Insights into public experiences in Argentinian water sector after the end of the PPP-era

Examples from Buenos Aires and the province of Santa Fe

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Abstract

Private sector participation in water sector has raised significant interest in the academia, engendering a numerous literature on one of the pillars of the Washington Consensus. A particular attention has been given to the flagship concession of Buenos Aires, and countless articles were published on the controversies associated with this contract and its contentious termination. Yet, scant literature has been dedicated to the aftermath of such a process with the renationalisation of several water utilities in Argentina.

Based on the two case studies of Buenos Aires and the province of Santa Fe, this works pursues a threefold objective.

Firstly, it tries to analyse the new management in term of continuities between the private sector era and the current public model. This follows the hypothesis of a managerial turn operated by the private sector and never questioned ever since; in other words, it is argued that the renationalised water companies have retained and integrated several aspects of the management installed during the private interlude.

Secondly, it analyses the performance of the new public companies, in the light of their claim for a paradigm shift towards the human right for water. An undeniable push has occurred in terms of expansion of the network, with the construction of massive infrastructure. More than a million of new consumers have thereby been integrated in the legal network. However, the maintenance and renovation suffer from significant deficiencies, which are threatening the economic and technical sustainability of such a model.

Finally, it critically explores the achievement of a pro-active policy towards the poor. Public participation and alternative construction systems are analysed in details through the example of the programme *Agua Mas Trabajo*. This programme offers an interesting alternative to eventually reach the long promised universal coverage of water and sanitation services.

Key words: public water management – Argentina – Buenos Aires – province of Santa Fe – Agua Mas Trabajo

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Responsibility for errors is my own.

List of Acronyms

APLA: *Agencia de Planificación*, Planning Agency

APSF: *Aguas Provinciales de Santa Fe*, former private company operating in Santa Fe

AySA: *Aguas y Saneamientos Argentinos*, public company operating in Buenos Aires

DIPOS: *Dirección Provincial de Obras Sanitarias*, former public regional company, prior to *Aguas Provinciales de Santa Fe*

ENRESS: *Ente Regulador de Servicios Sanitarios*, regulatory body of Santa Fe

ERAS: *Ente Regulador de Agua y Saneamiento*, current regulator in Buenos Aires

ETOSS: *Ente Tripartito de Obras y Servicios Sanitarios*, regulator in Buenos Aires during the time of *Aguas Argentinas*

IMF: International Monetary Fund

OSN: *Obras Sanitarias de la Nacion*, former public company operating in the whole country and then only in Buenos Aires before *Aguas Argentinas*

PSP: Private Sector Participation

UNDP: United Nations Development Programme

Chapter 1

Is there a new paradigm after the end of the Washington Consensus?

A/ "Surgery without anaesthesia"

In 1990, the Argentinian president Carlos Menem described his programme of massive privatisation of the public sector as "surgery without anaesthesia" (Akhmouch, 2009, P.39). Private sector participation (PSP) in the water sector was one of the emblems of this new era, supported by international institutions such as the World Bank or the International Monetray Fund (IMF) in an ideological plan which was coined as the Washington consensus (Williamson, 1990)[1]. This consensus can be described as a neoliberal programme promoting budgetary austerity, international direct investments through privatisation and liberalisation of the national market. Such a plan was theoretically supposed to bring what the former public company had not provided before: an effective and efficient service with universal coverage at an affordable price, theoretically making water a merit good[2] (Schouten and Schwartz, 2006). Twenty years later, the legacy is fairly mixed; the promised transplant did not adjust itself adequately (Botton et al., 2011). The universal supply of water and sanitation services had not yet been achieved, and the private experience with multinational water companies[3] had ended in a highly contentious way, after 13 years in Buenos Aires and 10 years in the province of Santa Fe.

The implication of the private sector has raised a great deal of interest from academics, journalists and politicians. Consequently, numerous articles have been written on private sector participation in the water sector in Argentina (Fournier, 2003; Schneier-Madanès, 2003

[1] The term was coined by Williamson (1990). It designates the programme of liberalisation and deregulation of economies in Latin America to address the debt crisis, which was organised by international institutions based in Washington.

[2] According to the classical definition, a merit good is physically accessible for everyone and pricewise affordable and should not be excludable (Kessides, 2003)

[3] Some national private groups are still operating such as in Cordoba, but the multinational water companies involved in Argentina - Suez (in Buenos Aires, Santa Fe and Cordoba), Veolia and Thames Water - have withdrawn from Argentina over the last five years.

and 2010; de Gouvello, 2001) and its flagship concession of Buenos Aires (Botton, 2005; Azpiazu, 2002a, 2002b, 2003, 2010; Azpiazu and Forcinito, 2004; Rocca, 2010), or even on the controversies raised by the case of Santa Fe (Pesce, 2007). This work does not intend to add a new contribution to this extensive existing literature on the analysis of failures and merits of the private sector. Instead, the termination of the contract will be taken as a fact, to see what has been put into place in the aftermath, focusing on the barely analysed new public model that followed the end of the contracts.

Therefore, the time of privatisation will only be documented in the twofold light of the transformation it had brought when it started and the manner it has evolved ever since. In other words, unlike a large part of the literature, we are not trying to justify or condemn privatisation, but to contextualise it, and to analyse the reasons why it failed to succeed in the Argentinian context. Our main point scrutinises the ability of the new public companies to overcome the pending challenges that were not resolved by the private sector, mainly regarding the universalisation of services and consequently water supply to the poor. As Henri Coing recently explained (2010), contract termination is not only the failure of one specific actor, in this case the multinational water company, but rather the failure of a system, of a good functioning between all the actors of the concession. Ultimately, those who might suffer from the termination are those who are still not connected or getting poor service from the network utility. This work tries to analyse to what extent the system replacing the scheme inherited from the Washington Consensus managed to resolve the constant and almost aporetic challenge faced by all public utilities. This dilemma tries to combine both service efficiency – in other words, economic performance and financial aspects – and the social and territorial equity of the service provision, which is the cornerstone of a fairly equilibrated social contract (Jaglin and Zérah, 2010).

B/ Hypothesis: continuities with the PSP experience

The hypothesis that will be tested is whether the return to a public management is not a simple reappearance of the fairly contested management preceding the opening to the private sector. This is rather a combination of mixed legacies and a new model. In other words, it is argued that, unlike the claim of a full break from the private experience, there are forms of continuity between the current management and what happened during the time of the concession with the private sector. This approach is inspired by the theoretical framework introduced by Karen Bakker (2004; 2007 and 2010). She develops a set of indicators to go beyond a binary division between public and private sector (see table 1).

		State	Market	Community
Resource management institutions	Primary goals	Guardian of public interest	Maximization of profit	Serve community interest
		Conformity with legislation/policy	Efficient performance	Effective performance
	Regulatory framework	Command and control	Market mechanisms	Community-defined goals (not necessarily consensus based)
	Property rights	Public (state) or private property	Private property	Public (commons) or private property
Resource management organizations	Primary decision-makers	Administrators, experts, public officials	Individual households, experts, companies	Leaders and members of community organizations
	Organizational structure	Municipal department, civil service	Private company, corporation	Cooperative, association/network
	Business models	Municipally owned utility	Private corporate utility	Community cooperative
Resource governance	Accountability mechanism	Hierarchy	Contract	Community norms
	Key incentives	Voter/ratepayer opinion	Price signals (share movements or bond ratings), customer opinion	Community opinion
	Key sanctions	Political process via elections, litigation	Financial loss, takeover, litigation	Livelihood needs, social pressure, litigation (in some cases)
	Consumer role	User and citizen	User and customer	User and community member
	Participation of consumers	Collective, top-down	Individualistic	Collective, bottom-up

Table 1: The three water supply models according to Karen Bakker
Source: Bakker, 2007

Although her strict tri-partition between public, private and community-based models will not be followed, as this could lead to the same objections as a binary division, her statement on possible overlaps will be kept: she only describes models that one needs to adapt to various contexts (Bakker, 2007).

The official discourse of top managers within the renationalised water companies in Buenos Aires and Santa Fe insists they are experiencing a paradigm shift compared to the era of PSP. They now promote water as a human right to ground a policy aimed at bringing universal coverage, as opposed to the practice of the private sector. On the other hand, many of the practices brought by Lyonnaise des Eaux or Suez may have been routinised and internalised. An insight into such a combination of approaches in the post-Public-Private Partnership era could help to give a fairly nuanced vision of the evolution of the water management in the area, beyond the debates on the sole issue of ownership. In a way, the private sector experience may have transformed the priorities in the current management (Gouvello, Lentini and Schneier-Madanès, 2010)

Mainstream critics on the experience with private multinationals have pointed to four main criticisms:

- a lack of investment in terms of network expansion (Muñoz, 2003; Azpiazu, 2003; Castro, 2005), particularly in the least profitable areas, hindering the achievement of a universal coverage and leading to the accusation of rent-seeking;
- an ill-adapted system of financing, imposed by international institutions like the World Bank, such as full-cost recovery, which has never been used in Europe to get a universal access to water (Barraqué, 1995; Schouten and Schwartz, 2006; Botton et al., 2011).
- a lack of public participation and insufficient inclusion of stakeholders (Almansi et al, 2010)

- an insufficient or deficient supply of water and sanitation to the urban poor (Almansi et al., 2010; Botton, 2004)

Therefore the new model of water management in Buenos Aires and Santa Fe will be analysed in the light of these four challenges, to examine how they were addressed, if at all. This work is consequently driven by three groups of question:

- What are the forms of continuity and the important transformations operated by the new public operators? The extent to which and whether there has been a paradigm shift in terms of management can be questioned. One of the central elements is to determine if a new culture of water has emerged (Arojo, 2006), unifying the idea of water as human right and the provision of an efficient service, or whether the new framework is only a pale veil hiding a fundamental continuity with practices from the private sector.
- Does ownership really matter? As Budds and McGranahan (2003) stated it provocatively, “are we not missing the point” by focussing solely on public or private? The key determinant is how the new operator is performing and addressing the criticisms raised against the private operator. This should allow the criticism of the ideal of universal coverage as fairly unreachable (Fournier and Gouëset, 2004).
- What are the relevant criteria to analyse the performance of a company: how to balance social efficiency and economic efficiency (Spronk, 2010)? Shall one favour social sustainability and affordability or ensure some form of profitability for a good that is vital? This forces us to consider technical, economic and also social performances of the new company. Behind this issue comes the question about access to basic services and its relation to a material citizenship: citizenship here is not only understood in terms of political representation, but also of service provision (Chatterjee, 2004; Castro, 2005; Jaglin and Zérah, 2010). This problem is central in a

country where more than 20% of the population is living under the poverty line (Castro, 2008), often in unofficial settlements.

In the following, after a brief description of the methodology (chapter 2), this work is positioned in the academic landscape of private and public water management to show how to go beyond this debate (chapter 3). This leads us to an analysis of the possible continuities between the private experience and the current public management (chapter 4). The social, technical and economic performances of the two re-nationalised companies are then assessed (chapter 5), and original forms of public participation are scrutinised through a comprehensive survey of the programme Agua Mas Trabajo (Work and Water) (chapter 6). The last chapter draws the lessons from the two different experiences of post-PPP water companies (chapter 7).

Chapter 2

Methodology

A/ Justification of the sites

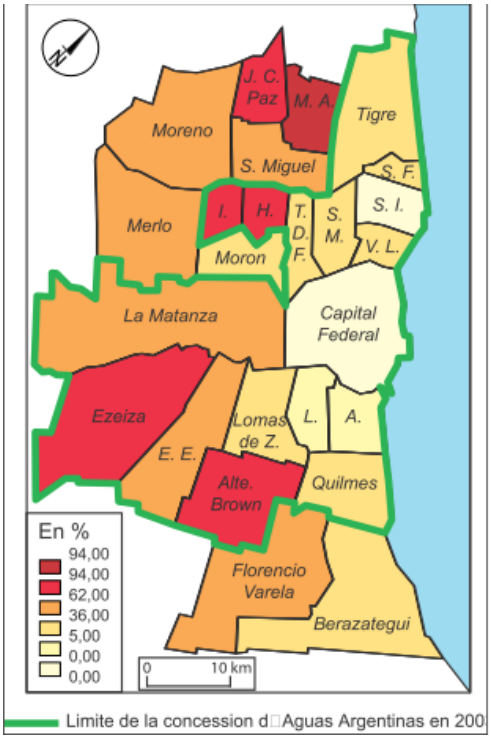
This work analyses in depth two cases, the already well-studied former concession of Aguas Argentinas in Buenos Aires[4], which was emblematic of the private sector participation in 1993, and the less known case of the province of Santa Fe[5] (see maps 1 to 3). Both cases shared the same operator, Lyonnaise des Eaux and then Suez, and both the contracts terminated in a contentious manner.

The idea we are seeking is to avoid the "optical illusion" of the Buenos Aires story (interview with Jorge Rozé, 2007), which almost monopolised the attention of academics and concentrates a large amount of political tensions, so as to have another perspective on the post-Washington Consensus' models. The province of Santa Fe and Buenos Aires underwent a similar transformation in a fairly comparable timeframe; thus it would be fruitful to examine how they may differ in the aftermath of the closure of the private sector chapter.

[4] This concession covers not only the Capital City, but also 17 cities of the "Conurbano", which corresponds to a large part of the Metropolitan Area.
[5] In the province of Santa Fe, the concession was designed to supply the 15 main cities of the province, which represent more than 90% of the whole population

Map 1: Argentina – Situation of Buenos Aires and the Province of Santa Fe
Source: d-maps.com

Map 2: The 15 cities supplied by Aguas Santafesinas
Source: Aguas Santafesinas



Map 3: The area supplied by AySA (and formerly Aguas Argentinas)
Source: ENS, 2007 – Guilhem Boulay

B/ Methodology and obstacles

The survey used in this study was based on three different sources: a critical analysis of the literature on private sector participation, the collection of performances data of the new public water companies and a set of 29 semi-structured interviews[6] with various stakeholders of the process of water supply.

Due to the extreme difficulty in gathering coherent, consistent and reliable data, as this remains strategic and politically sensitive information, water companies are reluctant to provide it. Thus there is a need to constantly cross sources to get some consistency. Consequently, we have largely privileged the qualitative part of the fieldwork, based on interviews with key actors in both cases. The panel of interviewees encompasses managers and employees from various sections of the water company, representatives of the regulatory bodies, members of ministries of water affairs at provincial and local levels, former employees of the private water company or the regulator, NGOs, academics and consumer associations.

Due to the sensitive nature of the information provided by the interlocutors, most of the extracts used here have been anonymised.

[6] On average, interviews lasted between an hour and ninety minutes, in accordance with the ethical forms of the Oxford University *(CUREC*)

Chapter 3

Argentina and the debate

on private or public water management

Buenos Aires has often been presented as the flagship concession of Lyonnaise des Eaux and then Suez. The multinational water company was endowed with the largest water concession in the world when it won the PPP concession contract in 1993 on the promise of a universal supply of water and sewerage networks (Botton et al., 2011). Thirteen years later, the contract was brutally terminated and the government decided to create a new public company, AySA, following the return of other major important contracts in Argentina to the public sector, such as in the province of Santa Fe in 2005[7] (Pesce, 2007). The contentious termination of the contract translated into judicial proceedings at the International Centre for Settlement of Investment Disputes (ICSID), initiated by Suez against the Argentinian State. Regardless of the decision made by the dispute settlement body[8], such a development illustrates how the Argentinian case not only reflects but also fuels a debate on private or public ownership in water sector that occurred at a larger scale.

The concession contracts for water services in Buenos Aires and Santa Fe did not happen randomly and in isolation. They were embedded in a larger context, including both national and regional politico-economic evolution, as well as being enshrined in international debates. This chapter will consequently position the Argentinian case within the literature on privatisation and its contestation. The concession contracts of Buenos Aires and Santa Fe will be approached in the light of a critical analysis of the academic literature on the participation of the private sector in water and sanitation networks and its capacity to supply the poor so as to reach a universal supply.

[7] Started in 1995.

[8] The decision rejected the claim that the government operated an expropriation of investments and did not provide full protection and security for the investments, but recognised that the Argentinian government denied the company a fair and equitable treatment in the aftermath of the immense crisis that occurred in 2001.

A/ Water supply in Latin America: a political question and a "comprehensive social issue"

Drinking water management in Argentina, and to a larger extent in Latin America, can be envisaged as a "comprehensive social issue", as Fournier and Gouëset coined it (2004, p.4). Their argumentation encompasses a fourfold challenge:

- an environmental one, related to the preservation of the resource;
- an issue of political economy, linked to the processes of privatisation;
- a problem of urban planning, associated with the extension of networks;
- and a social concern, as Latin America is highly pervaded by deep social inequalities (Fournier, 2001; Lee, 2000; Castro, 2005).

These challenges reveal the comprehensive nature of water management, and the necessity to avoid confining it to a simply technical approach (Dorrier-Appril and Jaglin, 2002; Mansfield, 2008; Bakker, 2010). As Karen Bakker (2003) expressed it, supplying water is then more than a simple material act: this is also a social and political matter, implying power relations and distribution issues, aimed at unifying civil society and political society[9] (Chatterjee, 2004).

Though a part of the academic literature tends to promote "de-politicised" water management (Briscoe, 1998; Rouse, 2009), the nature of water management is ultimately political or

[9] Chatterjee (2004) details the problems of states in the South unable to extend public services (such as water) to the entire population for both fiscal and managerial reasons. Access to goods and services is often incomplete and thus often a locus of political struggle for the achievement of a material citizenship. In the tradition of the subaltern studies, he consequently defends a constructivist approach of citizenship, differentiating the "civil society", which is often confined to a selected elite, from the "political society" (encompassing the entire population), which is composed by "only tenuously, then only ambiguously and contextually rights-beating citizens." The supply of all basic services would allow transforming the political society into a fully civil society.

cultural, tangled up in a country's political realm and transformed by numerous stakeholders[10] (Brown, 2002; Schouten and Schwartz, 2006; Suez, 2008).

This has even been formulated in an ornate way by a classical reference on public management: "any suggestion that public management can be radically depoliticised is either a misunderstanding or flies in the face of evidence from many countries. (…) Decisions about major public infrastructure projects are all inherently political decisions, however many ministers may protest that these are technical or professional decisions" (Pollit and Bouckaert, 2000, cited in Schouten and Schwartz, 2006, p.14)

These political and cultural dimensions of the concession have been partly underestimated by Suez, which accounts for a large part of the conflicts that occurred during the time of the concession. As one of the managers of Aguas Argentinas recognised it, "*water was and remains an eminently political issue, which needs to be managed. It was noteworthy that the World Bank left its model of a fully depoliticised management as they presented it bef*ore" (interview with a manager of Suez Environment, June 2011, confirming Mollinga, 2008). In other words, the enthusiasm for the Washington Consensus led place to scepticism even from the part of the multinationals.

[10] According to Brown (2002), even if policy formulation, service provision and regulation were allocated to separate agencies, politicians would still be held accountable by the general public with regard to the actual services provided.

B/ Argentina and the Washington Consensus

1/ The threefold context that led to private sector participation

A threefold crisis

An understanding of such a process leading to the Washington Consensus requires a threefold historical contextualisation, to get a sense of the large crisis at the supra-regional, national and corporate scales. Thus, a critical approach of the private experience does not foreclose the necessity to simultaneously criticise past and present public water sector failures (Castro, 2005).

At a sub-continental level, the 1980s were marked by two joint phenomena: an immense debt and a growing cycle of hyperinflation (Velut, 2002). Such a phase resulted amongst others in the "Tequila Crisis" with the devaluation of the Mexican peso and the macroeconomic effects in the whole Southern Cone, principally the development of a massive urban poverty affecting one fifth to one third of the population in Latin America (Musset, 1996; Lee, 2000).

At a national level, a similar economic cycle was affecting the Argentinian economy. Levels of inflation were close to 1,000% a year, putting the State in the situation of quasi bankruptcy with a tremendous indebtedness and a slow if not negative growth (Velut, 2002).

At the scale of the water utility, the situation of the national company Obras Sanitarias de la Nacion (OSN) in Buenos Aires was characterised by Spronk (2010) as the "three lows": low rates of recovery, low productivity, low service quality and coverage. This process is not an exception to the Argentinian case, but reveals the historical limits of the municipal hydraulic

paradigm (Coutard, 1999; Bakker, 2010; Allan, 2003). The idea traditionally defended by hygienists that water supply was the material expression of political inclusion had been concretely neglected. As a consequence, a significant number of water utilities were experiencing the vicious cycle of the three lows, limiting further investment (Savedoff, 1999). For instance, in 1994, the World Bank estimated that only 30% of costs were recovered on average in urban water supply systems (World Bank, 1994). Affordability remained the primary goal, but this was managed in a largely ineffective and inefficient manner.

"Even Kirchner would have privatised" (manager of AySA, June 2011)

In Buenos Aires as well as in Santa Fe, regional and national governments were also directly using the utility as a cash cow to finance the Public Treasury (interviews with manager of AySA and a director of ENRESS). As no significant investments had been realised in the capital city's water networks, the service was in a "state of emergency" (Almansi et al, 2010) with regular interruptions and problems of water quality and low pressure (Cirelli, 2008).

Though the Argentinian State has traditionally been a key actor of the national economy, providing almost all public utilities, its position has been converted and diverted as a macroeconomic instrument. This translated into political pressure to overemploy labour, corruption and the use of public services to borrow more than needed on international markets (Baer and Montes-Rojas, 2008). Unable to manage directly and adequately a large number of public utilities, the State privatised them from 1989 onwards, created regulatory bodies and gave up its attributions in terms of planning of public investments, construction, direct management of investments on infrastructures and external financing (Schneier-Madanès, 2001).

This brief presentation of the macroeconomic context at the turn of the 1990s reveals that the privatisation wave was not purely ideological but also tried to address the failure of poor performing companies (Bakker, 2010) and was sometimes considered by stakeholders themselves as the way forward. As one of the current managers of AySA explained it synthetically:

> "*one needs to look back to what the public services were in Argentina in the 1980s. In all the sectors, they were about to collapse. The country almost went bankrupt. That is the context in which an immense wave of privatisation occurred. But at that time, there were no other possibilities. The water utility was not working, as the government was taking the benefits directly to finance the Public Treasury. All this happened in a context of crazy hyperinflation, which reached incredible levels of 1,000% per year. In this time, even Kirchner*[11] *would have privatised if he was in power.*"

2/ The push by the international institutions

This economic context was accompanied by a large push made by the international institutions and lenders, mainly the World Bank and the IMF, which were the pillars of the Washington Consensus. They both promoted programmes of liberalisation of public services, may they be in the electricity (Politt, 2008), telecommunication or water sector.

A "New Minimalist Approach to Private Sector Development" was then developed (Altenburg and Drachenfels, 2006), grounded on the assumption that, with the exception of

[11] Nestor Kirchner is the president who supported the renegotiations that led to the termination of the major contracts with multinational water companies

very few purely public goods, services should be provided on commercial terms. In a way, such a programme of neoliberalism can be characterised as a new mode of social and ecological regulation, politically constructed as well as hegemonic (Peck and Tickell, 1992; Prudham, 2004). This was often criticised as a form of "new green imperialism" (Heynen et al., 2007), or "market environmentalism" (Bakker, 2004), of which the World Bank was the vanguard.

Following the conclusions of the Buky report in 1992, the World Bank changed its lending strategy. The report underlined failures in four main objectives of the Bank, namely institution building, financial viability, provision of a minimum supply to the poor and sustainability of the projects awarded with loans. Concurrently with the Dublin Conference in 1992, the Bank underwent a paradigm shift in 1993, opting for decentralisation and privatisation as new flagships and full-cost recovery as a motto. The priority consequently moved from access and equity towards economic efficiency and commercialisation (Bakker, 2010). In other words, the figure of the user/citizen has been progressively replaced by the one of customer (Pflieger, 2002), in a new ethic of water use where economic equity prevails over social equity (Lacey, 2004).

Yet, however important these changes in the water industry were, one has to note that water was actually not a priority in low income countries for decades. Schouten and Schwartz (2006) described the financial efforts of the World Bank for water issues as minimalist compared to the sums of money spent on electricity and telecommunications, though costly big works are required for water. According to Gray (2001), $36 billion was invested worldwide by the Bank in the water sector between 1990 and 2000, but $197 billion in electricity and $292 billion in telecommunications, and not even to those who needed it the most.

However, this international push paved the way to the opening of the Argentinian water sector to multinational companies (Castro, 2005), in a hybrid system combining the French model of concession and the English model of an external regulatory body (de Gouvello, 2001; Botton et al., 2011)[12]. The contract was designed on the basis of the "dollarization" of the economy with the indexation of the Argentinian peso to the American dollar, following the law of convertibility voted in 1991. This monetary compromise exploded with the crisis of 2001-2002 and the devaluation of the peso definitely damaged the economic equilibrium of the contracts signed by Suez in Buenos Aires and Santa Fe.

3/ The crisis of 2001 and the end of the Consensus

The economic crisis of 2001 is the culminating point of a four-year long depression, accompanied by the perception of a large political corruption and incompetence (North and Huber, 2004). The backlash engendered massive social effects, as 52% of the population lived in poverty in 2002 and up to 22% were reported as living in severe poverty (North and Huber, 2004; Akhmouch, 2009). In 2006, 19.2% of households were still living below the poverty line, and 30% of the Metropolitan Area of Buenos Aires (The *Conurbano*) is only made up of informal settlements, creating a situation of poverty hardly compatible with the development of a commercial service as it was designed (Almansi et al, 2010).

According to the contracts awarded to Aguas Argentinas in Buenos Aires and Aguas Provinciales de Santa Fe in Santa Fe, only tariffs should cover operative costs (OPEX), taxation, part of the investments (CAPEX) and capital earnings, with a system of price-cap

[12] It is noteworthy to remember that there is no authority of regulation in France, the contract being balanced between a company facing directly a municipal authority and consumers (Petitet, 2010).

(Del Castillo Laborde, 2005). With the "dollarization" of the economy, the water companies contracted debts in dollars and recovered bills in dollar-equivalents. This could not be maintained after the devaluation of 2002, and put Aguas Provinciales de Santa Fe in a state of patrimonial insolvency (interview with manager from ENRESS, June 2011) and severely damaged the financial capacities of Aguas Argentinas. With such a tariff structure and economic equilibrium, it became quite impossible to finance the network extension only with the rates charged after 2001 (Del Castillo Laborde, 2005) and Aguas Argentinas refused to become simply operator of the network.

> *"At the end of the contract, the government proposed to change the modus operandi, making us only operator of the concession, while the State would take care of the expansion work. We refused, as we would have lost the freedom in the investment management, and the choice of the areas to invest in. The government required trusteeship for everything, which we refused."* (former director of Aguas Argentinas)

In 2003, the government launched a large campaign of renegotiations of more than 60 contracts in various sectors, piloted by an *ad hoc* institution, UNIREN. This resulted in political tensions and eventually the termination of the contract with Aguas Provinciales de Santa Fe in 2005 and with Aguas Argentinas in 2006, replaced respectively by Aguas Santafesinas and AySA.

Both of the new companies developed a new approach to water management, aligned with the conception of water as a fundamental right or a human right[13] and based on the motto "agua

[13] See Darrow (2005) for an analysis on the interest of a human-rights based approach of development, or reversely Bluemel (2004) for a sharp criticism of such a paradigm in the water sector

para todos" (water for all). They contrast this new model of management to what they depict from the PSP experience as making water a pure commodity. However, opposing water as a commodity and water as human right is misleading, as it compares a property rights regime and a legal category applicable to individuals (Bakker, 2010). But this new approach also reveals a political desire to turn the page of the multinational era and of the Washington Consensus. Some analysts interpreted this failure of the Washington Consensus not as a simple rejection of markets, but as a problem of undemocratic decision making, marked by a lack of citizen participation and suspicions of corruption (Castro, 2008; Guasch, 2004; Guasch and Straub, 2008). Though corruption was certainly not invented by multinational water companies, this was a common practice to win under-bided contracts (Budds and McGranahan, 2003).

As a former employee of Aguas Provinciales de Santa Fe and currently employee of Aguas Santafesinas narrated it, "*with the syndicate, as it often happens in this kind of cases, we bought their approval in a way. When we started to make surveys and were about to sign the contract, representatives of Lyonnaise had taken contacts and we paid what was required to win the bid. This is a common practice. (…)At the time of Lyonnaise, one should not be naïve, there was some corruption, but less than during the time of DIPOS*[14]*, and at least we could work correctly*."

Beyond the allegations of insufficient public participation or corruption, the Washington Consensus also failed to succeed in Argentina, for the vision it defended was based on contestable and highly contested preconceptions.

[14] Name of the provincial company operating between 1980 and 1995 in Santa Fe, after OSN had been divided in regional antennas.

C/ A vision based on contestable preconceptions

The experience of the private sector participation in the water utilities relied on the idea, supported by international institutions, of a state and a governance failure (Bakker, 2010). Over time, it faced its own contradictions, as the consensus that constituted its basis was pervaded by three main preconceptions contested by the reality.

1/ The "explosion of the full-cost recovery paradigm"

One of the cornerstones of the policy agenda advocated by the World Bank consisted in a twofold price measure: applying the true price and the principles of full-cost pricing, which means passing all the costs of maintenance and expansion of the network to the final user. Yet, drinking water is often considered an uncooperative commodity (Bakker, 2003; Swyngedouw, 2009): bulky, non-substitutable, heavy, socially and economically contested; it defies easy commercialisation and its treatment as a pure commodity (Bakker, 2010).

Though it contradicts what was a common practice in developed European countries up to the late 1970s (Pezon, 2002), this strategy promoted a full depoliticisation of operational management, cancellation of general subsidies, replacement by full-cost recovery policies, comparative competition, transparent procurement of goods and services and independent regulation (Rouse, 2009). In this view, the transfer to the private sector would supposedly imply that the political aspects would be left to the regulator (Ayuero, 1998). But experience has proven that a significant level of politicisation has remained ever since: the rules of market have not erased the determinants of the political and social realms (Schouten and Schwartz, 2006).

As noted by Barraqué (1995), this type of policy is then unlikely to install the necessary conditions to achieve a universal supply of water in the South, as an important part of the users cannot afford to pay the connexion fees due to financial reasons: in1994, connexion fees to the water network cost US$ 450, and US$ 670 for the connexion to the sewerage system, which is far more than the middle salary in Argentina at that time (Azpiazu, 2002 and 2010).

The argument is often made that poor people frequently pay high prices for water and would be willing to pay to get access to a safer and more regular connexion. However, Budds and McGranahan (2003) have demonstrated that such reasoning is partly flawed for three reasons:

- these high prices are either for small quantities, only for drinking or for short periods, in cases of huge scarcity;
- many informal vendors provide fairly efficient and reliable service in difficult circumstances;
- high water payments can put pressure on already very low incomes.

This confirms, in a way, the lack of potential of adaptation for a full-cost pricing policy in a country affected by such significant social disparities.

This inadequate paradigm was even sharply criticised by the managers of Suez themselves in the comprehensive analysis they led about the failure of the contract (Suez, 2008; Botton et al., 2011): "*Originally, the system planed was to charge the new client for his connexion. This was a unique country in the world with such a type of functioning, whereas elsewhere, a new connexion is financed either by tax for all or by additional charges for the customers already connected. That is the reason why we changed the form of financing of the new connexions after a few years, with the SU and MA charges*[15]*: The paradigm of full-cost recovery literally*

[15] Both were charges to all users to cover the connexion fees of new users (SU: universal supply; MA: environment)

exploded at the contact with reality: we could not ask to the poor to pay for their connexion" (social engineer, Suez, June 2011).

In reality, the contracts designed by the Argentinian State and the World Bank were based on the implicit assumption that all areas were homogenous in population density or socio-economic profiles, which ignored the intensity of poverty issues. There was actually no goal to extend it to low-income areas, which were excluded from the concession area. Clearly, no obligation was specified to extend services to residents in settlements without clear land tenure, though they represented 20% of the Metropolitan Area of Buenos Aires and a large percentage in the outskirts of the main cities in the province of Santa Fe (Almansi et al., 2010; Botton, 2004; Botton et al., 2011). This even hampers easy renegotiations in the case of opportunistic bidding as it occurred in both Buenos Aires and Santa Fe[16].In other words, the full-cost pricing was inadequate and lacked adaptation to the Argentinian context. This confirms a form of "institutional determinism" from the World Bank (Dorier-Apprill and Jaglin, 2002), trying to impose a scheme regardless of some key social and political determinants, engendering a deficient appropriation of the model by the local societies

The progressive retreat from lower income consumers and regions operated by multinational water companies reinstall the idea that PSP models as designed by the World Bank were unsuitable for achieving universal provision in developing countries (Bakker, 2010). This is due to large numbers of unconnected households having a low ability to pay (Mehrotra and Delamonica, 2005). For Budds and McGranahan (2003), given the limited scale and the elusive benefits to lower-income groups, there is no justification for the continued promotion of PSP as a means of achieving the international water sanitation targets.

[16] Opportunistic bidding, or diving bidding are characterised by an under-priced proposed tariff aimed at winning a contract that will be renegotiated soon after the end of the bidding process.

None of the developed countries achieved universal coverage without important public subsidies (Castro, 2005; Bakker, 2010), and Argentina was no exception to that rule. However, this model of financing had important effects on the investment strategies.

2/ Debates on the investments achieved by the private sector and the regulator capture

A deficient provision of fresh capital

Promoters of private sector participation advocate a higher capacity to invest from the private sector. Yet, this assumption has been largely contradicted by facts: some experts of the water and sanitation sector deplore largely insufficient investments from the private water companies, mainly in the sector of sanitation services (Maceira, 2007, Cirelli, 2008). The World Bank recognised in 2003 that private sector finance had provided only 10% of necessary capital, even experiencing a declining trend (Winpenny, 2003).

The economic deconstruction of the PPP model by Azpiazu and Pesce proved that fresh private resources were in fact negligible in the contracts of our two cases. In Buenos Aires, fresh capital accounted only for 2.6% of total funding between 1993 and 2001. This was the direct consequence of the paradigm of strict full-cost recovery with all costs passed onto the users, opposed to the practice of large investments with fresh capital carried out before setting tariffs to cover the expenses retrospectively and ensure a decent rate of return (Gutierrez, 2001; Budds and McGranahan, 2003; Azpiazu and Schorr, 2004 and 2006; Pesce, 2007; Castro, 2008).

The accusation of rent-seeking

The constrained investment policy paved the way to the accusation of rent-seeking against the multinational water companies, facilitated by the institutional capture of the regulator (Azpiazu, 2003; Baer and Montes-Rojas, 2008). Concessionaires were thus allowed to apply tariff indexation, though it was breaching the law on convertibility. Subsequently, the consumer surplus was often undermined by multiple tariff adjustments (Baer and Montes-Rojas, 2008). At a larger scale, this has been criticised internally by the World Bank. Private water supply contracts generate gains in labour productivity by having fewer employees per connexion, yet this is not accompanied by lower prices or higher investment (Gassner et al., 2009). This results in the absence of profit for the consumers, compared to the potential margins generated by the water companies.

A whole debate was raised on the profitability of the concessions, with contradictory results and controversies between the microeconomic analysis carried out by Azpiazu (2001; 2003; 2010) and the comparative statistical survey achieved by Sirtaine et al. (2005) at the Latin American level. Whereas Azpiazu (2010) demonstrated that tariff increase were of 88.2% between 1993 and 2002, though price index was only increasing by 7.2%, with a yearly 20% rate of return, Sirtaine et al. (2005) came to an opposite conclusion, insisting on the low level of profitability of water companies in Latin America, lower than European or Northern American standards. This reflects both the fact that statistics are a social and political construction and the intensity of controversies on the assessment of the performances of these emblematic water companies.

3/ The alleged superior efficiency of the private sector over the public one

The third pillar of the Washington Consensus was formulated in terms of an alleged superior efficiency of the private sector, making it desirable.

The lack of empirical evidence of such a controversial assumption has been long debated by academics and politicians. Though the IMF has recently acknowledged one should not take for granted the superior efficiency of a PPP over public investment (Bakker, 2010), claimants of one side or the other still try to prove the superiority of the former or the latter.

According to Comander and Killick (1988), economic theory fails to provide any conclusive reason for favouring the private sector over a public enterprise, which echoes in several case studies. Feigenbaum and Teeples (1984) established that parameters were identical for government and private operation. Fox and Hofler (1986) came to the conclusion that there was no statistical difference in efficiency for public and private firms. As Estache and Rossi conclude (2002)[17], there is no convincing evidence of a systematic superiority of one form of ownership over another.

This largely reveals the lack of robustness of the concept of efficiency, confirming the work made by Lefeber and Vietorisz (2007) and Tverdek (2004). They deconstructed efficiency calculations to demonstrate that these operations were based upon assumptions of what constitutes a "good society" and were, by so doing, highly subjective.

[17] Their survey was estimating stochastic cost frontier using data from a sample of 50 water companies in 29 countries, and testing the following criteria : data on operational costs, annual salary, number of clients, daily production, number of connections, population density in the area served, percentage of water from surface sources, number of hours of water availability per day, percentage of metered connections

D/ Are we not "missing the point"?

1/ A highly polarised and purely ideological debate

These controversies on efficiency illustrate a major trend in the literature on drinking water supply and management: its irreducible polarisation into two seemingly impenetrable strongholds.

As a reaction to the ideas advocated by the actors of the Washington consensus, an important part of the literature has adopted a line defending the public sector almost *per se*, cumulating case studies of examples of good water management by public utilities (Hall, 2001; Hall and Lobina, 2004 and 2006). As Swyngedouw (2009) points it out, this could lead to some contradictions between the advocacy of principles relating to the public sector and the promotion of examples of highly corporatized water companies, following the same principles as the private companies that were criticised (Baietti et al., 2006).

On the other side of the panorama, some authors defend a vision embedded in purely economic perspectives, focused mainly on the nature of water as a commodity and on the value of water (Briscoe, 1998). The attention is then placed on notions like use costs, which combine historical fixed costs to build the infrastructure; replacement costs to develop the maintenance; and marginal costs, aimed at demonstrating the necessity of transforming water as a pure commodity (Braadbaart et al., 1997; Whittington, 2003; Schwartz, 2008).

This conflict can be illustrated by an example given by Bond (2004). He opposes a political line embodied by *The Economist*, explaining in 2003 that water is tremendously under-priced,

and, on the other side, South-African President Mbeki[18] talking about a "global apartheid" for water due to its lack of affordability for the poorest.

But this debate about public or private ownership, because of its extreme polarisation, seems to be vain in many aspects. As Swyngedouw (2009) underlines it, the issue of water as a commodity is not completely relevant. Water is a commodity, or at least has got an economic value, though not exclusively economic (Bakker, 2003): delivering the right volume of water of the right quality to the right place requires major investments of capital and labour. The accurate question rather concerns the institution or person who will pay for that part of what he calls the "hydro-social circulation process" (Swyngedouw, 2009). Besides, the question that is often not asked is also whether the effects of new values such as efficiency and the customer have transformed if not damaged the traditional values of the public service, which are continuity, equity and probity (Kernaghan, 2000; Politt and Bouckaert, 2004).

2/ Problems of biased data to assess PPP

The model of PPP offered a solution, but surveys to assess their performance have been characterised by their partial nature and their unfair bias, affected by a lack of homogenous data (Jaglin and Zérah, 2010, Bakker, 2010). So far, no empirical study has proven the capacity of the private sector to achieve a threefold essential challenge: investing, improving the water management and extending the network to the most precarious districts at the same time (Prasad, 2006; Trémolet, 2006).

To date, the only consistent study on PPP in major water contracts worldwide has been carried out by Marin (2009). He reviewed 65 contracts, using four indicators: extension,

[18] at the Johannesburg World Summit in 2002

service quality, operational efficiency and tariff evolution. Only a very limited number of utilities were actually obtaining two positive criteria out of these four. Marin's conclusions refuse the simple explanation of governance failure. For him, defaults of the public service concessions in the North are above all amplified in the South. This encompasses:

- insufficient contractual distribution of risks;
- asymmetry of information, focusing only on economic regulation and not on consumers' defence;
- weak economic equilibrium, with tariff increases politically indefensible;
- and weaknesses in supplying the poorest categories.

In other words, he joins Jaglin and Zarah's (2010) argument according to which the explanation of failure only by governance or institutional deficit, and lack of coordination are trying to depoliticise a topic that is fundamentally political and politicised. Such a polarisation on governance failure would result in a too binary interpretation between the actors carrying out the institutional transformations and those who contest these transformations. (Coing, 2010).

As Budds and McGranahan (2003) provocatively ask it: is this debate on private or public management not "missing the point"? As they express it, the debate on public vs. private diverts the attention from the important roles played by civil society organisations in the sanitation process, as public utilities, may they be operated by public or private companies, are supposed to pay attention to extend beyond efficiency and effectiveness: they also have social objectives (Hodge, 2000; Lane, 1994).

Water and sanitation networks are not purely public goods, but they can provide important public benefits, including health. One of the problems is that public benefits of water

provision only really become significant where the private benefits are insufficient to finance adequate provision (Budds and McGranahan, 2003).

Thus the relevant question concerns the difficulty for contractors and managers to find sustainable and acceptable solutions to get universal coverage. In other words, what is the ability of the actors to build some public interest and therefore to get universal coverage at an affordable price, making water a merit good? Jaglin and Zérah (2010) have already emphasised the current vacancy of the post-Washington consensus. The temptation of designing models still exists, however, with the ideal of municipalisation of water networks. Yet, such a model could face tremendous problems of financing and questions the continuity with norms set by the private sector.

The following chapters will therefore explore both these continuities with the "private interlude" (de Gouvello et al., 2010) [chapter 4], as institutional changes do not determine automatically mutations of social practices (Melé, 2002), and the first fruits of a new model of public water management [chapter 5].

Chapter 4

A contrasted legacy of the private sector

Unlike a large part of the official discourse asserting that the new public water company represents a complete break with the former private management[19], the forms of continuity that occurred between these two phases ought to be stressed. Just as Aguas Argentinas and Aguas Provinciales de Santa Fe capitalised in some aspects on the former experience of OSN and DIPOS, similarly AySA and Aguas Santafesinas did not start from scratch and were also influenced by the private sector experience.

A/ A technological leap

One of the major contributions by the private sector relates to the technological leap it represented. In Santa Fe as well as in Buenos Aires, the opening to PSP corresponded to a major modernisation.

This concerned three aspects that were improved conjointly: water quality, the development of a strong commercial sector and the installation of a new working discipline.

1/ Water quality

Amongst others, the legacy of Lyonnaise des Eaux was the laboratory they built in the Metropolitan Area of Buenos Aires to control the quality of water. This was the biggest and technologically most advanced laboratory of South America at that time (interview with ERAS, July 2011). Such a transformation was accompanied by significant changes in

[19] One of the promotional handbook distributed by AySA only dedicates five lines to the private sector era out of fifty pages, without even mentioning the name of Aguas Argentinas.

procedures, with the development of automation in the water treatment plant in Rosario, as well as in the San Martin treatment plant in Buenos Aires[20].

Photo 1: San Martin water treatment plant
Upper part: 1993, a tree in the middle of the decantation basin. Lower part: in 2003
Source: Aguas Argentinas

> *"During the time of OSN, they did not have good computers, and the technological leap was incredible with the capacity of Suez. The problem is: how much this technological leap cost us?"* (interview with ERAS, July 2011)

The tremendous shift was also related to an actualisation of the land register and to the digitalisation of the network, allowing preventive leakage management, which was actually almost inexistent beforehand.

[20] One could even see a tree growing in the middle of one of the basins of the San Martin treatment plant in the early 1990s, illustrating a lack of maintenance (interview with former vice-CEO of Aguas Argentinas)

"Till 1996, our task was to adjust the masterplan. One of the key problems of the concession was indeed the lack of information on the state of the network at the start of the contract. But this was quite understandable, given the state of the technology at the time of OSN. We only had 2 PCs for 40 engineers: of course there was no information, no measurement from the field; what we did with OSN was only technical and theoretical work. We learned everything with Safege, with models, such as Picolo. We discovered a lot of instruments and tools, to be able to digitalise the network. We could have a rationalised approach of the network, whereas water was going out all over the place with OSN, without us even knowing it." (former manager of Aguas Argentinas and AySA)

This transition was operated with an empowerment of the employees that remains today: water quality standards are fully respected, often beyond WHO recommendations.

2/ Development of a strong commercial sector

Such an operative modernisation was accompanied by the creation of a strong consumers' service.

Automated systems to deal with complaints started to be implemented. A vast section of both Aguas Provinciales de Santa Fe and Aguas Argentinas was organised around commercial perspectives that still prevail in the current management.

> *"With Suez, they lifted us up in a new division. Our goal: to go even higher, and never to level down. Currently, we have very good performances in terms of consumers' service: you only have to wait 15s on average to get someone if you have a complaint. These are results similar to OFWAT. Interventions are operated within 24 hours,*

which did not exist at the time of OSN, because the specification of services did not exist." (interview with a director of AySA, July 2011)

This correlates the idea that one of the transformation by the PSP was a fairly consumer-based approach (Schneier-Madanès, 2003), which was never completely questioned afterwards.

3/ A new working discipline

In order to achieve these objectives, private water companies put into place drastic conditions to impose working discipline. This was carried out through a large programme of voluntary retirement and new staff controls. The company started with 7,000 employees and only half of them remained after the implementation of the retirement scheme,

"*but they were authentically full-time. Under OSN, it was quite common to have two jobs: I had two for instance. As we did not have a budget, it was like a game to design projects, to say we were doing something, but we were rarely working more than 14-17 hours a week. One cannot work correctly under these circumstances. The last year of OSN, we did not even have heating system in the offices and they stopped cleaning the offices and the common parts."* (former manager of Aguas Argentinas)

This new discipline was also part of a programme of empowerment, with a new philosophy of management, which apparently found a positive echo amongst the employees:

"*I felt happy because I had the impression I was part of the change, part of the move. A simple illustration of that is that I did not even know my boss at the DIPOS, whereas I met my boss at APSF every week. They developed our agility, to gain the maximum of operability. We were also motivated to work thanks to bonuses when we complied*

with the objectives. Another important advantage was the perspective to get a career and an evolution within the group, which I used a lot. I was actually the first "expat" from Argentina in the whole group Lyonnaise-Suez." (former manager of Aguas Provinciales de Santa Fe)

Given the high stability of the workforce after the return to the public sector, as above 85% of the current employees were also working in the privatised company, and due to empowerment processes, these standards have been largely maintained, even if this was sometimes criticised by some of the interviewees.

B/ Continuities and legacy from the private sector management

1/ Routinisation of processes

The continuities between the private interlude and the current public management can be seen as a form of inertia within the company (interview with economists from ERAS). Processes implemented during the time of Aguas Argentinas have never been rejected ever since, and are clearly integrated in the current management.

The annual reports are very strict and controlled, and offer an extensive description of the work achieved by the company. With almost 4,000 pages in each and every yearly report, the level of detail is almost overemphasised. For some representatives of the regulatory body, the communication is considered even easier between technicians from the regulation and the water company.

> *"With the private sector, there was a confrontational and tense situation which now does not exist anymore. The technicians of Aguas Argentinas often did not want to deliver the data when it was bad, because they were afraid of being sacked if the data was divulged. Now, from technicians to technicians, the relationship is better between the regulator and the company, though we have less power to orientate the company's evolution. Now, the situation is appeased."* (economists, ERAS)

In other words, the routinisation of processes resulted in a constructive though not entirely easy relationship between the regulator and the regulated company. Two processes were theoretically to be achieved during the time of concession: regulatory accounts, to get a harmonised tool, which may be used at the national and possibly international scales, and benchmarking. Though the former has been developed in depth, benchmarking is still a pending issue. However limited it may be, suffering from an understaffed section amongst the regulator and from a traditional low willingness from companies to divulgate strategic data, one can see some of the effects of benchmarking within companies management. It translates, therefore, in a push to stay in the average and not to level down (directors of Aguas Santafesinas). Nonetheless, such a benchmarking has been often criticised for the lack of clear objectives, and remains to be further developed to be effective.

2/ The emergence of the figure of the consumer

Amongst management issues that have been routinised since the private interlude, beyond the technological contributions, is the emergence of the figure of the consumer one of the main legacies of this era. This follows a threefold scheme.

Firstly, Suez did install a commercial service that is still in place, with call centres to deal with complaints or places dedicated to external marketing like the Casa del Agua (House of Water) in Rosario. These elements contribute to consolidate a consumer-based approach of the service that is still topical now.

Similarly, the private experience contributed to a massive cultural change, installing a new culture of payment. The level of bill collection increased tremendously during the time of the PSP, as this was balanced by the threat of a disconnection in the case of a default of payment. This threat effectively changed behaviour and, even after the crisis, concerned 1,000 cases a month only in the city of Rosario in 2003.

In the province of Santa Fe, at the time of DIPOS, the level of bill collection was approximately 50%. It increased up to 80% with APSF and is now around 73-75%. This varies a lot in the province. In Reconquista, the levels are about 92%; in Rosario, the levels of bill collection approximates 72-73%, but it reaches only 50% in Villa Gobernador Galvez, in an area much poorer and socially much more difficult. Similar figures can be found in Buenos Aires, though with a higher level of bill collection.

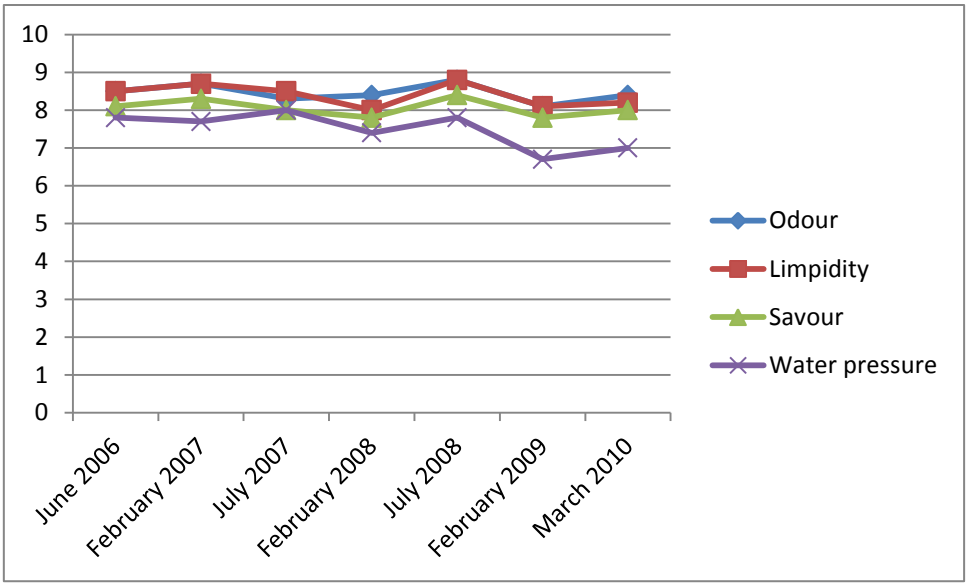
Although the policy of disconnection has been abandoned in the new public model, as it is seen as a violation of the human right to water, the companies are claiming to defend, the culture of payment has been integrated and levels of bill collection remain fairly high[21].

[21] "*We were afraid to face a come back to the time of DIPOS and its problems, but this is not the case. Besides, people sometimes come and pay, telling us they are paying before the water is cut, though we do not operate any disconnection anymore. It really demonstrates how it has been integrated in the behaviour*." (commercial manager, Aguas Santafesinas)

Thirdly, the integration of the figure of the consumer was also accompanied by the new practices of satisfaction enquiries. Though the results were not publicly available in Buenos Aires, surveys undertaken by external companies were provided in the province of Santa Fe (see tables 2 and 3 and graph 1). Four indicators are tested: odour, savour, limpidity and pressure of water. The results provide some difficulties related to water pressure issues that will be discussed in chapter 5, but a rather high general level of satisfaction. Commercial satisfaction enquiries, which were abandoned before the end of the concession in 2004, are also starting again this year, proving that the consumer became the cornerstone of the water management. Similar studies carried out by the ENRESS, the regulator, demonstrated that service appreciation was ranked higher than for power companies, but below gas companies, which are traditionally skyrocketing results of satisfaction due to the impossibility to have illegal connections (interview with director of ENRESS)

Year	Satisfaction index
June 2006	8,2
February 2007	8,3
July 2007	8,3
February 2008	7,9
July 2008	8,5
February 2009	7,7
March 2010	7,9

Table 2: Satisfaction Indices – Aguas Santafesinas
Source: Aguas Santafesinas



Graph 1: Four indicators of satisfaction by consumers in the Province of Santa Fe
Source: Aguas Santafesinas

	Cañada de Gomez	Capitan Bermudez	Casilda	Esperanza	Firmat	Funes	Galvez	Granadero De Balgorria	Rafaela	Reconquista	Rosario	Rufino	San Lorenzo	Santa Fe	Villa Gobernador Galvez
Odour	5	8	10	7	8	7	9	6	9	9	9	7	6	8	8
Limpidity	9	7	9	9	10	7	10	7	10	9	9	9	6	8	7
Savour	2	7	8	8	8	7	9	6	9	9	9	7	6	8	8
Water pressure	9	7	10	9	10	7	10	3	7	9	8	8	6	8	7

Table 3: Indicators of consumers' satisfaction at the municipal scale
Source: Aguas Santafesinas

These various continuities with the experience of the private sector are consistent with the conclusions of de Gouvello et al. (2010), according to whom this transition through the private company somewhat allowed to change the focus on the essential issues of water service. In other words, PSP has engendered a managerial turn that has not been altered ever since.

However, these continuities should not hide some of the failures and inefficiencies of the private concessions, which are mainly related to a turn that occurred before the 2001 crisis, namely the shift from Lyonnaise des Eaux to Suez after 1997.

C/ From Lyonnaise to Suez: installation of rent-seeking processes and problems of contractual compliance

Apart from a fascinating monograph by Lorrain (2007), very little attention has been paid to this fundamental change. This transformation was however perceived, and unanimously quite negatively considered by all the actors that underwent the transition. This phase can be characterised as the transition from the logic of engineering and a tradition of public service to a corporate rationality almost only based on pure economic criteria.

Suez is originally a group of financiers, owning shares in Belgian gas and power companies. Water is then compared with electricity and gas, where rates of return are much higher. In 2000, 1€ invested in the energy sector generated 1.02€ of turnover, unlike only 0.55€ in the water sector. Due to the profit-taking orientation of Suez, this accounts for a large wave of disinvestment (Lorrain, 2007).

At the scale of the company, in Aguas Santafesinas, such a transformation was deplored, as it resulted in short term visions and a lack of flexibility to achieve long-term investments.

> "*Before, we had free hands to buy the tools and material we needed, and investments were considered something normal with Lyonnaise. Everything became more difficult with Suez, who refused to invest, and was making any decision bureaucratic and difficult*".

"Lyonnaise was a company of engineers with a vocation of public service. They were not moved only by money. Suez was really different, they were much more pragmatic. They were only focused on the economic balance, and decided to close everything that was not profitable. That accounts for the withdrawal of the whole continent"

Numerous similar stories can be given, due to the resentment felt by the employees towards this evolution. Hydraulic engineers were put aside to install financial or marketing managers (interviews with former employees of Aguas Provinciales de Santa Fe, June 2011).

At the scale of the concession, credits for material to do preventive leakage management such as leak noise correlators, which were stopped and considered as useless expenses. The whole strategy of expansion of the company was consequently affected by such an approach, as no expansion occurred after 1999. Any further investment was considered as having an insufficient rate of return for a too high risk. This tremendous transformation accounts partly for the insufficient compliance with the contractual objectives of the concession, which started before the 2001 crisis and was only amplified by it (Pesce, 2007, Muñoz, 2004). At a larger scale, this strategy resulted in the withdrawal after 2003 of all the projects that were considered unsuitable according to their economic grid and the termination of contracts in Atlanta, Manille, Puerto Rico, La Paz, Hô Chi Minh City and Phnom-Penh (Lorrain, 2007).

Such a profit-based orientation was even contradictory with social and environmental considerations, and demonstrates the limits of an approach purely relying on criteria of economic efficiency. An illustration of this was reported by all the employees of Aguas Provinciales de Santa Fe, epitomising this logic with a programme of implementation of individual meters.

Contractually, Aguas Provinciales had to reach 100% metered connexions within 15 years. In 1997-1998, the group launched a pilot of a large programme of meters' installation. It was

planned to install 25,000 meters in Rosario, starting with a first pilot of 8,500 meters. After two months, the water utility faced enormous social issues: in many households, as the inhabitants did not realise how much they were consuming, the bill suddenly often tripled. This was socially difficult to accept for many of the consumers.

Though this was not theoretically legal, the company decided to come back to the former tariff system for two months, to give users time to take care of their connexions, as most of the consumption came from a lack of maintenance of the house connexion and therefore domestic leakage. Consequently, time was given to allow consumers to adapt to the new regime.

Before this experiment, people were clearly neglecting their connexions, and the tripling of the bill clearly triggered a fairly accurate awareness of their importance. Yet, four months later, when Aguas Provinciales came back to the metered tariff, consumptions had dropped severely, and subsequently the level of billing and profits as well. As a consequence, Aguas Provinciales stopped the programme of installation of meters, because it was viewed as not-profitable enough.

This paved the way to criticism pointing to the rent-seeking attitude of the group, in both Buenos Aires and the province of Santa Fe. Profitability was emphasised as a central priority, if not the only one. Against such reasoning, a new model emerged after the termination of the contracts, fiercely claiming its not-for-profit nature, which needs to be critically assessed (chapters 5 and 6).

Chapter 5

An incomplete tapestry:

the new public management

In 2005 and 2007 respectively, the province of Santa Fe and the national government decided to re-provincialise and re-nationalise of the water utilities. Even if official documents promote the continuity with the time of OSN in Buenos Aires (AySA 2009), this new scheme did not correspond, in both cases, to a simple reactivation of the former public management and consequently requires some attention. Though these two models of public management offer numerous similarities, we will analyse them separately, for the sake of clarity.

A/ The Aguas Santafesinas story: the province strikes back

1/ Institutional and normative changes: the end of the British model of regulation and the temptation of municipalisation

The transition that occurred in the province of Santa Fe was clearly chaotic, and water management has only come back to some stability in the past two years. The end of the concession was marked by a highly muddled situation: the directors left the headquarters, and the company remained without any CEO for months. Another source of instability came in 2007, after the Socialist Party won the provincial elections against the Peronist Party, followed by another six months vacancy at the head of the company. Within the company, this led to conflicts with the union, and many employees took advantage of it to settle scores and obtain the dismissal of some colleagues, creating a fairly deleterious working atmosphere (interviews with managers and construction managers). Similarly, the regulator suffered from a lack of leadership during more than two years, creating conditions for the deterioration of capacity of control. A new director has been nominated about two years ago, who was the leader of a consumers' association that was in the vanguard of the anti-Suez campaign.

Although the legal framework regulating the private company is still in place[22], one can observe signs of the elimination of the British model of regulation. This model usually consists in an independent agency controlling the compliance of the regulated company with the contractual objectives and sanctioning deficiencies through a system of fines. In the current system, the ENRESS is still directly related to the provincial power, with directors' nominations approved by the legislative power, but the company is now also under the authority of the provincial government. Therefore, the regulator cannot fine the company, as this would mean fining the province, i. e. its own supervision authority.

The practice of regulation, though it seems quite effective in terms of water quality controls with an independent laboratory owned by the ENRESS, is significantly loose in other aspects. This is mainly due to three reasons:

- The regulator is highly understaffed. With 80 employees to regulate the 15 cities of the concession area and the 347 cooperatives and municipal services in the region, this has decreased compared to the peak in 2001, where 103 employees were regulating the then 15 cities and 220 other local water utilities of the province.
- The regulator also suffers from a lack of public visibility and was even described by some of its managers as "a wonderful library of data quite closed to the public". Such a lack of marketing can be partly explained by the low levels of modernisation of some practices, as the digitalisation of tasks is reduced to a minimum, if at all existent: most of the tasks are still dealt with paper and not computing tools. This deficient modernisation is deplored by the employees, but also reflects the problematic system of financing, relying only on a fixed percentage of the bill, whereas most of the experts considered the tariff as being fairly behind.

[22] Law 11,220

- ENRESS is often skipped by the province. This is highly true regarding the vast programme of aqueducts; as it is operated by the province and not directly by the water utilities. Consequently, the regulator has no detailed information and possibilities of control of this infrastructure.

To act the end of the British model of regulation, a new regulatory framework is in preparation, promoting three ideas:

- the notion of water as fundamental right through the transformation of the company as a non-profit organisation with the legal status of *sociedad del Estado* (Provincial Society)
- municipalisation of services, following the model of Porto Alegre (Mehta et al., 2004)
- and the internalisation of the regulator.

The municipalisation is criticised internally within the company, for this would lead to the end of the territorial solidarity through cross-subsidies that prevailed to get the same price regardless of the location. This would enhance water prices in the least favoured cities such as Villa Gobernador Galvez. Amongst the regulatory body, this project is also perceived negatively, as it would attack its relative autonomy, making it directly dependent on the executive power.

2/ A fragmented approach and a lack of comprehensive planning

This institutional instability had consequences in terms of water management, as it has damaged the creation of a master plan on a long-term perspective (interviews with employees of Aguas Santafesinas and ENRESS, June 2011).

Though water mains in Rosario and Santa Fe are respectively 120 and 80 years old on average, no clear renovation plans have been designed, nor a global strategy of expansion. The development policy has been modelled on the political rhythm, with only 4-year fragmented plans. This will endanger the sustainability of the company, though the political continuity in the last elections in July 2011 opens room for a continuation of projects.

3/ Deficient maintenance and renovation, problems of financial sustainability

The dependence on the political rhythm also affects the maintenance of the whole network. As the director of Aguas Santafesinas states, it is partly due to a huge problem of financial sustainability. Such a situation paved the way for accusations of overstaffing, as the payroll remains the first budgetary expense; though the workforce has slightly increased since the end of PSP, the enhancement remains really limited and with no comparison with the levels reached at the time of DIPOS[23]. Yet, in spite of an official willingness to cover all the operation costs with an adequate tariff, the company reaches only 70% of cost recovery without investing in any further expansion. This critical financial equation is aggravated by the fact that budget proposed by the company to the provincial authority is often reduced by 40%.

Unlike what happened in Buenos Aires, tariff increases did occur, but the increase of fixed costs cumulated with a skyrocketing inflation of 20% per year created an unsustainable situation where the cost of production (1.20 pesos/m3) is now superior to the selling price for consumers (0.86 pesos/m3).

[23] The DIPOS employed 2,000 people, APSF reduced it to less than a 1,000, and now 1,050 employees are working for Aguas Santafesinas.

This hinders any financial sustainability, and consequently lowers the possible maintenance of the system. A concrete consequence of this is the extremely high level of leakage and the very low concern about leakage management, as there is no plan to reduce losses that have amounted to 53% in Rosario (including commercial and physical, the latter being beyond 33% of water production). Consequently, problems of water pressure at the ends of the network, and even in some part of the centres of Rosario or Santa Fe, have sensibly augmented (interview with managers of Aguas Santafesinas and personal observations).

Such a financial design makes the company highly dependent on subsidies provided by the province, where water issues are apparently not the first political priority on the agenda. Yet, one should also emphasise the absence of any financial help from the national government, mainly due to political issues, as the Provincial government is not coming from the same party as the President. This has reactivated a situation that occurred formerly between Rosario and the provincial authorities (Almansi, 2010).

4/ A more participative and socially equitable tariff approach

However, some improvements are noticeable in terms of social participation. To enhance the level of transparency of tariff increases and make it socially more acceptable, a new institutional framework has been designed, and every tariff increase has to be discussed in public hearings (*audiencia public*), where all stakeholders come together to defend their positions. The first one occurred in March 2010.

For the consumers' associations, this has represented an opening in terms of transparency, as it has forced the company to publish its figures and to explain why tariffs needed to be increased. This resulted subsequently in the implementation of rising block tariffs for up to

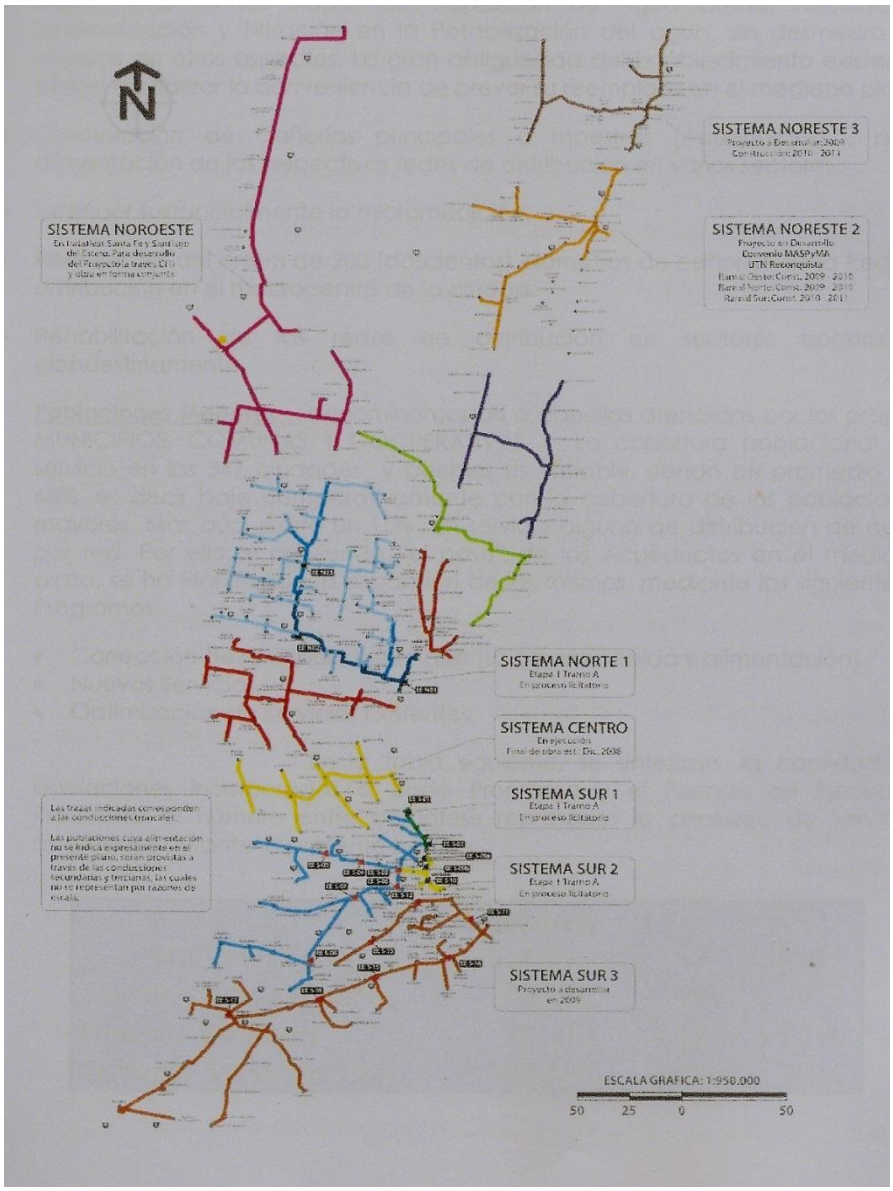
80% for the biggest consumers, abandoning the socially inequitable system designed for the privatised concession only affecting a tariff according to the size of the apartment regardless of the district. However, a tariff increase by 70 to 90% is still required to only cover the operational costs.

This demonstrates that improving governance through involving consumers in decision-making can improve transparency and accountability, but can rarely deal with issues of financing, access and operational management (Garande and Dagg, 2005; Wolff and Hallstein, 2005). The latter has been actually partly captured by the province.

5/ The support of the province: a gigantic plan of extension

The main transformation operated in the new model corresponds to a vast programme of network extension through a series of twelve aqueducts (see map), carried out by the provincial authority and costing US$ 1,500 million[24]. The provincial governments, regardless of the political party, have thus taken the lead of a new approach, more "infrastructure-oriented" than the former privatised group.

[24] This will be financed by a fixed percentage of the province's budget (2.4%), and possibly with external sources like the Fondo Español de Saneamiento and the FOSEM. Projects have also been presented to the World Bank.



Map 4: Santa Fe- the web of aqueducts
Source: province of Santa Fe

Though the design of these aqueducts has raised some political controversies,

> "*now, with the plan of aqueducts, we have a plan to solve supply issues at the scale of the whole province. This will be achieved within 20 years, though this means a long time for the political timescale, which means that this could change. This project of aqueducts is however not new, and it existed 30 years ago, as my father told me about it at that time. The difference is that works have really started with the Peronist and then the Socialist governments about three-four years ago. So now, one of the*

aqueducts has been achieved, and there is a rather clear perspective for the others."

(commercial manager, Aguas Santafesinas)

The huge commitment of the province to achieve these works contrasts with the deficient direct investment within the company. In other words, the trend is to favour water production rather than maintenance, which can be questionable in terms of sustainability.

6/ Social and environmental efficiency: the metering issue

However, such a trend must be balanced by the initiative of some commercial managers in the South of the province regarding preservation of the resource and implementation of meters. The benchmark was Capitan Bermudez, a city supplied at the time of DIPOS with incredible performance figures: 92% of bill collections, few complaints and all metered connexions with fairly lower consumption levels. This has triggered a large programme of installation of meters to both improve the quality of service and preserve the resource (table 4). Though that should result in a reduction in profits in the long-run, some committed commercial managers have defended the social and environmental sustainability of the project, which started last year. Within two years, universal coverage by meters will be reached in the South of the province, whereas the average level of metered connexion barely reaches 20%.

Distrito	Current metered connexions	Meters to be installed till 2012
CAPITAN BERMUDEZ	7818 (100%)	
GRANADERO BAIGORRIA	1232	1944
FUNES	1351	1920
SAN LORENZO	5504	1080
VILLA GDOR GALVEZ	741	4956

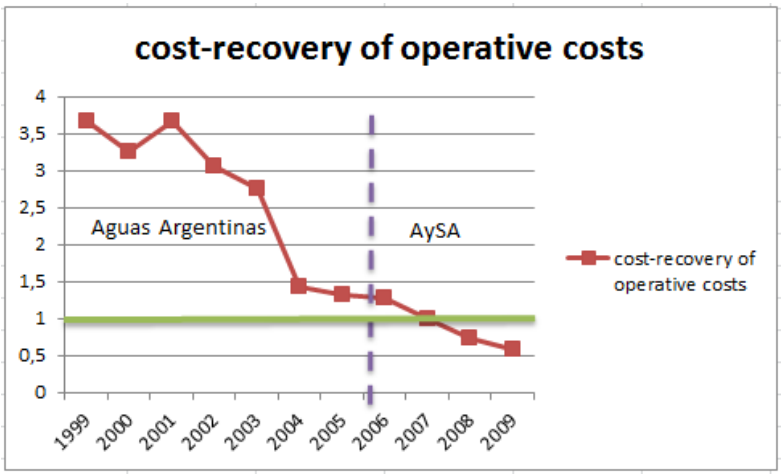
Table 4: Installation of meters in the Gran Rosario
Source: Aguas Santafesinas

This illustrates perfectly social and environmental efficiency rather than economic profitability (Spronk, 2010), and shows the difficulties to unite the three pillars of the sustainable development. This also reflects the fragmentation of the management and the lack of overall planning, isolating too much sensible initiatives that would need to be scaled up.

B/ The AySA story: a revivified state-based approach of water management

1/ The temptation of public corporatized company and the tariff issue

AySA experiences similar issues as Aguas Santafesinas in terms of tariff and low cost recovery (graph 2), as tariffs have been frozen since 2000. This issue should be addressed by the progressive transformation of the utility in a corporatized company in some aspects. In this respect, the company has proposed a 5-year adjustment plan, which would allow covering the operational costs, and will correspond to an almost 300% tariff increase in total (an average slightly than 30% per year).



Graph 2: Cost recovery of operative costs
Source: Molinari, 2009

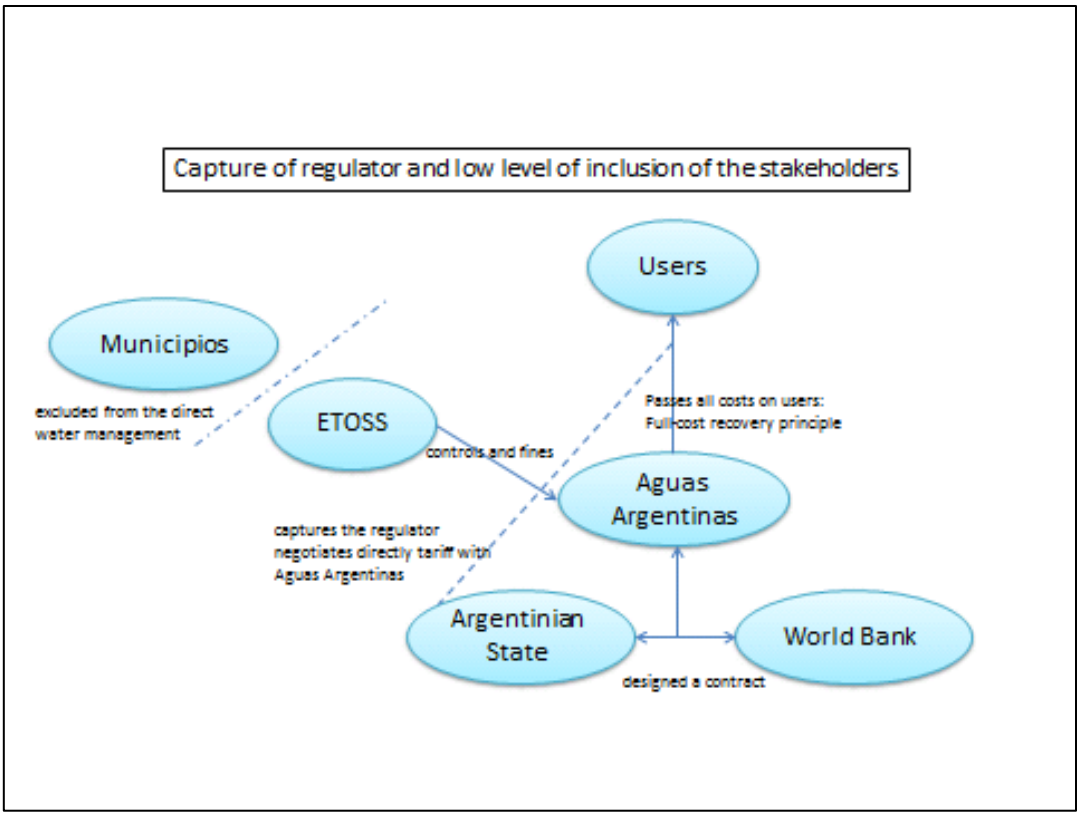
In August 2011, a tariff increase by 300% has already been implemented, but is still covered entirely by public subsidies, on behalf of the human-rights approach. However, the government has already announced the progressive reduction of the subsidies in all sectors (*La Nación*, 13/08/2011), though it is too early to know how and when.

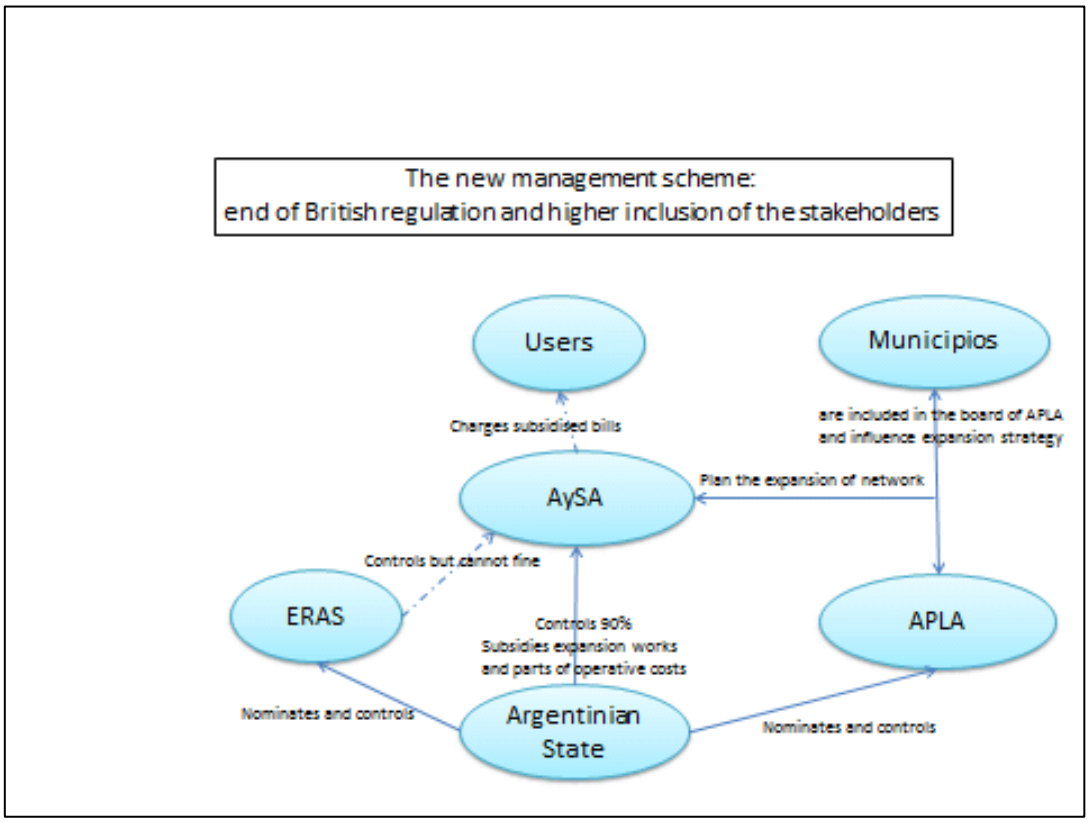
2/ The transformation of regulation: a disempowered regulator

Regulatory issues are fairly similar to those in Santa Fe. The British model has been considered too much associated with the era of privatisation, and there is a political will to change, if not to remove it. Consequently, the regulator cannot fine the company, and is confined to a role of information collection. One of the few means it has to influence the company is therefore to publish data and to stress potential inefficiencies in articles.

However, a twofold change occurred. First, one should note a tremendous decrease in complaints by consumers against the utility. This is both due to the low level of tariff and to the end of the policy of disconnection like in Santa Fe. Yet, this also reflects a fundamental and historical attachment, as well as a cultural one according to many of the stakeholders interviewed, to the public management of key services such as water, as no clear performance enhancement has been carried out.

The other change relates to a greater inclusion of *municipios* in the expansion projects. They are directly included in the board of the planning agency and work in close collaboration with AySA. Under the system designed by the World Bank and the Argentinian government for privatisation excluded the 17 *municipios* outside of Capital City, which was deplored by many representatives of Aguas Argentinas. This reflects a fair improvement of participative management and an inclusion of all stakeholders.


Capture of regulator and low level of inclusion of the stakeholders
Users
Municipios
excluded from the direct water management
ETOSS
controls and fines
Passes all costs on users: Full-cost recovery principle
Aguas Argentinas
captures the regulator negotiates directly tariff with Aguas Argentinas
Argentinian State
World Bank
designed a contract


The new management scheme:
end of British regulation and higher inclusion of the stakeholders
Users
Municipios
Charges subsidised bills
are included in the board of APLA and influence expansion strategy
AySA
Plan the expansion of network
Controls but cannot fine
ERAS
APLA
Controls 90%
Subsidies expansion works and parts of operative costs
Nominates and controls
Argentinian State
Nominates and controls

3/ The major role of government: a tremendous investment in infrastructures

The former regulator ETOSS has actually been split into two entities, ERAS, the disempowered institution in charge of consumers, and the APLA (Planning Agency), which is an hapax legomenon in the Argentinian institutional landscape, and is in charge of the implementation of the master plan of the company designed in 2007 up to 2022. Unlike Santa Fe, a clear and well defined planning infrastructure is in place.

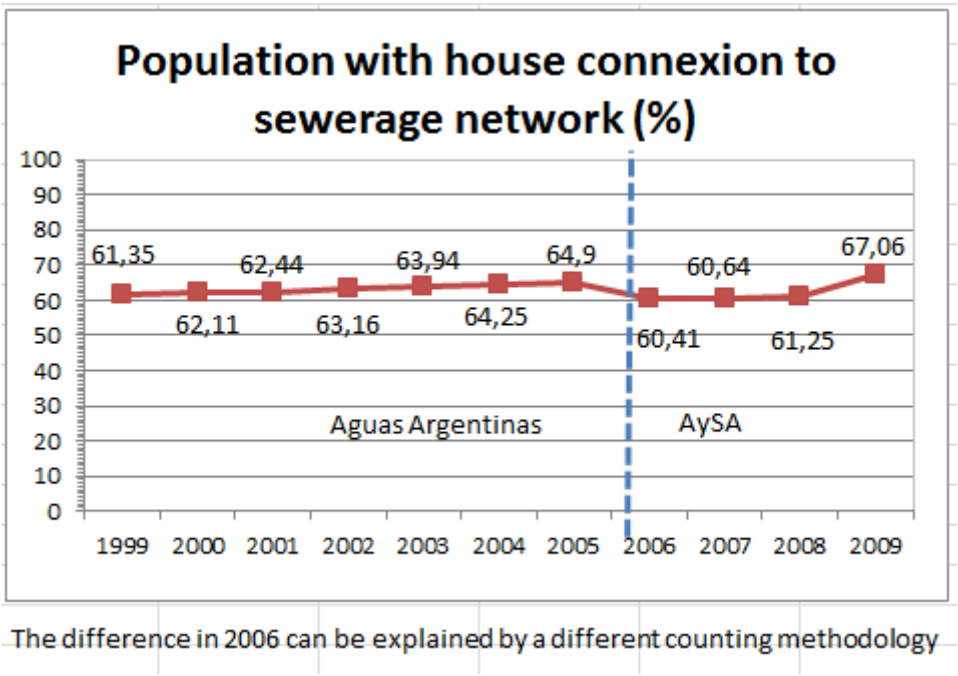
Similarly with the experiences in developed countries, the investments to expand the network and to carry out the construction of prominent infrastructures are processed directly by the State. Enormous investments have been made to enhance the levels of water production and the connexion to sewerage networks (graph 3), though some of the financing sometimes experiences some delay (table 5).

Year	2008		2009		2010		2008 - 2010	
Detail	Planned	Executed	Planned	Executed	Planned	Executed	Planned	Executed
WATER	309	290	935	639	1 839	1 016	3 083	1 945
SEWERAGE	312	129	651	394	1 966	463	2 929	986
TOTAL	**621**	**419**	**1 586**	**1 033**	**3 805**	**1 479**	**6 012**	**2 931**

Amounts are in K$ (pesos) without VAT and in nominal value

Summary of Investments - Plan of Expansion and Improvements

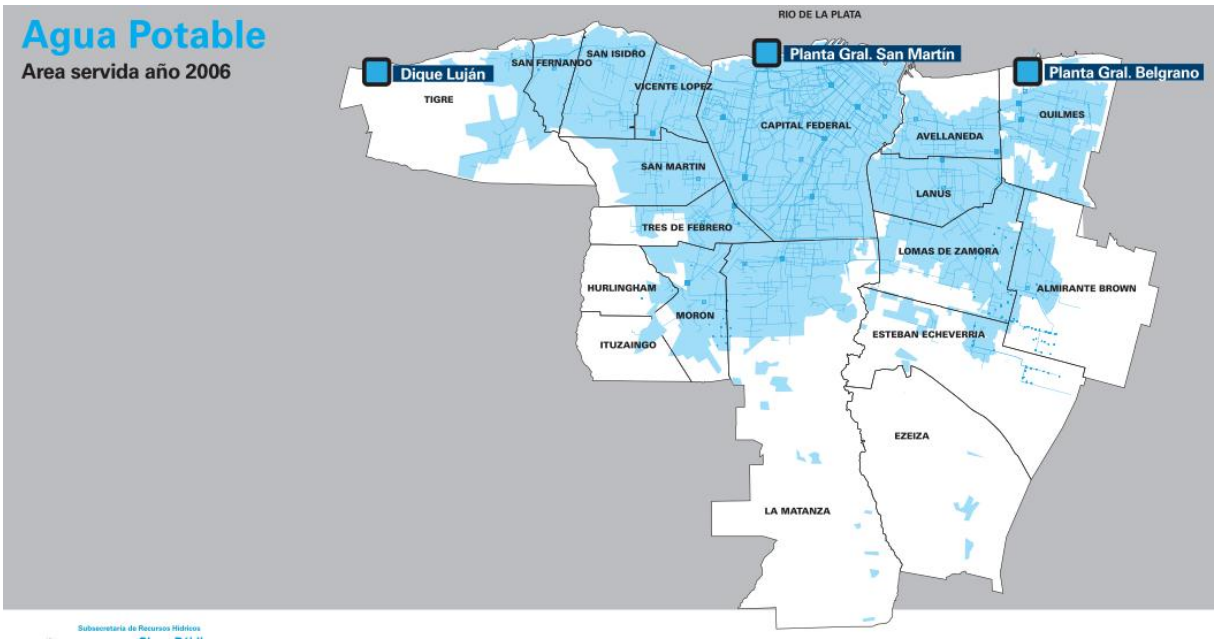
Table 5: Investments – Plan of Expansion and Improvements
Source: data from APLA



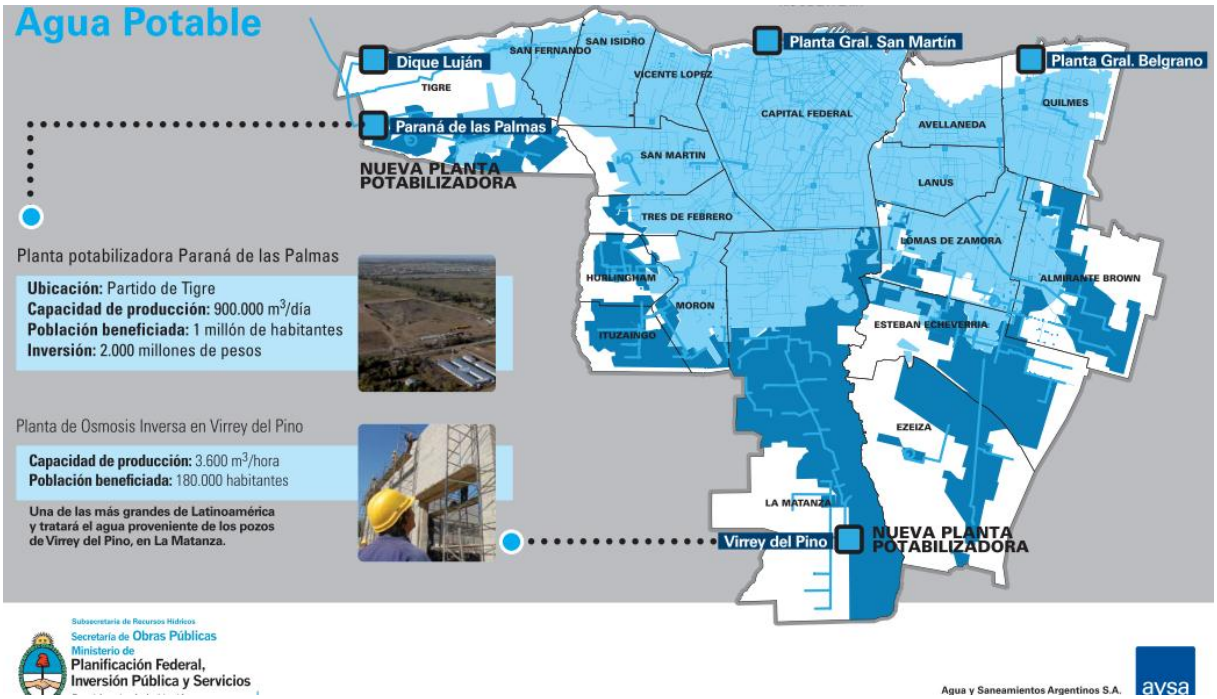
Graph 3: Population with house connexion to sewerage network
Source: Molinari, 2009

A new water treatment plant will be inaugurated in a few months in Parana de las Palmas and the treatment plant General Belgrano will double its capacity. Similarly, wastewater treatment plants are being built in Berazategui and in the socially least favoured watershed of the Riachuelo-Matanza (maps 5 to 8), emphasizing a pro-poor policy targeting universal coverage for health and social reasons.

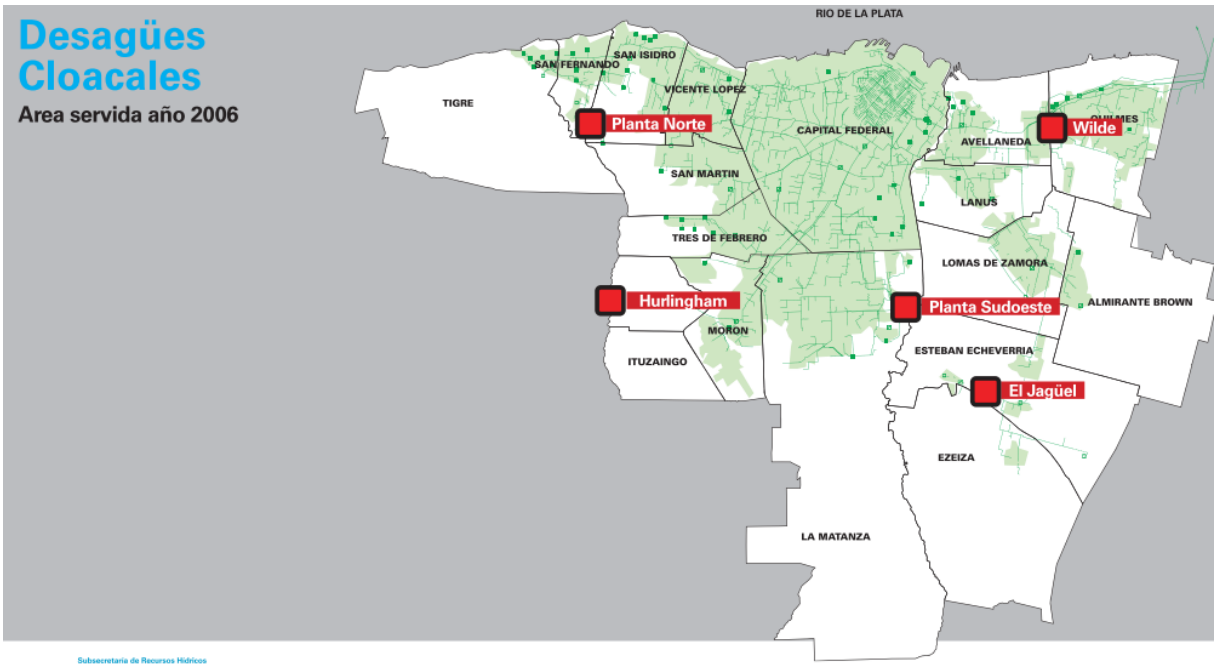
Though some criticism sometimes points out a political logic in this expansion, if not clientelistic, one has to admit that water and sanitation are provided to an immense number of traditionally non-connected users, thereby improving health and general living conditions. This also makes the AySA model original, mixing both logic of corporatisation and missions of social or public interest to reach the universal coverage of water and sewerage networks.



Map 5: Area supplied with official network in 2006
Source: AySA



Map 6: Major Infrastructures and Plan of Expansion AySA 2020
Source: AySA

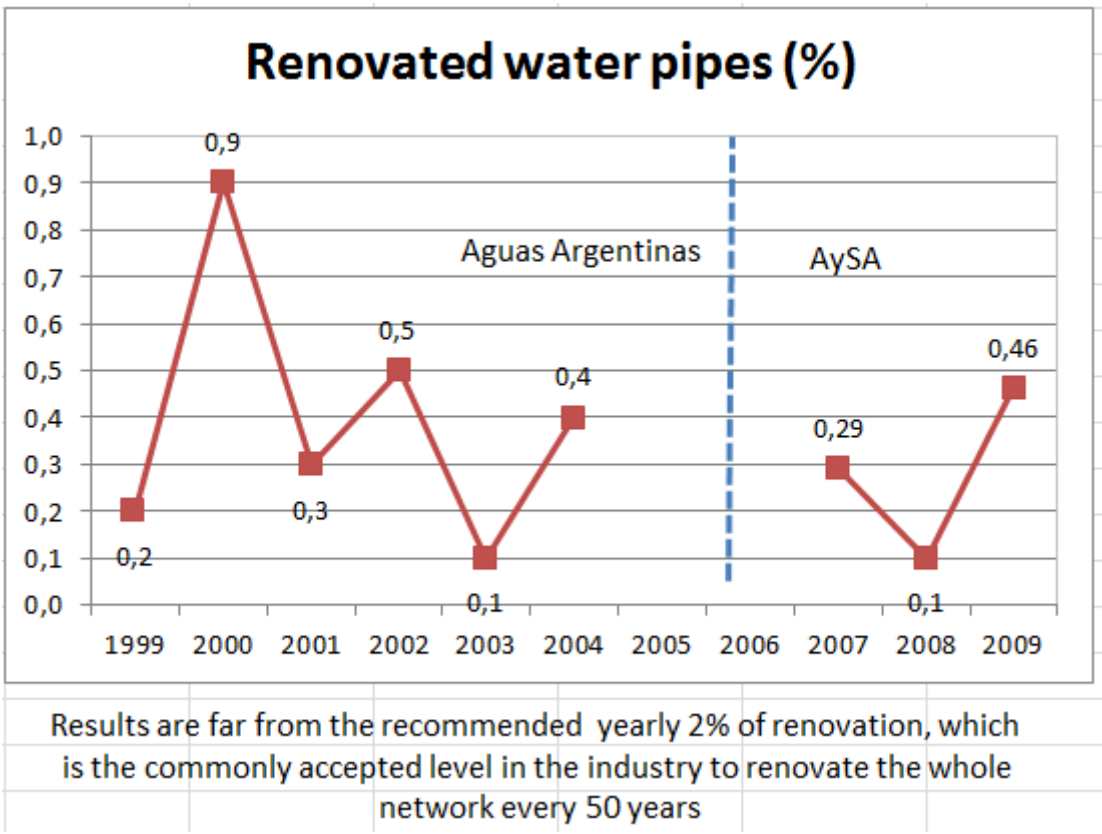


Map 7: Sewerage Networks. Areas supplied in 2006
Source: AySA

Map 8: Extension of sewerage networks. Plan Expansion 2020
Source: AySA

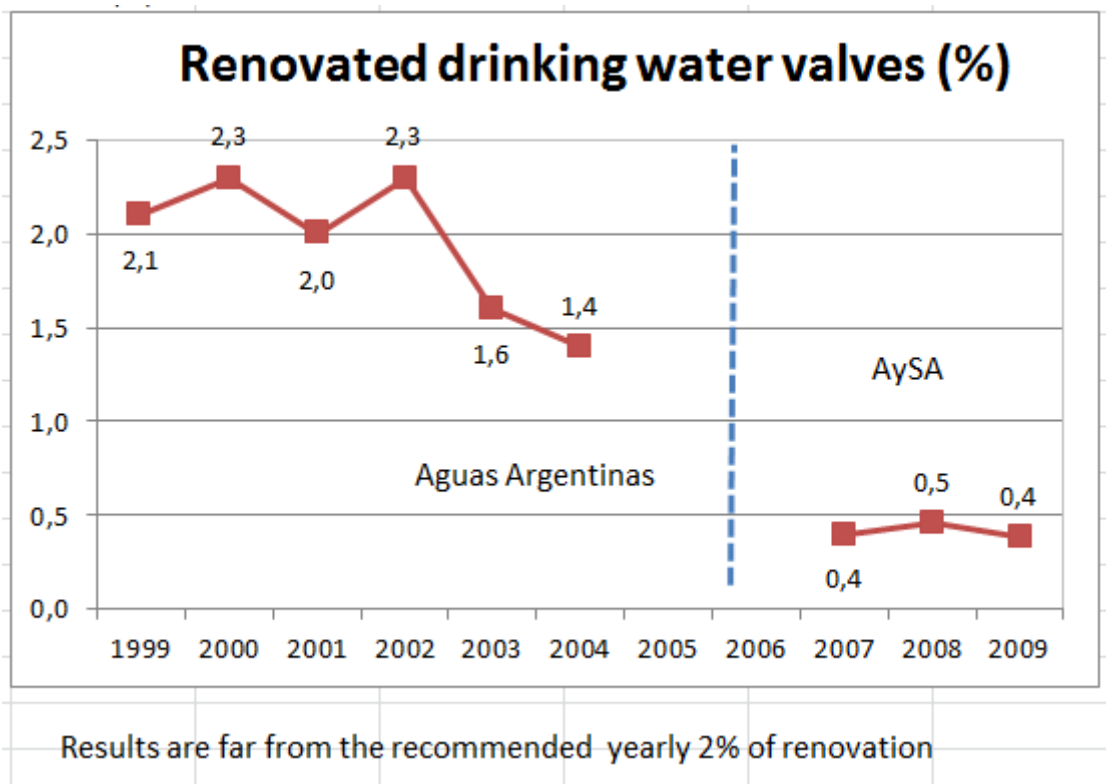
4/ Problems of maintenance, leakage management and water pressure

However, AySA seems to be affected by a similar tropism as Aguas Santafesinas, compensating maintenance problems by a simple augmentation of production. This translates into a deficient leakage management[25] and a programme of renovation as insufficient as during the time of the privatised concession (graphs 4 and 5), in spite of the existence of plans to address these issues and real investments even superior to those planned (table).



Graph 4: Renovated water pipes
Source: Molinari, 2009

[25] Non-revenue water now reaches 40 to 42% of water production with an increasing trend (annual reports 2007, 2008 and 2009), whereas losses had been reduced to 35 to 37% with Aguas Argentinas.



Graph 5: Renovation of drinking water valves
Source: Molinari, 2009

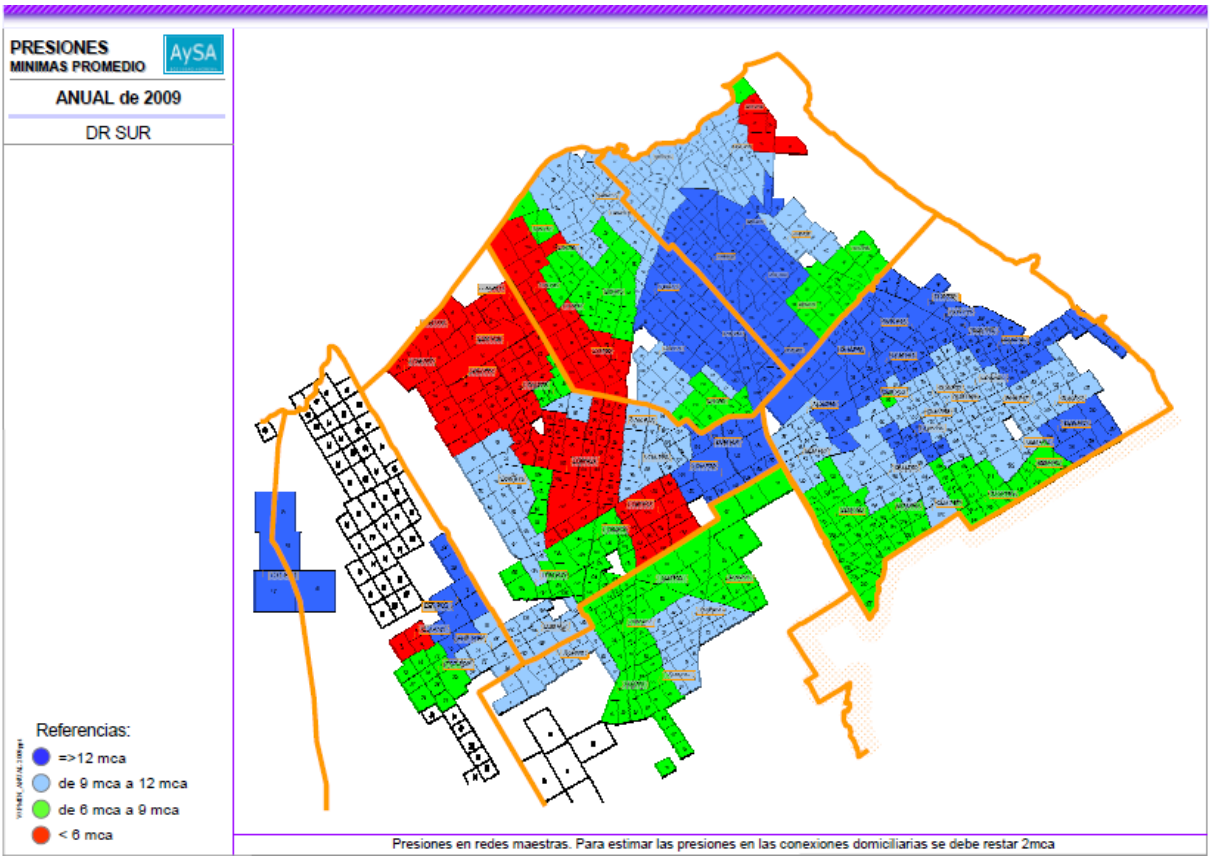
Year	2008		2009		2010		2008 - 2010		2011	2012
Detail	Planned	Executed	Planned	Executed	Planned	Executed	Planned	Executed	Planned	Planned
WATER	93 866	96 016	70 078	84 429	86 700	111 941	250 644	292 386	87 699	94 863
SEWERAGE	11 485	11 071	17 975	19 897	27 137	60 390	56 597	91 358	30 417	31 508
INVESTMENT	4 154	3 744	13 860	10 926	15 523	15 449	33 537	30 119	17 385	19 298
DIRECTIONS	83 507	80 080	60 989	67 447	68 308	106 596	212 804	254 123	76 505	84 921
TOTAL	**193 012**	**190 911**	**162 902**	**182 699**	**197 668**	**294 376**	**553 582**	**667 986**	**212 006**	**230 590**

Amounts are in K$ (pesos) without VAT and in nominal value

Summary of Investments - Plan of Renovation and Maintenance

Table 6: Investments – Plan of Renovation and Maintenance 2008-2012
Source: APLA

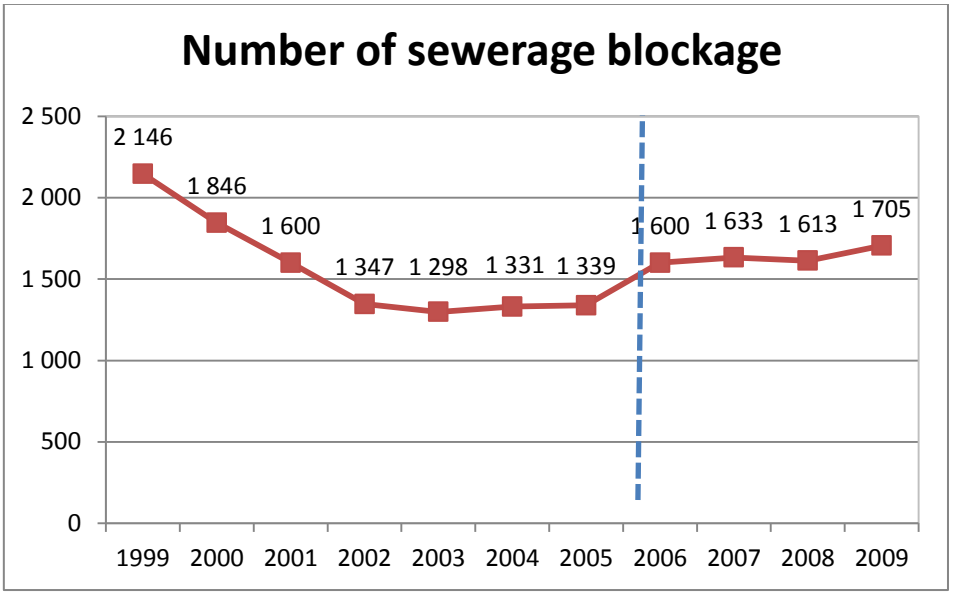
Increasing water pressure issues have consequently been reported (map 8). This is aggravated by a more lax normative control, as the obligation of 10 metres of water column has been transformed into the obligation to reach a “sufficient pressure”, which should tend towards 10m.



Map 9: Water pressure issues. An example in the *Conurbano* (Southern Region)
Source: AySA

Countless anecdotes have been collected which depict this lack of efficiency in terms of working processes and attempts to reduce an overuse of water and to limit blockages of sewerage networks (graph 6) For some technicians and former employees, this is partly due to the comeback of some influent former members of OSN and to the clientelistic practices of contracting out companies chosen only for their good relationship with the union. Various stories detail evidence of such a process, stressing the lack of comparative performance assessment. This results in skyrocketing average consumptions (above 500L/day/person),

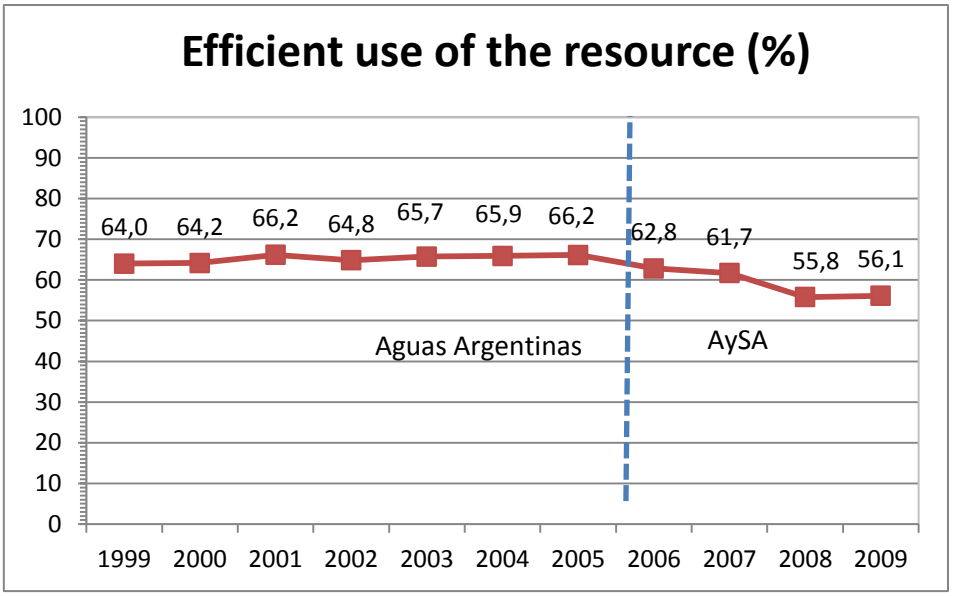
partly due to a lax leakage management and the tradition of the free tap system (*canilla libre*) for tariff[26] with no incentives to install meters.



Graph 6: Sewerage blockages
Source: Molinari, 2009

The metering issue remains a largely unaddressed problem[27], as no financial incentive has been designed to install meters and judicial decisions have even considered their installation in collective connexions anti-constitutional. This results in the persistence of an extreme overuse of water and a non-efficient use of the resource (graph 7). Consequently the impact of the numerous but seemingly unsuccessful campaigns for the rational use of water is fairly limited.

[26] For non-metered connections, tariff is only based on the size of the house with a geographical coefficient, but regardless of the consumption.
[27] Less than 20% of the individual connexions are metered/



Graph 7: Efficient use of the resource 1999-2009
Source: Molinari, 2009

The enormous amounts of money invested in the expansion contrasts with a fairly neglected programme of maintenance and renovation of the network. The AySA model presents a contrasted and unique picture of a proactive pro-poor approach, embedding an incredible programme of expansion that is however not supported by an adequate level of maintenance of the network. Beyond these contrasted indicators of performance, the following chapter will document the originality of this participative pro-poor approach (chapter 6).

Chapter 6

Supplying the poor:

public participation

and the programme *Agua Mas Trabajo*

A/ The piped dream of universal supply? One day in La Cariñosa

International institutions such as the UNDP promote a universal supply of water and sewerage networks, and even official discourses in Buenos Aires and Santa Fe claim that they are achieving a universal coverage of water supply. The fieldwork experience shows the flaws in this conception, as a large part of the unconnected population is not even recognised as inhabitants, let alone full citizen (Chatterjee, 2004). This largely concerns precarious and sometimes illegal settlements, which may be close to the centre of the main cities or in their outskirts.

Prévôt-Schapira (2002) has already deconstructed what she called "a populist logic of welfare dependency rather than development: the exclusion of some districts is often explained by a strong political willingness to maintain some districts in a marginal position towards the urban networks". There is a containment of poverty, with negation of citizenship.

A visit in the precarious district of La Cariñosa in Rosario (see appendix for an extract of the fieldwork diary), a seven year old precarious settlement squeezed between a power plant and an open-air informal rubbish dump, gives a sharp illustration of these issues. This district is not an isolated case, as around 15% of the inhabitants of the Metropolitan Area of Rosario are living under these conditions, but this leads us to relativize the discourse on universal supply, as it often excludes a large part of the urban poor. Getting water is only possible through illegal connexions, and sparks issues of lower water pressure or water-borne diseases such as dengue. This reflects on a larger scale a deeper problem, the "comprehensive social issue" mentioned by Fournier and Gouëset (2003), as water is part of an urban, economic and social challenge for these populations

Photo 2: La Cariñosa, important garbage issue, close to a power plant
Source: personal picture

Photo 3: problems of water pressure in La Cariñosa. Claudia (see appendix for her story)
Source: personal picture

Photo 4: illegal connections and water pressure issues in La Cariñosa.
Mariana (see appendix for her personal story)
Source: personal picture

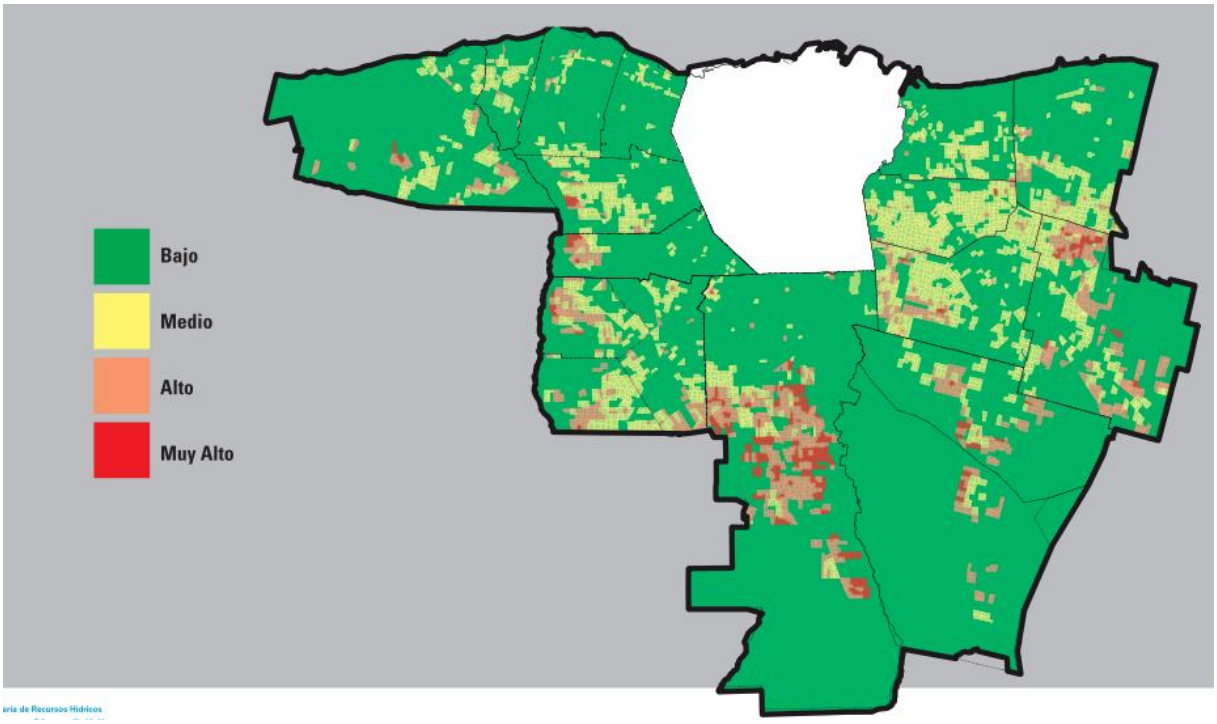
B/ Agua Mas Trabajo: participation and pro-poor action

Against this form of fatality of the urban poor being unconnected, a programme has been launched in the Metropolitan Area of Buenos Aires (the *Conurbano*) to provide water supply to districts that are usually considered unsuitable for any commercial purpose: Agua Mas Trabajo. This constitutes one of the major innovations of the management carried out by AySA, unifying human-rights approach, health considerations, social features and commercial aspects.

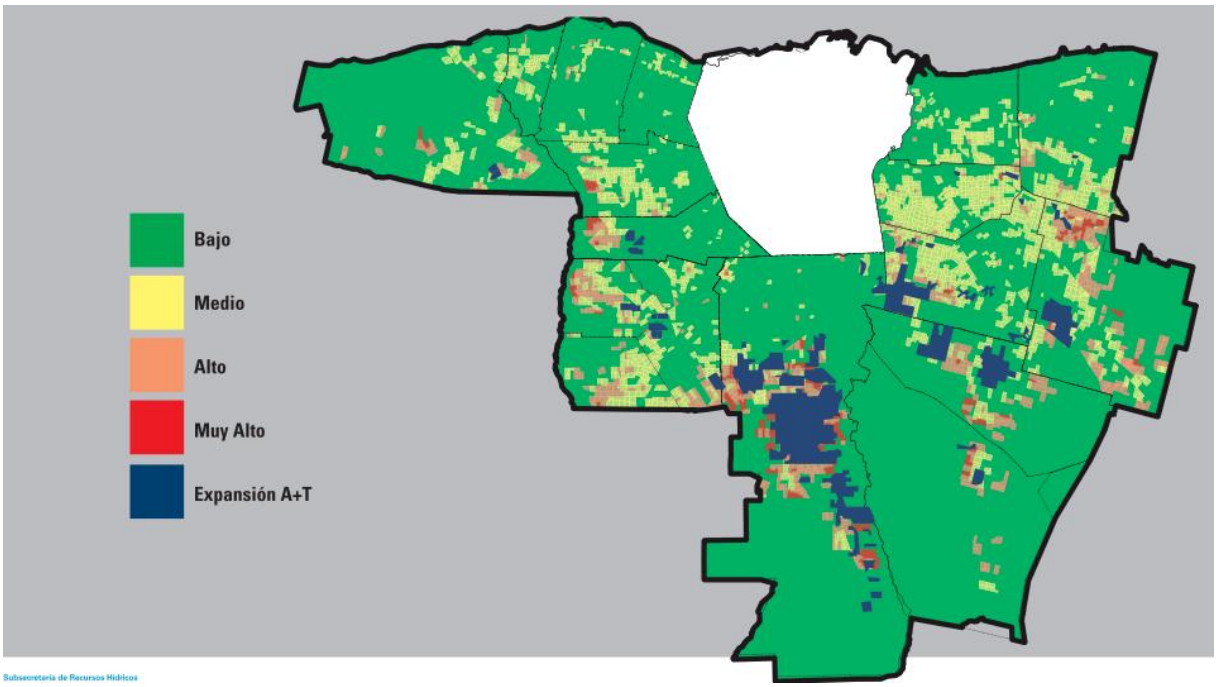
1/ From water wells to a pipe network

Such an ambitious project started in 2003 under Aguas Argentinas, thanks to the commitment of a social engineer who created a community department within the company. This was based on pilot experiments in La Paz and Brasilia and relied on the contribution of the users to the construction of the network to lower the connexion charge by two thirds to three quarters (Botton et al., 2011; Paterson et al., 2007; Poupeau, 2007).

Agua Mas Trabajo was coordinated by the federal agency ENOHSA, and worked under the law 20,337, installing working cooperatives. The proposed scheme combined social issues (with the creation of cooperatives for unemployed people) and operational aspects with the water supply for poor districts (Botton, 2004). This was also addressing a critical sanitary situation stressed by reports in 2003 (Merklen, 2008), mainly affecting the southern and eastern parts of the concessions, in cities like La Matanza or Lomas de Zamora.



Map 10: Sanitary Vulnerability [sanitary risk/ population density] in the *Conurbano*
Source: AySA (low : green ; high : red)



Map 11: Adequacy between Agua Mas Trabajo and the Sanitary Vulnerability
Source: AySA

The programme was extended and immensely scaled up by AySA, so that it now encompasses 70% of the expansion works of the whole network. It has thereby provided water supply to one million additional inhabitants for four years, which is a major step forward towards real universal supply.

A threefold change was implemented by AySA compared to the programme launched by Aguas Argentinas:

- The scale of application has changed from a pilot with 500Km of pipes connected to isolated wells to a gigantic programme now connected to the general network. Within the company, the decentralised system with 20 employees working on the project as only part of their missions has been replaced by a centralised but deconcentrated organisation with 60 people working full-time for the 437 modules.

- This network-based approach has allowed water quality to be improved in areas affected by problems of nitrates, salinity and arsenic concentrations like in La Matanza. This is coordinated with the project of a new plant in La Matanza and another one in the South, with reverse osmosis processes to deal with arsenic.
- The coordination is now entirely run by AySA and not by ENHOSA, to facilitate the centralisation and the coordination with the *municipios*, which was formerly sometimes chaotic.

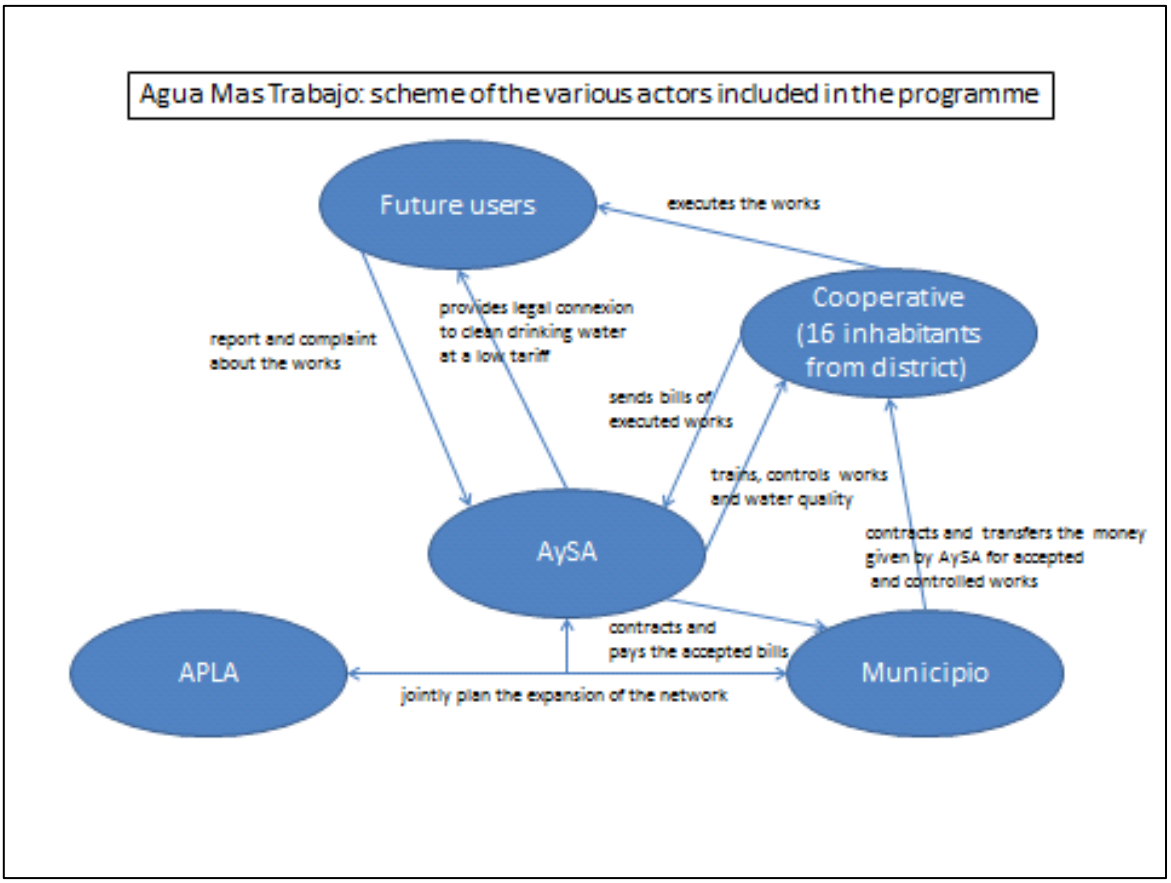
Annually, AySA invests between 70 and 100 Million pesos for the programme Agua Mas Trabajo. This covers amongst others the primary works operated directly by the firm (which represents 20% of the whole investment budget). The water company then signs a contract with the *municipio*, which contracts with a cooperative: AySA does not have any influence on the choice of the cooperative. They finance the following: tools, team work, materials, training and capacity building of the workers, works manager's fees, control and assistance of works, and other costs such as assistance for accounts to the cooperative, toilets for workers and rent of the workers house if needed.

As explained by the manager of the programme within AySA,

> *"The cooperative is composed by 16 people of the municipio, but not necessary of the district (barrio). The reason is related to an issue of continuity: we want to train cooperatives for more than only one work, with contracts of at least two years. As a consequence, if we only work with the people of the district, this will be a one-time experience, and will multiply the number of actors we are dealing with. To improve the quality and continuity of the works, we prefer contracting cooperatives many times*

for various works, and not only one. To get them the level of specialisation required, it takes one year: it is economically more meaningful and more useful to do so."

All in all, the works themselves need eight months for the construction and installation of the each module.



"This plan is a fabulous plan, promoting the idea of working, giving a dignity to the workers and with clear objectives: the cooperatives are only paid once AySA has approved the quality of the works. (...) This brings some dignity to the work they are doing, it is dignifying for the people who are doing that job" (municipio of Tigre)

2/ Quality controls, commercial aspects and results of the programme

The pipes are subject to the same controls as other pipes directly installed by AySA: before the pipes are in use, the company operates bacteriological and chemical analyses to guarantee the conformity of the pipes with the quality norms once a module is achieved.

Once the works have been carried out and water is supplied, the level of bill collection is around 50%, but leakages are minimal. Yet, one needs to look at it carefully to identify the reasons of non-payment, as this is not always due to a lack of willingness to pay: sometimes, the address is missing, streets have no names, and people do not receive the bills. In many areas, water issues are consequently related to problems of urbanism. What AySA tries to do is to include the inhabitants in a positive trajectory, a trajectory of insertion. This explains the success of the programme, praised by the *municipios* and the inhabitants concerned (See Appendix for an extract of fieldwork diary, one day in Lomas de Zamora's construction site)

Water + Work	Modules	Km Pipelines Laid	Connections Installed	Inhabitants
In Progress	86	299	26 041	187 880
Network Completed	148	690	67 475	373 170
In Operation	188	929	87 283	436 415
Overall Total	**422**	**1 918**	**180 799**	**997 465**

Table 7: results of Agua Mas Trabajo
Source: AySA

Photos 4: construction sites of Agua Mas Trabajo
Source: AySA

C/ Various criticism towards the programme

Three kinds of criticism have been raised by different sources: academic, technical or inhabitants.

Some authors have criticised the high level of clientelism of the programme in the first two years (2004-2006), related to a long tradition of clientelistic political practices in cities of the Conurbano like La Matanza (Merklen, 2008). Though this may certainly have occurred at a specific level, one has to acknowledge the amplitude of the expansion, and the relative adequacy between the areas of higher sanitary risks and zones of development of the programme.

Another criticism relates to the quality of the work. The company itself recognises the necessity of training the cooperative during one year to get an efficient job. At the beginning, in some places, this resulted in some problems of payment from AySA: the certificates of works were sent to AySA, but the company refused to pay because the works were not carried out the way it should.

In another context[28], authors have used that argument to demonstrate that given the work of the users, the maintenance cost and the prices of the material, participative connexions may be more expensive for users than standard connexions (Laurie and Crespo, 2007). This will require further surveys to analyse whether the social improvements are not damaged by a flawed economic rationale, but this might be too early to evaluate in Buenos Aires.

The last criticism comes from the inhabitants themselves, who often manifest a form of impatience to have the works done quicker, and who relates that issue to larger ones such as garbage management and improvement of the general urban infrastructure.

[28] In La Paz

D/ A programme extended to sanitation services

However important and meaningful these critics might be, such a participative methodology clearly increases the level of acceptance of the service. This resulted in a more rational use of water. In this respect, low levels of consumptions in the newly connected areas are reported, in contrast to the areas in the centre of the megalopolis. This is due to habits of low consumption by default of water supply, but also to campaigns organised within the programme. As part of the programme Agua Mas Trabajo, regular meetings are organised with the inhabitants (see appendix for the narrative of one of them), and the last meeting with the inhabitants was made jointly with the service of social development to talk about how to preserve the network and the resources.

The overall success of the programme has led to its continuation with the sewerage networks, within the programme Agua Mas Cloaca Mas Trabajo. This new extension of the project has barely started in districts like Quilmes (see Appendices for results)[29], but still provides the inhabitants with the hope of a genuine universal supply of water and sewerage networks. The costs are however fairly higher than for water pipes, yet opens promising challenges.

Sewerage + Work	Modules	Km Pipelines Laid	Connections Installed	Inhabitants
In Progress	9	17	2 229	14 510
Network Completed	2	4	296	1 840
In Operation	4	6	565	2 825
Overall Total	**15**	**27**	**3 090**	**19 175**

Table 8: Agua + Cloaca + Trabajo. First results of the programme
Source: AySA

[29] only 14 sites are under construction, in contrast with the 448 of the programme A+T

Chapter 7

Concluding thoughts

Three main lessons can be drawn from these two examples of post-Washington Consensus water management.

Firstly, unlike most of mainstream academic articles, it has been argued that the strong divide between public and private water management is somewhat pointless. This does not altogether mean that they may be both equal, as they certainly pursue very distinctive objectives, but the current public water companies operating in Argentina are also the heirs of privatisation. The ten to thirteen years interlude of PSP brought some processes and practices that have been integrated, such as the recognition of the figure of the consumer or some issues related to water quality that were previously fairly neglected. The stability of the workforce and the persistence of reporting have constituted the basis for multiple forms of continuities between the private and the public experiences, the latter emphasising sometimes practices barely initiated by the former, such as benchmarking or the implementation of metered systems.

Secondly, a clear new model has also emerged, though part of the literature points out a theoretical vacancy after the failure of the Washington Consensus. Based on the idea that water is a fundamental human right, this new paradigm clearly prioritises the achievement of important infrastructure works to reach a real universal supply. This implies an enormous commitment of the public actor, may it be the provincial or the national government. By so doing, one actually only reactivates the scheme that allowed current developed countries to get a universal supply of water, with a significant contribution brought by the public sector, regardless of the pure economic cost. This approach is based on the very idea of providing essential public service to the whole public at an affordable price thanks to mechanisms of cross-subsidization, making water a merit good and not an economic good as Dublin Principles described it. AySA offers, in this respect, a highly stimulating model, combining both mechanisms of corporatisation and innovative participative approach to include the poor through Agua Mas Trabajo, i. e. principles of both economic and social efficiency.

Finally, maintenance and renovation of both water and sanitation networks remain an issue insufficiently addressed in the two case studies. Clearly, these deficiencies constitute the bête noire of these water utilities, and translate into a fairly inefficient use of the resource that contrasts with the immense commitment to extend the infrastructure. This needs to be dealt with to ensure the stability and the sustainability of such a model.

Bibliography

Akhmouch, A. (2009). “De l’utilité de l’accusation de ‘pillage’ : le cas des multinationales de l’eau en Argentine, l’exemple de Córdoba.” *Hérodote*. N°134. pp. 194-217

Akhmouch A. (2009), *Géopolitique des privatisations : enjeux et conflits dans le secteur de l’eau et de l’assainissement en Argentine. Le cas des concessions de Santa Fe, Cordoba et Mendoza (1995-2007)*, under the supervision of Marie-France Prévôt-Schapira, université Paris-VIII, doctorate, 352 p.

Allan, T., (2003). “Integrated water resources management is more a political than a technical challenge”. *Developments in Water Science*, vol. 50. pp. 9-23

Almansi F., A. Hardoy and J. Hardoy (2010). *Improving water and sanitation provision in Buenos Aires. What can a research-oriented NGO do?* IIED Human Settlements Working Paper Series. Water N°22. 44p

Almansi, F. (2009), “Rosario's development; interview with Miguel Lifschitz, mayor of Rosario, Argentina”. *Environment and Urbanization*. Vol 21. pp. 19-35

Altenburg, T.and C. von Drachenfels (2006): “The ‘New Minimalist Approach’ to Private-Sector Development: A Critical Assessment”, *Development Policy Review* 24 (4), 387–411

Arojo, P. (2006), *Los retos eticos de la nueva cultura del agua*.

AySA (2008). Annual report. 3,468p.

AySA (2009). Annual report. 2,742p.

AySA (2010). Annual report. 3,174p.

AySA (2009), *AySA, nuestra y para todos*. Buenos Aires, 122p.

Auyero, J. (1998) “Favores por votos”. Editorial Losada. Argentina

Azpiazu, D. (2001) “Inequidades normativas, rentas de privilegio y asignaturas pendientes”, *Enoikos*, 17, pp. 14 –19.

Azpiazu, D. (2002a) “Privatizaciones en la Argentina. La captura institucional del Estado”, *Realidad Económica*, 189, http://www.iade.org.ar/modules/noticias/article.php?storyid1/4422

Azpiazu, D. (2002b) *Las privatizaciones en Argentina. Diagnóstico y propuestas para una mayor equidad social*. Buenos Aires: CIEPP/OSDE

Azpiazu, D. (2003) *Crónica de una sumisión anunciada. La renegociación con las empresas privatizadas bajo la administración Duhalde*. Buenos Aires: Siglo XXI/FLACSO/IDEP

Azpiazu, D. (2010) “Privatización del agua y el saneamiento en Argentina : El caso paradigmático de Aguas Argentinas S.A.”, *VertigO - la revue électronique en sciences de l'environnement* [Online], Hors série 7 | juin 2010, URL : http://vertigo.revues.org/9730

Azpiazu, D. and K. Forcinito (2004), *Historia de un fracaso : la privatización del sistema de agua y saneamiento en el Área Metropolitana de Buenos Aires*, in Azpiazu, D., A. Catenazzi and K. Forcinito :*Recursos públicos, negocios privados. Agua potable y saneamiento ambiental en el AMBA*, Universidad Nacional de General Sarmiento, Los Polvorines, 174 p

Azpiazu, D. and M. Schorr (2006). La privatización del agua en la región metropolitana de Buenos Aires. Fracaso estrepitoso, renegociaciones dilatadas y futuros más que inciertos. In *Las Canillas Abiertas de América Latina II* (pp. 85-92). Montevideo: Casa Bertolt Brecht.

Azpiazu, D. and M. Schorr (2004) *Cross-comparative report on the economic-financial dimension*, in Castro (coord) *PRINWASS Project*, University of Oxford

Baer, W. and G. Montes-Rojas (2008). “From Privatisation to Re-nationalization: What went Wrong with Privatisations in Argentina?” *Oxford Development Studies.* Vol 36. pp. 323-337

Baietti A., W. Kingdom and M. van Ginneken. “Characteristics of Well-Performing Public Water Utilities.” *Water Supply and Sanitation Working Notes.* N°9. Washington, DC: World Bank.

Bakker, K. (2003), “Archipelagos and Networks: Urbanization and Water Privatisation in the South.” *Geographical Journal*. 169. 328-341

Bakker, K. (2004), *An Uncooperative Commodity: Privatizing Water in England and Wales.* Oxford University Press

Bakker, K. (2007), “The ‘Commons’ versus the ‘Commodity’: ‘Alter’-Globalization, Anti-privatisation and the Human Right to Water in the Global South.” *Antipode*. 39. 430-455

Bakker, K. (2010), *Privatizing water. Governance failure and the world’s urban water crisis*. Cornell University Press.

Barraqué, B. (1995) *Les politiques de l’eau en Europe*. Paris : éditions La Découverte, 304 p.

Bluemel, E. (2004). “The implications of Formulating a Human Right to Water.” *Ecology Law Quarterly*. 31. 957-1006

Bond, P. (2004), “Water commodification and decommodification narratives: Pricing and Policy Debates from Johannesburg to Kyoto to Cancun and Back.”. *Capitalism, Nature Socialism*. 15. 7-25

Botton, S., A. Brailowsky, P.-L.Mayaux, (2011), “ ‘Le rejet de la greffe’ ou les impensés du transfert de modèle de PPP, les cas de Buenos Aires (Argentine) et de La Paz-El Alto (Bolivie)” in Botton and Blanc (ed). *Services d’eau et secteur privé dans les pays en développement. Perceptions croisée et dynamique des réflexions*. AFD, pp.169-200

Botton, S. (2004), “Les ‘débranchés’ des réseaux urbains d'eau et d'électricité à Buenos Aires : opportunité commerciale ou risque pour les opérateurs ?”, Flux-cahiers scientifiques internationaux Réseaux et Territoires N°56/57, Paris.

Botton, S. (2005), *La privatisation des services urbains et desserte des quartiers défavorisés : une responsabilité sociale en partage. Le cas des services d’eau et d’assainissement, d’électricité et de télécommunications dans les quartiers ‘carenciados’ de l’agglomération de Buenos Aires (Argentine) de 1991 à 2004*. Doctorate, under the supervision of Sylvy Jaglin and Yves Lichtenberger, université de Marne-La-Vallée, Paris. 530p.

Braadbaart, O.and F. Braadbaart (1997). “Policing the Urban Pumping Race: Industrial Groundwater Overexploitation in Jakarta.” *World Development*. 25. 199-210

Briscoe, J. (1998), *Water as an economic good: the idea and what it means in practice*.

Brown, A. (2002). “Confusing means and ends, framework of restructuring, not privatisation, matters most.” *International Journal of Regulation and Governance*, 1(2), 115– 128

Budds, J. and G. McGranahan, (2003), “Are the Debates on Water Privatisation Missing the Point? Experiences from Africa, Asia and Latin America”, *Environment and Urbanization*, Vol. 15, No 2, IIED, London.

Castro, E. (2005), “Poverty and Citizenship: Sociological Perspectives on Water Services and Public Private Participation.” *Geoforum*. 38. 756-771

Castro, E. (2008), “Neoliberal Water and Sanitation Policies as a Failed Development Strategy: Lessons from Developing Countries.” *Progress in Development Studies*. 8. 63-83

Chatterjee, P. (2004), *Politics of the Governed: Reflections on Popular Politics in Most of the World.* New York: Columbia University Press.

Cirelli, A. (2008). “Wastewater management in Greater Buenos Aires, Argentina.” *Desalination*, 218, 52-61.

Coing, H. (2010). “Préface” in G. Schneier-Madanès and B. de Gouvello (eds) *L’eau mondialisée, la gouvernance en question*, collection Recherches, La Découverte, Paris

Comander, S and T. Killick (1988), “Privatisation in developing countries: a survey of the issues.” In Cook, P. and C. Kirkpatrick (eds), *Privatisation in Less Developed Countries.* Hemel Hempstead 91-124

Coutard, O. (1999), *The Governance of Large Technical Systems*. Longon: Routledge.

Darrow, M. (2005), “Power, Capture and Conflict: A Call for Human Rights Accountability in Development Cooperation.” *Human Rights Quarterly*. 27. 471-538

Del Castillo Laborde, L. (2005), “Institutional Framework for Water Tariffs in the Buenos Aires Concession, Argentina”, *Water Resources Development.*

Dorrier-Appril, E. and S. Jaglin (2002), “Introduction – Gestions urbaines en mutation: du modèle aux arrangements locaux.” *Autrepart.* 5-15.

Estache A. and M. Rossi (2002), “How different is the efficiency of Public and Private Water Companies in Asia”. *The World Bank Review*, 16. 139-148

Feigenbaum, S. and R. Teeples (1984), “Public versus Private Water Delivery: A Hedonic Cost Approach”. *Review of Economics and Statistics*, 65. 672-678

Fournier, J.-M. and V. Gouëset (2004). *Eau potable et inégalités sociales dans les villes d’Amérique Latine*

Fournier, J.-M. (2003) “L’eau potable en Amérique latine. Pour tous ou pour quelques-uns?, *Actes du Festival international de géographie de Saint-Dié* [http://fig-stdie.education.fr/actes/actes_2003/fournier/article.htm]

Fournier, J.-M. (2001), *L'eau dans les villes d'Amérique latine, inégalités sociales et concurrences des usages*, Paris, L'Harmattan, 203 p.

Fox, W. and R. Hofler (1986), “Using Homothetic Composed Error Frontiers to Measure Water Utility Efficiency”. *Southern Economic Journal*, 53(2).461-477

Garande, T. and S. Dagg (2005), “Public Participation and Effective Water Governance at the Local Level: A Case Study from a Small Under-Developed Area in Chile.” *Environment, Development and Sustainability*. 7. 417-431

Gassner, K., A. Popov and N. Pushak (2009). *Does Private Sector Participation Improve Performance in Electricity and Water Distribution?* PPIAF Trends and Policy Options. World Bank.

Gouvello (de), B., E. Lentini and G. Schneier-Madanès (2010) “Que reste-t-il de la gestion privée de l'eau en Argentine ? Retour sur l'échec des délégations à des consortiums internationaux”, *in* Graciela Schneier-Madanes *L’eau mondialisée, la gouvernance en question*, La Découverte « Recherches », 177-198

Gouvello (de), B., (2001), *Les services d’eau et d’assainissement en Argentine à l’heure néolibérale : La mondialisation des’ modèles’ à l’épreuve du territoire*, Paris, L’Harmattan, 240 p.

Gray, P. (2001), *Private participation in infrastructure: A review of the evidence*. Washington, DC: World Bank.

Guasch, J.-L., and S. Straub (2008), *Corruption and concession renegotiations. Evidence from the water and transport sectors in Latin America.*

Guasch, J.-L. (2004), Granting and Renegotiating Infrastructure Concessions. Doing it Right. World Bank Institute, Washington, D.C.

Gutierrez, E. (2001) "Framework document: a survey of the theoretical issues on private sector participation in water and sanitation", WaterAid and Tearfund.

Hall, D. (2001). *Water in public hands*. London: Public Services International Research Unit (PSIRU), University of Greenwich

Hall and Lobina, 2004 *Privatising other People's Water: the Contradictory Policies of Netherlands, Norway and Sweden*. PSIRU reports, Business School, University of Greenwich, 9 p

Hall, D. and E. Lobina (2006), *Pipe Dreas: The Failure of the Private Sector to Invest in Water Services in Developing Countries*. London, PSIRU.

Heynen, N., J. McCarthy, W. S. Prudham and P. Robbins, eds (2007), *Neoliberal Environments: False Promises and Unnatural Consequences*. New York: Routledge

Hodge, G. (2000), *Privatisation: An International Review of Performance*. Boulder, WestviewPress.

Jaglin, S. and M.-H. Zérah (2010), "Eau des villes : repenser des services en mutation", *Revue Tiers-Monde* N° 203, Institut d'étude du développement économique et social, université Paris I Panthéon-Sorbonne, Paris

Kernaghan, K. (2000). "The post-bureaucratic organization and the public service values". *International Review of Administrative Sciences*, 66. 91-106.

Kessides, I. (2003). *Reforming Infrastructure: Privatisation, Regulation and Competition*. World Bank Policy Research Report. World Bank, Washington DC.

Lacey, M. (2004), "A Changing Mind-Set." *American Water Works Association*. 96.

Lane, J. (1994), “Will public management drive out public administration?.” *Asian journal of public administration*, 2. 139-151.

Laurie, N., and C. Crespo. (2007). Deconstructing the best case scenario: Lessons from water politics in La Paz-El Alto, Bolivia. *Geoforum* 38: 841-854.

Lee, T. (2000).”Urban Water Management for better life in Latin America”, *Urban Water 2*, 71-78.

Lefeber, L., and T. Vietorisz. (2007), “The meaning of social efficiency”. *Review of Political Economy* 19: 139-164.

Lorrain, D. (2007), “The local-global firm : Lyonnaise des Eaux 1980-2004.” *Sociologie du travail*, 49. 90-109.

Maceira, D. (2007), “Desigual acceso a los servicios en Argentina 1991-2001. *Revista Hydria N°13*

Mansfield, B. (ed) (2008), *Privatisation: Property and the Remaking of Nature-Society Relations.* Malden, Blackwell.

Marin, P. (2009), “Public-Private Partnerships for Urban Water Utilities: A Review of Experience in Developing Countries”, *Trends and Policy Options*. 8 World Bank/ PPIAF, Washington DC.

Mehrotra, S. and E. Delamonica (2005), “The Private Sector and Privatisation in Social Services: Is the Washington Consensus dead?” *Global Social Policy*, 5. 141-174

Mehta, L., and O. Mirosa Canel. (2004), *Financing water for all: Behind the border policy convergence in water management*. Sussex, UK: Institute of Development Studies.

Melé, P. (2002), “Paradigme environnemental et action publique urbaine à Monterrey (Mexique)” in Dorrier-Appril and Jaglin (ed), *Gérer la ville, entre local et global*. 41-54

Merklen, D. (2008). “L’eau et le travail. Le marché de l’eau potable entre politiques sociales et traditions politiques, Argentine 2004-2006”, *Entreprises et histoire*, 50. pp.52-66

Molinari, A. 2009. *Informe de la gerencia de Benchmarking, ERAS, 2006-2009*. 85p.

Mollinga, R. (2008), “Water, Politics and Development: Framing a Political Sociology of Water Resources Management”, *Water Alternatives*, 1(1).

Muñoz, A. (2003) *Cooperativas de agua en Argentina*. Documento interno de la Asamblea Provincial por el Derecho al Agua, Rosario, 2003, 6 p.

Muñoz, A. (2004) *Privatización del servicio de agua potable en la provincia de Santa Fe. Historia de un fracaso*, 19 p.

Musset, A. (1996). *Le Mexique*. Armand Collin, Paris, 274p.

North, P. and U. Huber (2004) Alternative spaces of the “Argentinazo”, *Antipode*, 963-985

Paterson, C., D. Mara and T. Curis (2007), “Pro-Poor Sanitation Technologies.”*Geoforum*. 38. 901-907

Peck, J. and A. Tickell (1992), . “Local modes of social regulation? Regulation theory, thatcherism, and uneven development”. *Geoforum* 23, 347–364

Pesce, J. (2007), “El grupo Suez y la concesión de agua potable y saneamiento en la provincia de Santa Fe: la primera ‘piedrita en el zapato’.” *Pampa*, 165-196.

Petitet (2010) “Du ‘modèle français’ à l'émergence d'un ‘modèle mondialisé ‘ : le partenariat public-privé (PPP)”, *in* Graciela Schneier-Madanes*, L’eau mondialisée, la gouvernance en question*. 162-175.

Pezon, C. (2002), “La dérégulation discrète de la distribution d’eau potable en France et l’émergence d’un nouvel acteur collectif, les abonnés”, *Flux-cahiers scientifiques internationaux Réseaux et Territoires*, N° 48-49, Paris.

Pflieger, G. (2002), “Domination du consommateur et résistance du citoyen. Les tensions entre les figures de l’usager au sein du système de régulation de l’eau en France. *Flux,* N°48-49. 20-34

Politt, M. (2008), “Electricity Reform in Argentina : Lessons for developing countries”. *Energy Economics*, 30. 1536-1567

Pollit and Bouckaert (2000), *Public Management Reform: a comparative analysis*, Oxford University Press, 360p.

Poupeau, F. (2007), “Les ambivalences de l’orientation pro-poor de la gouvernance urbaine. Le cas du service de distribution d’eau à El Alto », (coll.), *La gouvernance urbaine dans les métropoles latinoaméricaines*, IFEA Bogota

Prasad, N. (2006), “Privatisation Results: Private Sector Participation in Water Services after 15 years.” *Development Policy Review*. 24. 669-692

Prévôt Schapira, M.-F. (2002), “Buenos Aires, entre fragmentation sociale et fragmentation spatiale”. In : Navez-Bouchanine, F.. *La fragmentation en question : des villes entre fragmentation spatiale et fragmentation sociale ?* Paris: L’Harmattan, Villes et Entreprises, pp.195-207

Prudham, S. (2004). “Poisoning the well: neoliberalism and the contamination of the municipal water in Walkerton, Ontario”, *Elsevier*

Rocca, Mariela Verónica (2010), *“’De la concesión a la reestatización’: El rol regulador del Estado Argentino en el servicio de agua potable y saneamiento del Area Metropolitana de Buenos Aires (1993-2008). Un abordaje desde la sociología política.”* under the supervisión of Martin Schorr, doctorate, Buenos Aires.

Rouse, M. (2009) “The Market Centred Paradigm”, in Castro and Heller (eds), *Water and Sanitation Services*, Earthscan.

Savedoff, W. (1999), *Spilled Water Institutional Commitment in the Provision of Water Services*. Inter-American Development Bank.

Schneier-Madanès, G. (dir.) (2010), *L’eau mondialisée, la gouvernance en question*, collection Recherches, La Découverte, Paris

Schneier-Madanès, G. and B. de Gouvello (2003), *Eaux et Réseaux : les défis de la mondialisation*, Éditions de l’IHEAL – La Documentation française, Paris, 346p.

Schneier-Madanès, G. (2001). “La construction des categories du service public dans un pays émergent: les conflits de la concession d’eau à Buenos Aires”, *Flux*, 44. 46-64

Schouten, M. and K. Schwartz (2006), “Water as a political good: revisiting the relationship between politics and service provision”. *Water Policy*, Vol 9 No 2, 119–129

Schwartz, K. (2008), “Mimicking the private sector: reforms in the water supply and sanitation sector”, conferencia Internacional Usos multiples del Agua: par la vida y el desarollo sostenible

Sirtaine, S., M. E. Pinglo, J. L. Guasch and V. Foster (2005) “How profitable are infrastructure concessions in Latin America? Empirical evidence and regulatory implications”, *Trends and Policy Options* (Washington, DC: The World Bank).

Spronk, S. (2010), “Water and Sanitation Utilities in the Global South: re-entering the debate on ‘efficiency’, *Review of Radical Political Economics*, 42. 156-174

Suez Environnement (2008), “Qu’est-ce que l’ingénierie sociétale ?”. Direction de l’ingénierie sociétale, document de travail, Paris.

Swyngedouw, E. (2009), “Troubled Waters: The Political Economy of Essential Public Services” in Castro and Heller (eds) *Water and Sanitation Services*

Trémolet, S. (2006), “Adapting Regulation to the Needs of the Poor: Experience in Four East African Countries” in BPD Research Series, London.

Tverdek, E. (2004), The efficiency imperative: Five questions. *Science & Society* 68: 447-474.

Velut, S. (2002) *L’Argentine. Des provinces à la nation*. Éditions Presses Universitaires de France, Collection Géographies, 296 p.

Whittington, D. (2003), *“ Municipal water pricing and tariff design, a reform agenda for South Asia*, Water Policy, 5. 61-76

Williamson, J. (1990), “What Washington Means by Policy Reform”, in J. Williamson, ed., *Latin American Adjustment: How Much Has Happened?* Washington: Institute for International Economics.

Winpenny, J. (2003), “Financing Water For All: Report of the World Panel on Financing Water Infrastructure.” Geneva, Third Wold Water Forum

Wolff, G. and E. Hallstein (2005), *Beyond Privatisation: Restructuring Water Systems to Improve Performance.*Oakland, Pacific Institute

World Bank, 1994, *World Development Report- Infrastructure for Development*, Oxford University Press

Appendix 1: Anonymised list of interviewees

Buenos Aires

- Aguas Argentinas
  2 members of the board of directors
  1 social engineer
  2 managers of a subsidiary company (SAFEGE)

- AySA
  2 members of the board of directors
  4 members of the Department of the Community

- ERAS
  1 manager of the benchmarking department
  2 economists of the economic department
  1 manager of the consumer service

- APLA
  2 engineers of the planning department

- Municipios
  1 representative of the *municipio* of Tigre
  1 representative of the *municipio* of Lomas de Zamora

- Inhabitants from Lomas de Zamora and Tigre

- Others
  1 former director of OSN
  2 academics (Paris and Buenos Aires)
  1 international expert on sanitation services

Province of Santa Fe

- Aguas Provinciales de Santa Fe
  1 former manager of APSF

- Aguas Santafesinas
  1 director
  3 top managers of the company
  1 manager of the commercial department in the Greater Rosario
  1 director of construction site in Rosario

- The province of Santa Fe
  1 director of the sub-secretariat of Water Affairs

- ENRESS
  2 former directors of the board of ENRESS
  2 current directors of the board of ENRESS
  1 manager of the economic department

- Consumer association
  2 representatives of consumer association

- Others
  1 social worker in the Greater Rosario

Appendix 2: Fieldwork diary. La Cariñosa

When one does not know where the entrance is, one cannot enter La Cariñosa. Nor is one completely welcomed, as the illegal settlement is quite controlled by its inhabitants. We arrive with a social worker and representatives of several welfare institutions. We will have a meeting with the inhabitants of the district, where 3,000 people are living after the first inhabitants started living there 7 years ago. On the way to the vacant lot where the meeting takes place, one can easily differentiate the three parts of the settlement, according to the level of solidification of the houses.

Tracks are splitting La Cariñosa into two parts. Trains transporting goods and food go through the district a couple of times a day, bringing rats in the district because of the food that falls down. This separation into two sides has also impacts on the water supply, as the illegal connexions have to go through the path through which the train goes: it enhances tremendously problems of water pressure.

Today, the discussion should primarily concerns the installation of a new communitarian water tank, but the conversation quickly drifts. The main concerns are related to the problems of garbage, as countless plastic bags are accumulating and engender new sanitary risks with the proliferation of rats. This makes part of the district an open-air dump, and a significant number of inhabitants evoke the health issues caused by these living conditions and the proximity of not-collected garbage.

This meeting offers also a fascinating component: though the audience is quite mixed, almost only women take the floor. Men are also present, but stay quiet. Public space and domestic space are both run by women here. They all detail the comprehensive urban issues they are facing: water is only one of them, but currently not the most urgent. This will change over the summer, with the importance of dengue and the lack of possibility to store clean water, as an inhabitant explains.

In the domestic space, one can see the shared connexions of both electricity and water. The more shared the connexions are, the more frequent water pressure problems occur. Midnight's plumber connexions are the rule here, as the settlement is not officially recognised as urban. Furthermore, some people do not even have identity documents. They are then both unrecognised as regular city dwellers and denied a right to citizenship through access to basic networks such as water and electricity.

Appendix 3: Fieldwork diary. Construction site of Agua Mas Trabajo in Lomas de Zamora

Today is Friday. The last time it rained was on Monday. But the informal streets made out of earth are still full of water in many parts of the districts, and it is quite impossible to circulate correctly. As some inhabitants will later narrate, the rain forces them to stay in their homes during days, whereas they sometimes send children to school or ill people to the doctors.

The illegal settlement started 14 years ago, mainly inhabited by foreign migrants. The groundwater is only 60cm below the level of the ground, as in all the city of Lomas de Zamora. The ground is highly polluted, so one does not use PVC for the pipes, but another plastic material to avoid the contaminations.. As a consequence, the works are really difficult; it is often flooded, as soon as it rains. As no system of sewerage exists, a large part of the excreta is directly drained off in the ground, and pops up again as soon as it rains: this makes the whole district an open-air sewer and a source of numerous diseases. The sanitary conditions are consequently highly precarious.

Today, the members of the Department of Community of AySA and the *municipio* of Lomas de Zamora have organised a meeting with the inhabitants of one of the poorest districts of Lomas de Zamora, where a construction site of *Agua Mas Trabajo* has been in progress for 5 months. The working conditions for the members of the cooperative are quite difficult, due to the rain, and due to some relational problems with some inhabitants. The objective of such a meeting is to present the state of advance of the construction and to listen to the recriminations made by the inhabitants.

Time is taken to listen to everyone's complaint, to take it into account and facilitate the appropriation of the work by the direct users. Some detail the problems they have encountered such as being excluded from the design or seeing leakages. The employees of AySA explain the different steps of the construction, and the necessity to carry out the water quality tests. It is difficult to explain that one cannot use water from the network whereas large parts seem to be working: they have not been clean up with chlorine before inhabitants can get an individual connexion. The connexion fees will not be passed onto the users, but AySA will take care of it.

The neighbourhood's associations think however that the works do not go sufficiently quick and impatience increases. People were promised to get water within 10 to 12 months, and their level of acceptation gets lower as the works last longer. The construction should be achieved by the end of October, before the critical period of summer, to avoid as much as possible water-related diseases with illegal and unsafe connexions. A new director of construction has been recently nominated and is presented to the 50 inhabitants who came that day: he has to face crude remarks and vehement reproaches.

A new front seems to emerge, between employees of AySA, social workers and representatives of the *municipio*: "we are all representatives of the State" says Guillermo, from the *municipio*. His discourse is clearly political, presenting all the efforts made by the

company and the *municipio*. He will later recognise that the *municipio* has no budget for the construction, as AySA takes care of all the expenses. The commitment of the water utility seems to be immense, but there is a clear lack of some other aspects of material citizenship: inhabitants constantly ask for regular streets, pavement, and a better garbage management. Clearly, water supply will bring an improvement of living conditions, but this will remain only part of what is needed, the social workers of AySA regret.

However, water supply will bring some part of legality in a district where the inhabitants traditionally pay nothing to regular utilities. Though the sum will be quite symbolic, inhabitants will receive bills. They will not have a metered tariff, but a fixed charge according to characteristics of the districts. In the current situation, it means that they are going to be charged 10 pesos every two months on average. But one has to keep in mind that this is a socially highly difficult district where people do not pay anything, and where there is no legal supply of electricity or water, and where sewerage are lacking. This will represent a tremendous change. Experiences in other districts in Lomas de Zamora or in La Matanza have proven the importance of such an improvement for the populations, considered as a first step towards a full recognition, let alone a feeling of citizenship. Today, one could feel that water supply was enshrined in a larger picture and was genuinely a “comprehensive social issue.”