economic sustainability is, above all, a technical matter, whose explanation greatly depends on the “exact” appreciation of the problems and the “correct” design of its solutions. As it is well known, despite its complexity, technical matters are susceptible, at least theoretically, to unambiguous and “neutral” answers in relation of our own preferences. But, as we will address right away, that is not the case for the social sustainability of this regulative system, which depends of the way collective values are expressed and of the regulative regime capacity to enforcement, despite the circumstances.

The social sustainability of the water regulative regime does not derive solely from the technical plausibility, it also depends from how well does it fits in with the “Politics”, understood no just as the art of the possible, but as the expression of common or collective values. I do not feel the need to temper the republican influence of this idea, but I think it is not hard to accept that, just as any other basic good (health, education, environment, etc.) the expansion the access to water, as well as its cost distribution, define the character of the society in question.

In this context, in direct relation with the “social order” legitimacy, it seems obvious that any legitimacy standards derived from the social institutions (organizations, norms, public policies, etc.) departs from the assumption that, if any form of “social” organization has any (some) purpose (s), it depends on its connection to the welfare of its members. The access to a basic good –those required for the satisfaction of basic needs; that is, those that are required as a condition to develop any life plan- is the least polemic standard for social legitimacy – as well as the most reliable criteria for development.

Regarding regulative regimes, it is crystal clear that legitimacy is the most effective variable for fulfilling institutional ends and, as a consequence the opportunities a society provides to its members for achieving its objectives –despite which are those, I insist- an essential condition for the medium and long term sustainability of social systems. Social violence is expressed –and also becomes a condition for it- through the systematic exclusion of persons and groups from the access to basic goods, that can only be stabilized by some sort of social “order” through the exercise of other forms of violence, through political, legal, cultural

institutions. In this sense, as it is well known, violence breeds violence, and that is not the best recipe for any kind of social sustainability.

Now, for the limited topic of this paper, I think it would be important not to miss out that the social sustainability of water regulative regime in Mexico needs decisions and public actions that will have deep distributive impacts; not only with respect to economic and financial goods but also of social and political power. For a better appreciation of this circumstance we just need to consider the effects of a new regulative regime in terms of territorial “solidarity” regarding the massive water extraction performed by and for the cities, which constitutes opportunities for social mobility throughout the country; particularly surrounding the Mexican “megapolis” (Mexico city and its surrounding areas), whose population, in great degree, does not inhabit in Mexico City, but in the State of Mexico. To modify our water regulatory regime –as would be the case in other public services as education, health, electricity, transportation, etc.- we have to make a more equitable distribution of power in territorial terms. This entails reducing or eliminating an implicit “subsidy” from the whole country to this privileged “spaces”, which have been historically defined as the most productive zones and, as a consequence of such misdistribution -even if rather deficiently-, the zones that enable social mobility.

This context has produced noticeable differences in political and economic power among the entities that conform the Mexican state, and, obviously, the welfare possibilities of their respective population. This pattern, for better or for worse, has created the Mexico’s development or underdevelopment pattern since its foundation in the XVIth century. Any “rebalancing” implies taking a radical “decision” that will generate winners and losers, at least in the short run. Thus, the managing dilemma is not simple, but undoubtedly it is one of the fundamental branches for Mexico’s social sustainability that cannot be overlooked. It is, simply put, one of the Gordian knots that hinders the *raison d’être* of the Mexican revolution and its almost centennial constitution: the promise of social justice.