

FRAMEWORK CONDITIONS FOR PRIVATE SECTOR PARTICIPATION IN WATER INFRASTRUCTURE IN MEXICO¹

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This document was developed as part of a dialogue on private sector participation in water infrastructure in Mexico led by the OECD in collaboration with CONAGUA. It contributes to a broader OECD / CONAGUA partnership in support to the implementation of the 2030 Water Agenda. The document assesses the enabling environment for private sector participation in water infrastructure in Mexico, using the OECD *Checklist for Public Action* and highlights areas for consideration by the government. The assessment builds on answers to a Questionnaire, material provided by CONAGUA and other key water stakeholders, publicly available material (listed at the end of the document), comments received at two CONAGUA/OECD workshops (organised in February 2011 and in February 2012) and interviews with various stakeholders, including private operators.

The National Water Programme (PNH) 2007-2012 and the National Infrastructure Programme (PNI) 2007-2012 provide the broad policy frameworks under which private sector is expected to contribute to the national efforts to build and manage water infrastructure. According to the PNH, private sector is expected to contribute the necessary technology and funding to construct, operate and maintain the major works required by the water sector. The National Infrastructure Program identifies public-private partnerships as the appropriate vehicle for these efforts and puts forward some 300 infrastructure projects in multiple sectors, including water. The 2030 Water Agenda launched by CONAGUA in March 2011 builds on these programmes to highlight the importance of mobilising investment in the water sector, of strengthening the financial autonomy and sustainability of water utilities and of bringing technical and commercial efficiency gains in water systems. Under the appropriate enabling environment, the private sector is seen as being part of the solution.

The rapid uptake of BOT contracts for the development of mainly wastewater treatment plants has shown that incentives be in place – subsidies for project investment and the consequent reduction of long term fee, guarantees for private sector, specific financial instruments to manage the project funds, financial and risk sharing mechanisms as provided by the PROMAGUA programme (Box 4) –, there was private appetite for private sector participation (PSP) in water infrastructure. There is a need today to evaluate these experiences at programme level in order to improve the approach and draw the lessons that can be replicable to other segments of the water sector. In particular, involving the private sector in the provision of water and sanitation services (WSS) has proved to raise important challenges that relate to the country's

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capacity to establish and implement the enabling environment for improved technical and commercial efficiency in water service provision and strengthened financial sustainability of utilities.

This document provides an overview of recent developments in private sector participation in WSS and highlights the areas for consideration by the government: the fragmented institutional and policy framework; the development of a sound regulatory framework for WSS; the weak financial sustainability of the sector; and the shortcomings in accountability mechanisms.

1. Context and recent developments with private sector participation

- The needs in infrastructure investment and efficiency gains to address the challenges raised in the 2030 Water Agenda are tremendous. They represent important opportunities for private sector involvement.
- Mexico has significant experience involving the private sector in the water sector, both successful and less successful, from which important lessons can be learnt.
- The shift in culture towards efficiency enhancement and demand management approaches, away from a pure logic of infrastructure development is underway but remains incomplete, in particular at the subnational level.

The context

While the country faces important hydrological disparities across its territory, it also displays strong common denominators: the country is mostly arid or semi-arid, rains are heavy, limited to a few months per year and there is a mismatch between population concentration and rain distribution. This profile has generated an important need for water catchment and transport infrastructure (see Tortajada, 2006). Today, however, aquifers are largely depleted and the gap between water demand and supply is widening. It is expected to reach 23bn cubic meters by 2030 (for all water uses) according to the 2030 Water Agenda, taking into account current trends of population, industrial and agricultural growth and existing and planned infrastructure development.

Access to water services is relatively good according to available national statistics (at 91.6% of the population for drinking water and 45.7% for sanitation with preliminary results from 2011). However, level and quality of wastewater treatment remain low and efficiency of service provision stays outside of what can be considered good practice in OECD countries². According to the 2030 Water Agenda, only some 40% of collected municipal wastewater and 16% of industrial wastewater were treated in 2010, owing to insufficient installed wastewater treatment facilities and underperformance or non-operation of some of the installed ones.

Overall, the authorities estimate that reaching the level of treatment which meets discharge standards will require levels of investment of some 114bn pesos (USD9.5bn). Achieving universal access to water services – i.e. connecting some 36.7 million inhabitants to drinking water and some 40.5 million to sanitation by 2030 – will require investments in network extension, wells development and rainwater harvesting of some 215bn pesos (USD17.8bn). The National Water Programme (PNH) also aims to improve efficiency of water service provision by 8% through support of 80 municipalities above 50,000 inhabitants. However, important constraints on public spending and slow and little progress made so far to improve efficiency and quality of service provision have been suggesting that stronger involvement of the private sector in the financing and management of water infrastructure and services could help to move the Water Agenda of Mexico forward.

² For instance, leakage rates are typically in the range of 10 to 20% in OECD countries.

The scope for improving efficiency – both physical and commercial – is also important. According to CONAGUA³, in 2011 average measures of efficiency reach 57.6% (physical), 76.6% (commercial) and 44.1% (global) in Mexico. The need to improve WSS efficiency has been clearly signposted in the 2030 Water Agenda. However, implementing efficiency-enhancement measures requires an important shift in the water sector culture – from one strongly focused on the supply side and development of new infrastructure, to one allowing the implementation of softer options, typically aimed at reducing operational, commercial and management inefficiencies and focusing on water demand management, as well as networks’ better connection and maintenance. Awareness of this challenge has built within CONAGUA, as illustrated by the four programs (PRODDER; PROMAGUA; APAZU; PROME) with a strong focus on efficiency improvement. It is not clear yet, whether this has trickled down to other parts of the government, including at sub-national level, in particular within municipalities responsible by law for providing WSS.

Recent trends in private sector participation

In recent years, Mexico has had several experiences involving the private sector in the development and management of diverse segments of water services provision and has proved to be an important laboratory of innovative PSP experiences. In particular, recent years have seen a rapid uptake in BOT (Build-Operate-Transfer) contracts for the development and management of wastewater treatment plants. In terms of risk transfer and depth of private sector involvement, however, the experience of Mexico remains relatively limited: private participation remains contained to punctual contracts for a well delimited set of single infrastructures. The shift towards deeper transfer of risks and responsibilities to the private sector – which would likely bring deeper efficiency gains, but would also carry more risks in the absence of a proper regulatory framework – remains in its infancy. In particular, service provision remains for its vast majority in the hand of the public sector.

Box 1 – PSP in WSS, managing the partnerships in a complex sector

As highlighted in OECD (2009), the water sector cumulates a number of characteristics – summarised in Figure 1 -, that make the involvement of the private sector a complex endeavour and underline the importance of risk management, of the institutional and regulatory framework and of strengthening the creditworthiness of the sector. In particular:

- i) High fixed costs coupled with long-term irreversible investments and relatively inelastic demand tend to make it a monopolistic sector in which competition is difficult to introduce and regulation plays a central role.
- ii) Water is a basic need. Water quality and access have important externalities affecting health, gender equality and the environment. These justify a public policy interest.
- iii) The responsibility for water and sanitation service provision often rests with local authorities. Nevertheless, the importance of the externalities, of taking into account the full water cycle and of optimising economies of scale requires an integrated approach to development and management of water infrastructure and service provision.
- iv) The sector involves numerous stakeholders and suffers from segmentation of responsibilities – notably across government tiers and public agencies.
- v) Investors in the water and sanitation sector are faced with commercial risk, contractual risk, foreign-exchange risk, sub-sovereign risk, arbitrary political interferences, and complex pricing policies with multiple objectives, such as cost recovery, economic efficiency, environmental objectives, equity and affordability.
- vi) Long-term relationships, limited competition and irreversibility of infrastructure and technology may expose the sector to risks, particularly of capture by vested interests.

Source: OECD (2009). Private Sector Participation in Water Infrastructure. OECD Checklist for Public Action. www.oecd.org/daf/investment/water

³ Based on CONAGUA’s monitoring of 80 water utilities providing services above 20,000 inhabitants.

Since 1997, 38 BOT (Build-Operate-Transfer) projects for wastewater treatment plants, aqueducts, desalination plants and 1 Management Improvement Project (MIG) have been registered under the PROMAGUA programme (Box 4); and 8 concessions or management and service contracts have been adjudicated in 5 municipalities (over the 1200 water providers that the country counts). These included:

- 4 service/management contracts sharing service provision of Mexico city, initially adjudicated in 1993 for 10 years and renewed;
- 2 concessions (one in Cancun & Islas Mujeres and one in Aguascalientes) granted in 1993;
- 1 contract for commercial functions in Puebla (1998-2008);
- 1 concession with a mixed company (between the municipality of Saltillo and Aguas de Barcelona) signed in 2001 in Saltillo. In essence, the municipality maintained majority ownership and control of the resource, but the administration and execution of projects were delegated to the private sector.

Annex 2 provides a snapshot of PSP experiences in a selection of municipalities, focusing on the characteristics of the municipalities under consideration, WSS performance, the main elements of the PSP experience and the difficulties faced.

Rapid uptake in BOT contracts for waste water treatment plants

According to CONAGUA⁴, in the period 2007-2011, some 636 treatment plants were built, rehabilitated or extended in cities with population above 20,000 allowing an additional 21.2m³/s of wastewater to be treated and bringing the level of treatment of wastewater collected from 36.1% to 45.7%. Among the wastewater treatment plants of highest capacity (capacity > 500l/s) in operation, some 17 projects were undertaken under the PROMAGUA allowing a private investment of some 4.4bn pesos (€0.25bn) – or 2/3 of total investment (the remaining investment coming from the FNI). A further 4 wastewater treatment plants were under construction (as of April 2012), allowing private contribution of around 7.3bn pesos (€0.4bn) – half of total investment. As of April 2012, 11 additional projects were under formalization, expected to add 1.9bn pesos (€0.1bn) of private investment. PROMAGUA has also provided an opportunity for the development of desalination plants in cities located near the coasts – including Los Cabos, Baja California Sur and Ensenada in Baja California (not under construction yet).

This uptake in BOT projects is not unique to the water and sanitation sector. It mimics similar achievements in other sectors, such as waste management, roads, ports, airports and highlights the importance of success factors for such schemes, which include a stable regulatory framework and an attractive financial package involving guarantees.

However, CONAGUA, OECD, IMTA (2010) notes that the success of BOT projects did not help improve the level of efficiency of water providers and the costs of services increased. Quick uptake in these projects most likely reflects the attractive package put together via the PROMAGUA mechanism, which combines subsidies granted by the Federation and a guaranty scheme from the local or state level that ensures the investor that the municipal water company complies with its payment obligation. At the same time, these BOT contracts are typically limited to a single infrastructure and impact only to a limited extent the overall management of the water system of a municipality. Consequently, while this type of contractual

⁴ Strategic Projects for drinking water, sewerage and sanitation: www.CONAGUA.gob.mx/english07/publications/StrategicProjects.pdf. The website is regularly updated. It was last consulted on 4 April 2012.

arrangements can help meet the upfront costs of infrastructure investment (which will nevertheless have to be repaid over time based on revenues from the municipal utility), it is not likely to address the more systemic lack of operational or commercial efficiency of the system.

An evaluation of the performance of the overall BOT programme (investment levels, improvement in access, impact on costs of services and on fiscal accounts) would help identify ways of improving the approach to private sector participation in the development of water projects. In particular, the overall programme assessment could consider the direct costs and improvements brought by the BOTs, but also the broader spillovers on service provision in related network, with a view to identify the accompanying actions that should be undertaken to ensure both that bottlenecks to full benefits from upgrading / development of the new infrastructure are removed and increased capacity / improved efficiency spill over the supply chain.

The bottlenecks to private sector participation in service provision

According to CONAGUA *et al* (2010), the 3 concessions of Cancun & Islas Mujeres, Aguascalientes and Saltillo helped increase water and sanitation service coverage through capital investments and improve the operating efficiency of utilities and their financial sustainability. Important lessons can be learnt from these early experiences (see Box 2), which highlight some of the challenges that Mexico faces when involving the private sector in long-term contracts in the water sector, as well as the success factors.

Box 2. Learning from PSP experiences in WSS

In both Cancun and Aguascalientes, the incumbent water operator was in a critical condition before the involvement of the private sector in 1993 - in Aguascalientes, for instance, water losses reached 70% - and coverage and efficiency improved dramatically subsequently. This provided an important scope for improvement to the private partners.

The two concessions share a number of characteristics that explain their sustainability:

In both cases, the full concession was preceded by shorter and lighter contractual arrangements that allowed greater understanding of the 2 parties and better knowledge of the underlying state of the assets and consumer base. In the case of Aguascalientes, the concession was preceded by a 3 year service contract. In the case of Cancun, the concession was preceded by a service contract with a subsidiary of the Grupo Mexicano de Desarrollo.

Both concessions benefited from political stability and credibility of the regulator. In the case of Cancun, the 30 year concession is under State regulation (CAPA: Comision de Agua Potable y Alcantarillado del Estado). Consequently, it is less influenced by political cycles than it would under municipal regulation (governors have 6 year mandates against 3-year for mayors). In the case of Aguascalientes, regulatory functions have been established outside of the contract and entrusted to CAPAMA (Comision de Agua Potable y Alcantarillado del Municipio), which supervises the performance of the private operator, approves tariffs setting and provides dispute resolution mechanisms.

Both concessions were severely shaken by, but managed to overcome, the deep economic crisis that affected Mexico in 1995. The crisis sparked a currency devaluation, leading to an increase in the costs of water utility operations and a decrease in consumer's ability to pay their water bills. Under these conditions, politicians were hesitant to permit tariff increases, and water operators were left with unserviceable debt. In the case of the Aguascalientes, the Mexican national bank, Banobras, aided the private concessionaire with its debt. In both cases, the crisis led a renegotiation of the contract and the introduction of essential elements, such as price adjustments and dispute resolution mechanisms, as well as regulatory functions outside of the contract.

Both concessions nevertheless face important challenges:

In particular, in Cancun, while the institutional setting provided stability to the project as long as political leadership remained the same at State and municipal level, recent political turnover is making the concession a source of conflict between levels of government. The concession also faces important challenges related to the strong growth of the city, which is putting pressure on the urban planning capacities of the municipality and is threatening the system of cross-subsidies (see section on financial sustainability). Over 2002-2010, the concession was able to absorb 7.5% additional clients per year (from 111 thousands in 2002 to almost 200 thousands in 2010). However, with hurricane Wilma and

the important urban migration, settlements have sprawled and urban planning has not kept pace. As a result, the system is not necessarily expanding in a rational way and the cost of new connections and investment needs are rising. At the same time, revenues are not following suit, threatening the financial sustainability of the system.

The innovative case of Aguas de Saltillo

In March, 2001, the municipality of Saltillo, Coahuila and its water utility (Sistema Municipal de Aguas y Saneamiento de Saltillo - SIMAS) launched a public bid to create a mixed entity (51% SIMAS and 49% private operator) to provide water and sanitation services in the city of Saltillo. In August 2001, an Association Contract and a Technical Assistance Contract were signed with Interagbar de Mexico SA de CV (AGBAR) for a duration of 25 years. The company has been operating since October 2001, providing by March 2011 water through 199,857 connections, and employing 385 workers. The current equity structure is 55% SIMAS and 45% Interagbar de México.

This experience has shown the benefits of this specific form of partnership with the private sector, in particular, its potential for mitigating a number of risks: a) Political interference in the management of the water utility has been reduced with the private operator appointing the General Manager; b) The company is protected from undue dissolution with each political change in the municipality thanks to a 25 year contract involving a chapter on dispute resolution; c) Interests between partners are balanced, owing to a ballot mechanism for topics which must be approved by certain number of votes of the advisers; d) Correct vigilance of the finance of the company, due to the possibility of each partner to name a commissioner for auditing the company and reporting to the Board of Directors; and e) Technology transfer, ensured by the Technical Assistance Contract.

The mixed company has nevertheless had to face a number of challenges, including: a) Geographic limitation: the contract applies only to Saltillo and excludes nearby municipalities, which are in need of assistance; b) Tariffs: tariffs are increased every month to take into account inflation but not any other types of contingencies. This threatens the financial balance of the company in case of natural disasters, new taxes, increase in the costs of electricity, cancellation of taxes deductions, among others.

Despite some of the successes achieved through the use of concessions and the existence of a market for PSP (in Mexico, 30 cities are above 500,000 inhabitants and 216 above 50,000), the trend in PSP in the provision of water and sanitation services stalled after 2001. The private sector appears reluctant to get involved in WSS, in spite of the efforts of the authorities to incentivise private sector participation, including through new schemes such as MIG which aims to support efficiency gains through municipal delegation of parts of WSS systems (see Box 4).

As an example, the first two bidding processes in San Luis Potosi to develop a MIG scheme were unsuccessful to attract private sector interest, highlighting the bottlenecks and less attractive risks/returns profile of this specific segment of the water sector and the need for well-tailored contractual arrangements and financial mechanisms. This has led CONAGUA and other Federal institutions to have a closer look at the characteristics of the projects under consideration and at the conditions under which beneficial PSP could be incentivised in water infrastructure. Consequently, a third bid was launched in November 2011, accompanied by several workshops and clarification meetings where feedback from the private sector was sought. Six companies submitted bids. The winner, a consortium led by Cobra Instalaciones México SA de CV was announced on March 30, 2012. The bid process was not contested by the private partners.

2. A fragmented institutional and policy framework

- Responsibilities across levels of governance are fragmented, leading to capacity and coordination challenges. It combines with an incomplete decentralization process to generate important heterogeneity across States.
- There are structural bottlenecks at local level to pursue greater cooperation with the private sector. In particular, given the short term mandate of mayors, the timeframe to develop a BOT and administrative time to register the projects create disincentives for political leaders to use this mechanism.

The OECD Checklist for Public Action: enhancing the enabling institutional environment

The government has the essential responsibilities of establishing the enabling environment for making the cooperation with the private sector work (**Principle 5**). In particular, water is a segmented sector, with oversight responsibilities for resource management and service provision often split horizontally between different Ministries, and vertically across national, regional and local authorities. This may raise important capacity challenges and also generate issues of consistency across government levels. Careful allocation of roles and responsibilities is needed across different authorities, taking into account existing capacity gaps, and based on resources allocated in line with duties and distributed in a predictable way (**principle 10**), as well as building common understanding across levels of government on the objectives, means and resources for water provision (**principle 11**).

Principle 5. Enabling environment. A sound and enabling environment for infrastructure investment, which implies high standards of public and corporate governance, transparency and the rule of law, including protection of property and contractual rights, is essential to attract the participation of the private sector.

Principle 10. Empower authorities responsible for privately-operated infrastructure projects. Authorities responsible for privately-operated infrastructure projects should have the capacity to manage the commercial processes involved and to partner on an equal basis with their private sector counterparts.

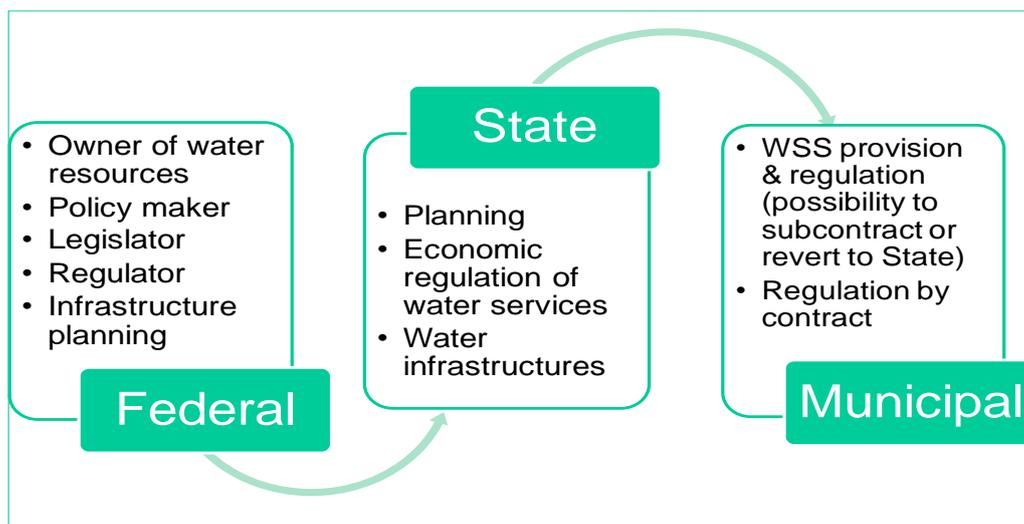
Principle 11. Clear and broadly understood objectives and strategies. Strategies for private sector participation in infrastructure need to be understood, and objectives shared, throughout all levels of government and in all relevant parts of the public administration.

Source: OECD (2009). Private sector participation in water infrastructure. OECD Checklist for Public Action.

OECD (2004) noted that overall, the transformation of Mexico towards an authentically federal country still required substantial actions to promote accountability, institution building and intergovernmental co-ordination. Looking at the different tiers of government, OECD (2003) further noted that “States are free and sovereign”, which is made possible in effect by the fact that “Mexican state governors are the only executive officers to be elected state-wide”. However, “The autonomy of municipal government has been severely limited, rendering it the weakest tier of the Mexican government”. As an illustration, municipalities are responsible for public service delivery, but heavily depend on federal and state transfers (tax rates that have to be approved by State legislature).

The water sector has a complex organization and involves many stakeholders. Fragmentation of responsibilities is always a risk. By Constitution, the sector is managed at three levels (Federal, State and Municipal) and involves a number of agencies and consultative bodies in addition to the 3 levels of government. According to Article 27, the federal government is the owner of water resources, with a right to transfer the titles to other parties. Article 115 assigns to municipalities the responsibility for providing WSS, with the possibility to subcontract this responsibility to autonomous service provider under their supervision. In a few instances, municipalities have relinquished their prerogatives to the State and water is managed by a water commission. This is for example the case in Quintana Roo, Nuevo León, Yucatán and Querétaro. In other cases, there is a good coordination between states and municipalities like in Baja California, Chihuahua, Coahuila, Veracruz, Tamaulipas, among others. In addition, States have the responsibility for planning, regulating, developing big water infrastructures and for economic regulation of water services (tariff setting) – either through State Congresses or Water Commissions. In the cases where water infrastructure is shared by two states, CONAGUA is responsible for carrying out the projects in coordination with the states and the municipalities.

Figure 1. A three tier allocation of responsibilities



Other relevant public institutions involve:

- CONAGUA (www.cna.gob.mx), a strong administrative, normative, technical, consultative, deconcentrated agency of the federal government (Semarnat), with regional offices in each state, in charge of managing water resources in the country. According to CONAGUA *et al.* (2010), CONAGUA's functions include the development of the national water policy; administering the rights for water use and wastewater discharge; planning, irrigation and developing drainage systems; managing emergency and natural disasters and managing investment in the water sector. CONAGUA funds the majority of its activities with direct budgetary transfers from the Federal Government and with the payments it receives for water use and wastewater discharge duties. It disburses those funds back to states and municipalities through diverse programmes (see notably Box 4).
- The National Association of Water and Sanitation Companies (ANEAS, www.aneas.com.mx) is an association of WSS providers with the aim to support professionalization and autonomy of operators and efficiency gains in WSS provision. It was established in 1981 and gathers today more than 700 members. It plays an important role as an interface with the various levels of government and the parliament.
- Banobras (www.banobras.gob.mx) is the Mexican Development Bank in charge of promoting and financing infrastructure projects and public services, mainly, through sub-national government lending and project finance. The Bank acts as trustee for the National Infrastructure Fund (FNI, see Box 4).
- The Ministry of Civil Service (SFP) is responsible for overseeing competitive biddings in relation to PPPs and public procurement. It is in charge of solving the possible controversies arising from the claims by the bidders of an abnormality in the bidding process. It has competencies to stop the bid and order a review of the proposals, as well as to ask for a new award of the bid.
- The Investment Unit of the Ministry of Finance (Unidad de Inversiones, SHCP) reviews the cost benefit analysis of projects carried out by contracting authorities, asks for clarifications and ultimately registers all the water projects within PROMAGUA and other programmes. In other sectors, UI also compares the PPP scheme with traditional procurement (value for money

evaluation), reviews the draft of PPS schemes (projects for the provision of service modelled on the UK PFI case) and participates in the approval process for funding of BANOBRAS and FONADIN.

- In addition, the National Water Law foresees a number of participatory mechanisms and bodies under various degree of activity: 25 River Basin Councils, 21 River Basin Commissions, 78 COTAS (Technical Groundwater Committees), 31 Clean Beach Committees and a Water Advisory Council.

In addition to the fragmentation of the institutional framework, a certain lack of continuity in top and middle management of government bodies – be it at federal or sub-national level – generated by frequent and profound political turn-over is also a cause of loss of competencies, and a source of disruption for long-term action of these authorities.

A legal framework under consolidation at the federal level

Private sector participation in water is framed by a number of legislations, including the National Water Law (1992) - which provides the general framework for private sector participation in water infrastructure under federal government responsibility -, and a number of policy documents (see Table 1), such as the National Development Plan (PND), the Sectoral Environmental and National Resources Programme (PSMARN), the National Water Programme (PNH), the National Infrastructure Programme (PNI), the National Hydrological Programmes and the River Basin Organisations Programme (Vision 2030).

Table 1. Policy documents and their relevance for PSP

| Programmes | Horizon | Relevance to PSP |
|--|-----------|---|
| Sectoral Environmental and National Resources Programme (PSMARN) | 2007-2012 | This Programme of the federal government establishes the Blue Agenda and the specific goals to increase water and sanitation coverage, as well as to increase efficiencies in water utilities. As in the PNH and the PNI the private sector is expected to contribute to the achievement of these goals. |
| National Water Programme (PNH) www.CONAGUA.gob.mx/CONAGUA07/Contenido/Documentos/PNH_Ingles.pdf | 2007-2012 | In objective 2 (To increase access to and quality of drinking water, sewerage and sanitation services), the private sector is expected to contribute the necessary technology and funding to construct, operate and maintain the major works required by the water sector. Promagua is highlighted as a key instrument to support private sector contribution along public resources. |
| National Infrastructure Programme (PNI) | 2007-2012 | The National Infrastructure Program identifies over 300 infrastructure projects in multiple sectors, including water, representing over \$150 billion to be financed using public-private partnerships, with significant Mexican public sector investment. |

In addition to the policy documents endorsed at federal level, CONAGUA launched in March 2011 the 2030 Water Agenda, after a series of consultations. The Agenda identifies a number of initiatives to consolidate sustainable water policy in Mexico and notes the need for the water sector to attract private resources. It also puts the emphasis on improving the legal framework to insure that the partnership with the private sector is beneficial. Initiative 32 for instance mentions the importance of “modifying state laws and their bylaws in order for them to regulate public–private investment in water infrastructure”, on the grounds that for this type of investment “to be successful, it is necessary to have effective regulatory

frameworks that recognize the legitimate interests of stakeholders and concession systems that are harmonized with the development objectives” (see Annex 1).

There have been recent efforts at the federal level to consolidate the legislative framework for PSP. This effort at Federal level aims to provide a broad legal framework for PPPs and ensure investor security - it foresees for instance conflict resolution mechanisms. However, it is not sector-specific and does not mention contractual forms. For that, more legislative tools might be needed, including sector-specific ones.

Table 2. The legislative environment for PSP at federal level

| Law | Adoption modification | Provisions of relevance to PSP |
|---|---|---|
| Law for acquisitions and litigations (<i>Ley de Adquisiciones, Arrendamientos y Servicios del Sector Publico</i>) | 2000, last modification in January 2012 | <ul style="list-style-type: none"> • Allows for long-term contracts in service provision • Introduces dispute resolution mechanisms |
| Public Works and related services Law (<i>Ley de Obras Publicas y Servicios Relacionados</i>) | 2000, last modification in January 2012 | <ul style="list-style-type: none"> • Introduces the possibility of PPPs in the development of infrastructure |
| Law on public/private association (<i>Ley de Asociaciones Publico Privadas</i>) | January, 2012 | <ul style="list-style-type: none"> • Provides a cross-sectoral legal framework for PPP projects undertaken at federal level or with a proportional majority of federal resources. • Establishes contract duration at 40 years (with possible extensions). • Foresees the possibility of unsolicited projects. • Includes provisions related to the financing of projects, step-in rights of the government and circumstances under which the PPP contract can be amended. |
| Law on WSS | Planned | Addresses allocation of responsibilities across levels of government |

The Law for acquisitions and litigations (*Ley de Adquisiciones, Arrendamientos y Servicios del Sector Publico - LAASSP*) was modified both to allow for long-term contracts in service provision – de facto integrating PSP – and to introduce related dispute resolution mechanisms (the latest version was issued in January 2012). In parallel, the public works and related services Law (*Ley de Obras Publicas y Servicios Relacionados*) was modified to introduce the possibility of PPPs in the development of infrastructure (the latest version was issued in January 2012). The new federal Law on public/private association (*Ley de Asociaciones Publico Privadas*) of January 2012 regulates the upstream preparation of projects, provides ways of dealing with unsolicited projects and facilitates project development; and amends *LAASSP* accordingly (Box 3).

Box 3. Law on public/private association (Ley de Asociaciones Publico Privadas)

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|---|
| <p>The PPP Law is cross-sectoral and includes provisions that address:</p> <ul style="list-style-type: none"> - PPP project preparation and design (including unsolicited bids); - Call for tenders and bids’ allocation (content and evaluation criteria); - PPP contracts characteristics; |
|---|

- PPP implementation (monitoring, terms of termination, dispute resolution mechanisms).

According to the Law, PPP projects are defined as long-term contracts between the public sector and the private sector for the provision of public services.

Project preparation and design

PPP projects' background studies must take into account an environmental performance analysis; as well as an analysis of (i) costs and benefits, (ii) social cost-effectiveness, (iii) contract duration and (iv) possible project/financing alternatives.

Unsolicited bids are allowed and must present (i) a project's description, (ii) the technical characteristics, (iii) a description of the necessary authorizations for the implementation of the project, (iv) the project's legal viability, (v) social cost-effectiveness, (vi) the project's economic and financial viability, and (vii) the respective responsibilities of the contracting parties. The contracting authority has 3 months to analyze and evaluate the proposal.

Call for tender

Call for tender must include at least: (i) the technical characteristics and specifics of the PPP project; (ii) the project's minimum levels of performance; (iii) technical characteristics and specifics for infrastructure construction and execution, when necessary; (iv) the necessary property, goods and rights to develop the project; (v) the location of the service provision; (vi) the possible risks of the projects; and (vii) how the parties will fulfil their legal, technical, administrative, economic, and financial obligations.

Bids are selected on a multi-criteria basis.

PPP Contracts

PPP contracts refer to the provision of services agreed upon in the projects, and in some cases, the use of infrastructures necessary to provide the services.

Contracts for PPPs must state, at least: (i) the object of the contract; (ii) the rights and obligations of each party; (iii) the specific characteristics, technical standards, and performance and quality levels necessary for the service provision; and (iv) project financing conditions.

The contracted party's obligation is to provide the agreed upon services, at the performance levels set by contract, and to invest the necessary resources.

Contracts duration can be 40 year or more (possible extensions).

PPP Project Monitoring

The Ministry of the Public Sector (Secretaria de la Función Publica - SFP) is responsible for supervising the bidding process, the regulation and monitoring of PPP processes.

Monitoring of service provision itself and of achievement of projects' performance is the responsibility of the contracting authority.

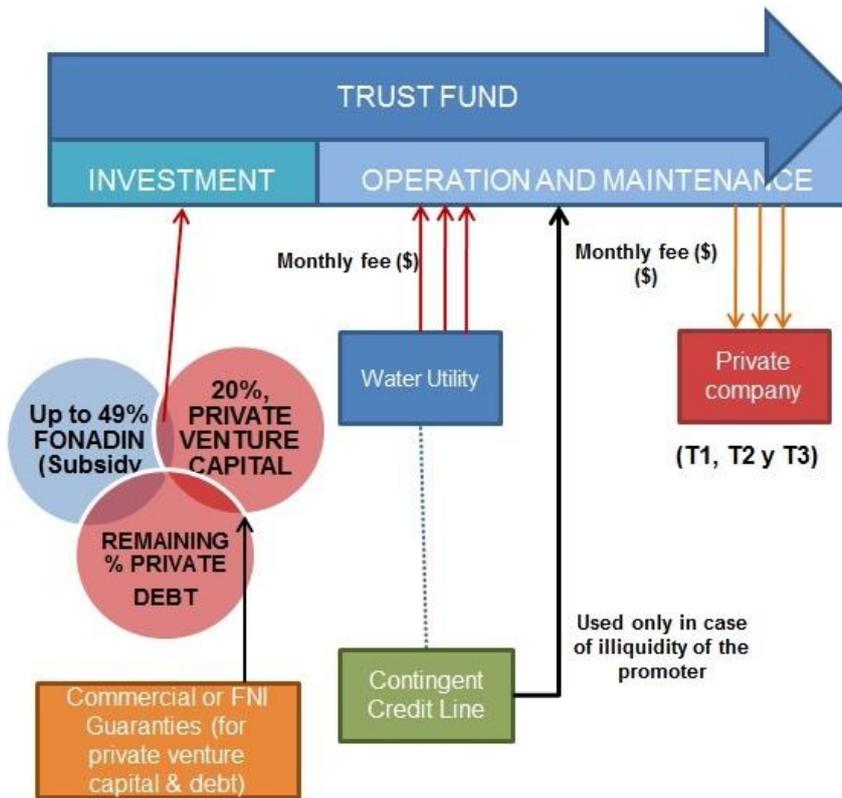
PPP Dispute resolution mechanisms and termination clauses

In case of economic or technical disagreement, parties can settle disputes via the mediation of an expert committee (with representatives chosen by both parties). Disputes are formally settled in administrative courts via the SFP.

Deficiency in service provision, modalities of service provision that differ from those agreed by contract, or the suspension of service provision for more than seven following days are causes for PPP contracts termination.

In addition to the various legislations and policy documents, a number of federal programmes exist to incentivise PSP through financial mechanisms – mostly blending of public and private money, like PROMAGUA (see Box 4 and Figure 2).

Figure 2. Financial scheme of a PROMAGUA project



Source: CONAGUA

Box 4 – Federal financing programmes incentivizing PSP

PROMAGUA (Programme for the modernization of water utilities, 2002) aims to boost investment in support of water coverage and increased efficiency for mainly cities above 50,000 inhabitants. It supports PSP through long term service contract, provides a subsidy for the compulsory planning study (Integrated Planning and Diagnosis) and allows for a mixed financing of investment (up to 49% provided by FNI), making compulsory the PSP and the allocation of private venture capital. As of April 2012, there were such 38 projects either under development or planned – 32 in sanitation, 5 in water services and 1 MIG – for the equivalent of MXP36.8bn (USD2.8bn) investment.

FNI (National Infrastructure Fund) – was created in 2008 as a financing mechanism for infrastructure (including water), with a PSP requirement. FNI provides financial assistance either as subsidies or through loans or guarantees, in exchange for the private sector to invest equity in infrastructure projects. The technical committee of FNI has representatives from various ministries, CONAGUA, Banobras and some States. FNI funds are channelled through Promagua to support the investment in water projects.

Recently, CONAGUA and Banobras have started working with a number of municipalities to develop specific contracts (called **MIG, Mejora Integral de Gestion**) to incentivize efficiency gains in the management of utilities through the involvement of the private sector. To date, this mechanism is on a pilot phase. San Luis Potosi is an example of a municipality that is developing such a contract with a view to increase the operating efficiency of the WSS provider by 30% in 4 years, under a 12 year contract. The private company will be compensated through a fixed fee incorporating a return on investment conditioned to the efficiency gains achieved. Of the estimated Mex\$880m investment needed, the federal government will provide 40% through subsidies, the private sector will be in charge of the debt investment (40%) and the private venture capital (20%).

Coherence between these various programmes and other federal mechanisms that channel financing in the WSS may raise some challenges. Private sector participation is an option that municipalities may contemplate when considering a new investment. Depending on whether they choose that option, municipalities can call on different support mechanisms: Promagua if PSP is part of the project, Apazu otherwise. Apazu, the Programme for Water, Sewerage, Sanitation in Urban Zones has been supporting WSS coverage, improvement in technical and commercial efficiency, capacity building and infrastructure development and upgrading through subsidies since 1990. It offers subsidies and has limited administrative requirements. By comparison, Promagua requires a long administrative process relative to the municipal term (3 years) and involves more studies and a cost-benefit analysis (DIP, Cost-Benefit Analysis, among others) as a prerequisite to the official registration in the Ministry of Finance. Several participants in the CONAGUA/OECD workshop of February 2011 suggested bringing the requirements of the 2 schemes closer to avoid selection bias. While some administrative simplification would benefit Promagua and make it more in line with the capacity of municipalities to use it (by bringing down the administrative delay to 18 months for instance), the DIP and the cost benefit analysis requirements are useful elements that strengthen the consistency of public planning and could be extended to other programmes.

The newest mechanism put forward by PROMAGUA to incentivize efficiency gains through the involvement of the private sector, MIG (Mejora Integral de Gestion), is in a pilot phase. Initially, however, it raised the concern among private operators that only partial transfer of responsibility would not give the private partner sufficient flexibility and autonomy to achieve the expected performance and would generate conflicts with the public partner. Since then, however, the mechanism has evolved and the new bidding process in San Luis Potosi is reflecting the concern initially raised by MIG. According to the latest terms of reference, the MIG involves that the municipality defines the efficiency gains to be reached in a given time, and lists the main activities that should be carried out in that perspective. The private partner must, in line with its bid proposal, determine the works to be undertaken and related timetable. Penalties are foreseen in case of underperformance (i.e. the efficiency gains are not achieved). Conversely, good performance is rewarded. The parties have six months to agree the base line of indicators upon which the private company will be evaluated. At the end of the operational period, should the efficiency gains not be achieved, the private operator will not be repaid in full for the amount of equity injected in the project.

Strong heterogeneity of situations at sub-national level – but generalized capacity and coordination gaps

The multi-level governance of the water sector is raising a number of difficulties that are relevant to the present analysis (a detailed analysis is however beyond the scope of this review and will be the object of a specific OECD work). First, it raises issues of legal and policy coherence and institutional coordination that may lead to sub-optimal regulation and supervision of contracts, and be interpreted as regulatory risks and additional costs by the private partners, eventually passed on to the users/consumers. Incomplete or inadequate transfer of responsibilities may also generate issues of capacity that hamper the ability of sub-national levels of government to carry out their tasks and create important territorial disparities.

A number of States have also adopted specific PPP legislations (i.e. Aguascalientes, Baja California, Chiapas, Chihuahua, Coahuila, Distrito Federal, Durango, Estado de México, Guanajuato, Hidalgo, Jalisco, Michoacán, Morelos, Nayarit, Nuevo León, Puebla, Querétaro, Quintana Roo, Sonora, Tabasco, Tamaulipas, Veracruz y Yucatán)⁵. In the few instances where the projects make use of federal financial mechanisms (typically Promagua), the federal level is involved to supervise the project studies, included the socio-economic evaluation necessary to register the project with the Ministry of Finance (in the *Cartera de Programas y Proyectos de Inversion*). Otherwise, there is limited or even no federal power in cases where prerogatives are the State's or the municipalities'. In these cases, the accountability and

⁵ All available on the PIAPPEM website: www.piappem.org/Document.php?idDocumentCategory=42

transparency mechanisms to ensure policy continuity between federal and sub-national levels, such as information on financial resource uses or performance of water operators, are limited.

The decentralization process, triggered by article 115 of the Constitution, remains incomplete in some instances. Diverse situations can be found on the ground in terms of service provision, such as decentralised municipal bodies, deconcentrated bodies and State bodies. Often, municipalities were given important responsibilities but not the human and financial resources to carry them out. Capacity of municipalities – coupled with the short term mandate of mayors (and limited financial sustainability of water utilities) - remain important bottlenecks to the development of long-term contracts with the private sector. For instance, inadequate capacity at municipal level has translated in the absence of proper urban development planning, the development of chaotic and often illegal settlements and is ultimately bearing on the development of proper service networks. Past failed experiences of involving the private sector has also shown the pivotal role of municipalities in designing realistic projects that can be sustained over time. In Puerto Vallarta, for instance, a contract for the DBOT (design, build, operate and transfer) of a wastewater treatment plant in 1992 had to be bought back by the municipality after it was hit by the financial crisis. An analysis of the experience showed the unrealism of some of the technical and financial project assumptions made by the municipality at the time – notably the overestimate of the population to be served, and of the treatment facilities capacity.

In this context and given the short term mandate of mayors (3 years), the 24 month timeframe to develop a BOT through FNI and administrative time to register the projects may be necessary but in effect create disincentives for political leaders to use this mechanism (and more generally to undertake significant reforms). Conversely, frequent changes in political leadership are interpreted as substantial risks for the private sector. It is worth noting that the successful experiences with the private sector took place in areas where the Federal government and States had a key role in supervising the contract or where regulatory powers were outside the contracting municipal authority, providing more stability to the contract.

3. The development of a quality regulatory framework for PSP

- The general legal framework for PSP is in place. However, the regulatory framework, in particular economic regulation of water and sanitation service provision, is at a very early stage of development and patchy.
- There is ample room to clarify regulatory role and responsibilities for WSS and introduce better regulation practices across various levels of government. More OECD work in this area is forthcoming.

According to the *Checklist*, the authorities have the responsibility of establishing **Competent, well resourced and independent regulatory bodies**. “Regulation of infrastructure services needs to be entrusted to specialised public authorities that are competent, well-resourced and shielded from undue influence by the parties to infrastructure contracts” (Principle 17).

The main activities of regulation for drinking water and sanitation pertain to regulation of water quality, environmental regulation, economic regulation to oversee monopolistic markets, monitoring of the sector and consumer protection. Setting the right incentives for private sector and preventing rent-seeking behaviour are the key elements of economic regulation in a sector where competition is limited. Prices are the essential, but not only, instrument available to support the efforts of policy makers to balance the following public policy objectives:

- 1) rent extraction or setting rates that strike a socially acceptable compromise between the interests of investors and consumers;
- 2) supply-side efficiency or providing signals and incentives for suppliers and investors to increase efficiency;
- 3) demand-side efficiency or providing signals and incentives for efficient consumption of regulated utility services;
- 4) revenue adequacy or allowing regulated firms to earn sufficient revenue to attract needed capital;

5) fairness or ensuring that prices are just and reasonable, and contribute to universal service goals without creating significant distortions.

Economic regulation also includes the use of subsidies, supervision of commercial contracts and granting of operating licenses. The proper establishment of regulatory functions goes beyond the institutional setting and involves an appropriate allocation of responsibilities across responsible public authorities and its clear understanding and adherence by all.

Source: OECD (2009). *Private Sector Participation in Water Infrastructure. OECD Checklist for Public Action.*

A good regulatory environment is fundamental to achieve the objectives set in the 2030 Water Agenda in relation to water and sanitation service provision and is an essential success factor when involving the private sector. It underpins a number of Initiatives of the Water Agenda and is the particular focus of Initiative 13 of the water Agenda, which aims to “Strengthen the capacities and attributions of the CONAGUA and its State Water Commissions in order to promote, supervise and regulate drinking water and sanitation services”. Currently, there is no formal regulatory body in charge of economic regulation for water and sanitation services in Mexico. In most cases, regulation is done by the contracting authority through the contract. However, the experience shows that, in a context of frequent changes in leadership, there may be value in differentiating the contracting authority from the regulatory body.

According to the latest OECD Public Management Review of OECD (OECD, 2011), while better regulation efforts have been conducted at federal level, little has been done at sub-national level (a dimension of particular relevance for the water sector). Indeed, the Mexican federal government undertook a general review of the regulations inside government (RIG) that resulted in the elimination of 67% of all the rules, and in the publication of nine handbooks of general application in the areas of procurement, public works, human resources, financial resources, material resources, information and communication technologies, transparency, auditing, and control. This is an important effort to improve the quality, efficiency and transparency of federal regulations. However, no such reviews of RIG have been carried out at sub-national level government, a challenging domain, since, according to OECD (2011), the federal government cannot oblige sub-national governments to perform a RIG review. The federal government can, however, provide the incentives to adopt these policies, including financial support for their adoption, performance lists to motivate competition, awards.

Discussions have been underway for some time to establish a strong environmental and economic regulatory body for WSS. CONAGUA has been at the centre of the discussions, as one strong entity able to take more regulatory responsibilities in the sector, should its other duties be made compatible. Past OECD work and reviews of Mexico have underlined on several occasions the importance of strengthening the regulatory framework. The 1999 regulatory Reform report for instance recommended launching a comprehensive, independent review of regulatory agencies in view of improving their efficiency, independence and accountability. It also recommended improving local governments’ regulations governing the private sector provision of public goods and services, private concessions and government procurement. The 2004 Review of Regulatory Reform recommended strengthening the governance framework of the Mexican regulatory authorities to ensure their independence from direct political intervention and regulated interests. In particular, the Review highlighted the need to clarify the responsibilities and focus of CONAGUA (which cumulated 16 functions as of then).

It is not likely that CONAGUA can, in the short run, become an independent economic regulator similar to OFWAT (the economic regulator of the water and sewerage industry) in England and Wales or SISS (Superintendencia de Servicios Sanitarios) in Chile, because of its conflicting missions and the attributions given by the Constitution to sub-national levels of government on regulatory matters. However, there is ample room to clarify regulatory roles and responsibilities for WSS and introduce better regulation practices across various levels of government. In addition, there is a wide variety of regulatory organisations for WSS that are most of the time hybrid systems – combining elements of the “independent

regulator” model and of the French model of regulation by contracts. The literature shows that different organisational and legal architectures can be used to achieve similar results.⁶ Building on the regulatory elements already in place in Mexico - the regulation by contract currently in practice in a number of municipalities, the experience of a number of States in carrying out economic regulation and the strengths of CONAGUA in reaching out to regional and local levels – there is room for a phased approach to strengthening the regulatory framework. In particular, the monitoring and benchmarking functions could be strengthened, as a basis for transfer of capacity and experience from good to lagging performers (see section below on accountability mechanisms).

Forthcoming OECD work in this area will focus on identifying and mapping regulatory functions for WSS and related institutions; and providing recommendations on how to improve role clarity and coordination across institutions; how to ensure the highest degree of regulatory integrity; how to support compliance and enforcement.

4. Financial sustainability

- Reflecting the variety of institutional arrangements and situations at sub-national levels, there is strong heterogeneity across states / municipalities in levels of cost recovery and no consistency in tariff regulation.
- Greater financial autonomy of utilities would open new opportunities to tap on commercial sources of funding, including access the dynamic sub-national bond market, as well as to focus federal subsidies on specific investments.
- To strengthen the financial sustainability of utilities, there is room for tariff increases in some places. In most cases, however, a phased approach involving greater bill collection would help put the balance sheet of utilities on a firmer footing and build consumer trust as a prerequisite for tariff increase (if still needed).
- Much remains to be developed in terms of water services tariff setting. In particular, more information and analysis on the social perception of price increase would help design better targeted pricing policies. There is also a need to share practices across local governments and raise awareness in State Congress on issues pertaining to tariffs to support more consistent approaches to price setting.

The OECD Checklist for Public Action: Financial sustainability and affordability of projects

Financial sustainability of projects is a key focus of the *Checklist* and involves that projects bring value for money - assessed through a cost-benefit analysis (**principle 1**) -, rely on stable and reliable sources of funding (**principle 2**) and are affordable for the government in the long-run (**principle 4**).

Principle 1. Informed and calculated choice. The choice by public authorities between public and private provision should be based on cost-benefit analysis taking into account all alternative modes of delivery, the full system of infrastructure provision, and the projected financial and non-financial costs and benefits over the project lifecycle.

Principle 2. Financial sustainability of infrastructure projects. No infrastructure project, regardless of the degree of private involvement, should be embarked upon without assessing the degree to which its costs can be recovered from end-users and, in case of shortfalls, what other sources of finance can be mobilised.

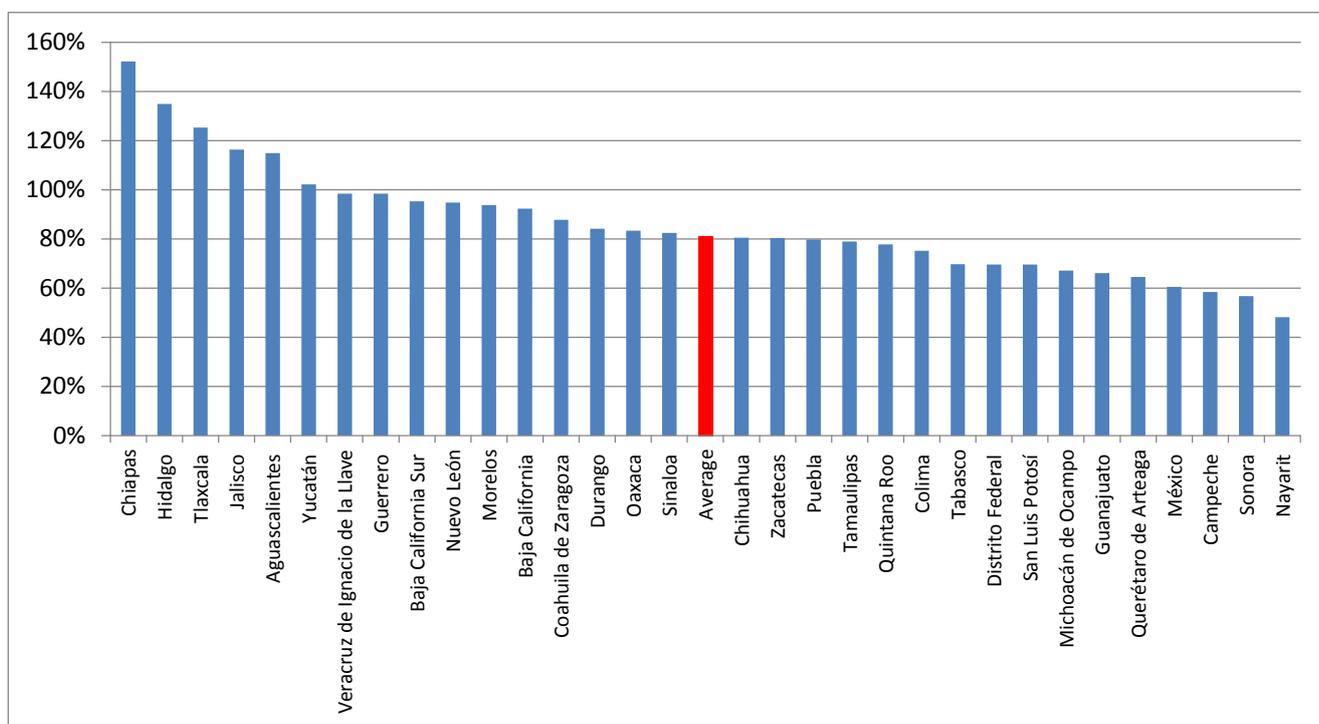
Principle 4. Preserve fiscal discipline and transparency. Fiscal discipline and transparency must be safeguarded, and the potential public finance implications of sharing responsibilities for infrastructure with the private sector fully understood.

Source: OECD (2009), Private sector participation in water infrastructure, OECD Checklist for Public Action

⁶ See for instance Groom Halpern and Ehrhardt (2006). Explanatory notes on key topics in the regulation of water and sanitation services. <http://siteresources.worldbank.org/INTWSS/Resources/WSS6-final.pdf>

In Mexico, most tariffs levels are below cost recovery, but vary widely across municipalities. According to OECD (2004), 2/3 only of water is billed owing to the importance of illegal connections, 4/5 of billed water is paid by users and the sector faces some 40% of water losses. Combining these factors meant that overall, early 2000, only a third of water supply was paid. CONAGUA estimated the average level of bill collection at around 75.2% in 2010 (76.6% in 2011), with important variations across States (see Figure 3). In addition, wastewater collection and treatment costs are not systematically recovered. In Cancun, for instance, 20% of the tariffs are allocated to wastewater collection; but there is no provision to cover the costs of the treatment itself. Confirming the low level of revenue in the sector, CONAGUA *et al* (2010) notes that only 8 of the 69 largest providers had positive operating margin (i.e. revenues from providing water, sewerage and wastewater treatment exceeding expenditures covering salaries, maintenance and operation) in 2008. An analysis made by CONAGUA of a sample of domestic tariffs in 2011⁷, shows that despite an average increase of water domestic tariffs between 2010 and 2011 of 9.1 percentage points (5.4 points above the inflation rate), O&M costs are still not recovered. Consequently, water operators rely mainly on government subsidies to meet their investment needs and this revenue structure is a major impediment to raising commercial sources of funding for investment.

Figure 3. Rate of bill collection in 2010 (collected revenues / bills, %)



Source: CONAGUA (2011). Situación del Subsector Agua Potable, Alcantarillado y Saneamiento. Edición 2011. www.CONAGUA.gob.mx/CONAGUA07/Publicaciones/Publicaciones/DSAPAS%20Edicion%202011.pdf

In addition, strong reliance of tariff setting on cross-subsidies may lead in certain instances to a number of difficulties, as illustrated in the case of Cancun. Traditionally, in Cancun, industrial and commercial clients pay six times the tariff of domestic users. However, strong population growth, at a time when efficiency gains allowed hotels and commercial users to reduce their water consumption, has threatened the equilibrium of the system. This phenomenon was amplified by the fact that a few large water users

⁷ www.CONAGUA.gob.mx/CONAGUA07/Publicaciones/Publicaciones/DSAPAS%20Edicion%202011.pdf

(typically the hotels) have dropped from the network and have developed their own desalination systems (based on licences granted by CONAGUA).

In most instances, tariffs are regulated at municipal level and tariffs increases have to go through State congress for approval (usually on an annual basis), except in 3 or 4 states, among which the State of Quintana Roo where tariff structure is defined by the Congress and applies throughout the State regardless of whether the operator is public or private. In some instances, tariff adjustment and Congress approval are quasi automatic. In others, it requires a more formal process. In most cases, the incentives of political leaders to increase tariffs or reach the production cost are limited. The short-term mandate of mayors coupled with the fact that federal subsidies are in most instances disconnected from performance of the municipalities in providing WSS and largely sustain the sector are clear disincentives to take hard decisions on tariffs (as well as, more generally to improve quality and efficiency of service provision – see Box 5). The cases where tariff increases take place are those where the States are responsible for tariff regulation – the political power is somehow removed from the local administration -; or where tariffs are adjusted automatically on a regular basis - such as in the case of Cancun, where tariffs change once a year for domestic clients and on a monthly basis for other consumers (commercial, hotels and general services).

Box 5 – Incentives based subsidies – learning from the experience of selected EU countries

Except for CONAGUA's programmes, most federal subsidies in Mexico go to the poorest municipalities without incentive mechanisms. This is the case of the "Fondo de Fomento Municipal" for instance and of the Fund for Municipal Social Infrastructure (FAISM), which is allocated based on poverty indicators. A number of papers show the adverse impact that such mechanisms may have on the tax efforts and efficiency of revenue management of municipalities.⁸

OECD (2009) shows the variety of approaches adopted in countries to deal with post-decentralisation implications in the water sector, in particular, the need to align local incentives and capacities with national water policy. Strong common features emerge from this review of case studies of relevance to Mexico, including the promotion of inter-municipal cooperation as a key lever to pool capacity and generate economies of scale. In Austria, for instance, where national support was established to extend water and sanitation infrastructure in urban areas, the subsidy scheme included an incentive mechanism for inter-municipal cooperation, with a provision that allowed municipal associations to apply to higher level of support compared to individual utilities. This triggered a strong development of municipal associations and led to a rapid uptake in access to WSS.

In Italy, various subsidies schemes to rebalance territorial disparities in public service provision and incentivize good performance were put in place and have led to an assessment by the Ministry of Economic development and the OECD (forthcoming). The most recent programme foresees that the Fund for Under-utilized Areas for 2007-2013 is allocated to the 8 Southern Regions (the poorest) based on the achievements of quantified targets (in 4 sectors including WWS) by 2013. A mid-term assessment took place in 2010 to evaluate the progress made in closing the gap between baseline level and targets and already assigning a share of the incentive funds. This scheme replaced previous mechanisms, such as the EC Performance reserve (2000-06) that set aside a reserve (a percentage of EU structural funds) to reward good performance by a set deadline. Important lessons were learnt from earlier experiences with incentives-based subsidies schemes, including:

- Defining indicators and targets at national level
- Setting rules and allocation criteria in detail from the beginning
- Leaving adequate time span to allow actions to be taken to achieve objectives
- Monitoring progress regularly

Source: OECD (2009). Dealing with post-decentralisation implications in the water sector. www.oecd.org/dataoecd/53/22/44096445.pdf; OECD Environmental Policy Review: Italy (forthcoming). www.mrr.gov.pl/rozwoj_regionalny/Prezydencja/Kalendarz/Documents/Strengthening_the_Performance_of_Cohesion

⁸ See for instance Uri Raich, Impacts of Expenditure Decentralization on Mexican Local Governments: www.presupuestoygastopublico.org/documentos/presupuesto/DT%20102.pdf,

To remedy some of the capacity and incentive challenges at local level, the 2030 water Agenda proposes to give more responsibility to the State governments in relation to WSS (Initiative 10), including “that State Congresses guarantee the financial adequacy of water utilities by defining the composition they consider most appropriate between tariffs and subsidies” and assigning “the attribution of water and sanitation services [...] to state governments in all those municipalities that are not in a position to do so, that do not have the necessary capacities or cannot develop them in the medium term.” The agenda also seeks to promote “the definition of water tariffs that obey technical criteria, dissociated from political aspects” (Initiative 12), as well as to strengthen “the capacities and attributions of the CONAGUA and its State Water Commissions in order to promote, supervise and regulate drinking water and sanitation services” (Initiative 13). Strengthening the role of the States in setting and revising water tariffs could contribute to depoliticizing the approach and ensuring that long-term dimensions are taken into account. This may nevertheless require working with State Congresses to raise awareness and build greater understanding on the rationale and political economy of tariff setting – their link with costs and their importance when combined with other instruments to ensure the objectives of financial sustainability, environmental sustainability, efficient allocation of resources and social equity.

The Water Agenda also clearly foresees a role for the federal level in supporting more consistent tariff setting. To support municipalities and other sub-national bodies in evaluating the adequacy of water tariffs to ensure sustainable service provision and promote greater consistency of approaches to tariff setting, CONAGUA developed in 2008 a norm setting out the methodology to evaluate tariffs for drinking water, drainage and sewerage services (NMX-AA-147-SCFI-2008).⁹ Given the constitutional allocation of responsibilities with regards to service provision and tariff setting, it was only through the guise of a voluntary instrument that the federal level could promote a more consistent approach. It is nevertheless not clear to which extent this norm has been used so far in practice. Consequently, CONAGUA and the federal government are currently investigating ways of incentivising the use of this methodology. One possibility would be to condition federal subsidies – granted through programmes such as PROMAGUA – to its use.

The experience of some municipalities – such as Aguascalientes, Mexico City and Tijuana – shows that there is scope in some places for affordable and acceptable tariff increases. The acceptability of tariff increases varies nevertheless strongly. The experience of increasing tariffs in Aguascalientes was difficult. In Mexico City, the tariff increase of some 150% was rather well received, owing partly to the fact that the initial tariffs were very low. For this reason, greater understanding of the user’s perception of the quality of service provision and of his willingness to pay would help develop better pricing strategies. This also applies more generally to any major change in the management of water service delivery. Consumers’ acceptability of reforms and changes is a function of whether they deem those changes fair and legitimate. Conversely, customers’ views on critical areas of service delivery can inform and help fine-tune policies in these areas. Ultimately, customers’ engagement on issues of tariffs and service delivery can help build trust and facilitate combined service improvement / price increase. Utilities play an important role in engaging with their customers on price and quality of service. However, there is also a role for State-level and federal level institutions to provide the high-level guidance and share good practices in support of utilities and municipalities – following the example of OFWAT which produced in 2011 a “customer engagement policy statement”¹⁰.

⁹ www.CONAGUA.gob.mx/CONAGUA07/Noticias/NMX-AA-147-SCFI-2008.pdf

¹⁰ www.ofwat.gov.uk/future/monopolies/fpl/pap_pos20110811custengage.pdf

As a first phase in the consumer trust building, improving bill collection rates is of critical importance. In most places, it would substantially improve the balance sheet of utilities, putting them on a much sounder financing footing. Public authorities have a strong role to play to support greater bill recovery, first by ensuring that all bills addressed to government bodies are promptly paid and secondly by ensuring that regulation and politics do not put undue constraints on invoicing and bill recovery. In that respect, a number of utilities have expressed concerns that the recent constitutional reform elevating access to water to the level of a human right would ultimately reduce the incentive to pay and prevent utilities to enforce any recovery measures – ultimately undermining the sustainability of service provision and defeating the objective of the law to promote continuous and safe access to water.

Mexico has a well-developed sub-national bond market, with all States and 70 municipalities (over 2444) with credit ratings. This can be explained by a conducive regulatory environment, in particular the absence of a federal limit for debt issued by Mexican states or municipalities, the introduction of trusts that provide effective guarantees to municipal debt issuances and isolation from local governments' general accounts, and reforms that have led to the emergence of a local rating industry.¹¹ However, because of limited financial autonomy, most water utilities have not been able so far to tap the bond market and borrow on commercial terms. Instead, according to CONAGUA *et al* (2010), bond issuance is a source of general funding for local governments which use the collected funds to, in part, subsidize water investment. There is however a great potential here, not only for efficient and financially sustainable utilities, but also for other types of vehicles to tap on.

As such an innovative example, CONAGUA *et al* (2010) mentions Tlalnepantla, a city in the State of Mexico, where a new water treatment plant was financed through private trust issuance of bonds supported by tariff revenues with a municipal guarantee and a partial credit guarantee provided by Dexia and IFC¹², but no federal government guarantee or transfer. Another example of innovative financing mechanisms involving private finance can be found in the State of Campeche, which is attempting to attract private finance through the establishment of a state-wide PPP capital Mobilization Vehicle, a special purpose company that develops infrastructure by borrowing from capital markets based on future State lease payments.

Initiative 28 of the 2030 Water Agenda also mentions creating revolving funds to support access to the commercial financing system for a greater number of water utilities and irrigation associations. “In order for these utilities and associations to be able to obtain private financing for the construction of infrastructure and the improvement of efficiencies in the use of water in agriculture, the industrial sector, services and for human consumption, it is proposed to implement revolving state funds that can receive federal and state contributions and can directly provide guarantees and financing with preferential conditions.”

5. Accountability mechanisms

- While there is information on the state of most water bodies and on federal level infrastructure, there is limited availability and credibility of information on sub-national infrastructure and on performance of utilities, a prerequisite to the development of a performance-based culture of water service provision.

¹¹ www.un.org/esa/desa/papers/2009/wp76_2009.pdf

¹² www.ifc.org/ifcext/subnationalfinance.nsf/Content/sampleproject2

- In developing the information base and performance indicators for the sector, the key dimension is the development of a framework where all stakeholders can trust and rely on the resulting performance monitoring.

The OECD Checklist for Public Action: making the co-operation between the public and private sectors work in the public interest

Contractual arrangements with the private sector for water infrastructure are typically long-term and as such not likely to cover all aspects of the complex relationship between the private sector and the public sector. Many past difficulties have also arisen from dispute over the real state of water systems and the quality of baseline data. While no contract can be comprehensive enough to eliminate all elements of uncertainty, mechanisms exist that may help reduce the uncertainty that comes with long-term incomplete contracts or deal with its consequences. They include: adopting performance-based contractual arrangements (**principle 16**), strengthening competitive pressure (**principle 7-15**), strong political commitment in the fight against corruption (**principle 6**) and promoting information sharing (**principle 14**). Greater involvement of civil society (NGOs, consumer groups) may contribute to developing a feeling of ownership on the part of the users and the communities, to better protection of consumer rights and to monitoring service provision (**principle 9**).

Principle 6. Fight against corruption. Infrastructure projects should be free from corruption at all levels and in all project phases. Public authorities should take effective measures to ensure public and private sector integrity and accountability and establish appropriate procedures to deter, detect and sanction corruption.

Principle 7. Create a competitive environment. The benefits of private sector participation in infrastructure are enhanced by efforts to create a competitive environment, including by subjecting activities to appropriate commercial pressures, dismantling unnecessary barriers to entry and implementing and enforcing adequate competition laws.

Principle 9. Consultation with stakeholders. Public authorities should ensure adequate consultation with end-users and other stakeholders including prior to the initiation of an infrastructure project.

Principle 15. Fair, non-discriminatory and transparent awarding of contracts. The awarding of infrastructure contracts or concessions should be designed to guarantee procedural fairness, non-discrimination and transparency.

Principle 16. Output/performance based contracts. The formal agreement between authorities and private sector participants should be specified in terms of verifiable infrastructure services to be provided to the public on the basis of output or performance based specifications. It should contain provision regarding responsibilities and risk allocation in the case of unforeseen events.

Source: OECD (2009). Private sector participation in water infrastructure. OECD Checklist for Public Action.

PSP requires an important shift in culture towards performance management, which is currently very limited in Mexico. One important impediment to the development of performance based contracts and regulation is the lack of relevant underlying information needed to appropriately monitor activities. Currently, there is no public information on the performance of operators. The national water Law foresees the development of a national system of information (SINA), which includes performance standards for utilities. More generally, when information is available, it is only at federal level. This is the case, for instance of the national tariff system (SNT) maintained by CONAGUA and which gathers information on tariffs for more than 100 municipalities.¹³ Although it is not necessarily the general case in Mexico, the lack of a credible underlying information base upon which technical and financial assumptions of project bids can build undermines the efficiency of the bidding process/awarding of contracts and lays the ground for discretionary political interferences.

Efforts to produce more accurate information on performance of water utilities are nevertheless developing. For instance, the impulse towards metering is an important step in collecting more regular and accurate information on water consumption that can underpin improvement in efficiency gains. The concession contracts in Aguascalientes and Cancun are also important, although contrasted, opportunities to develop experience with performance based monitoring. In Aguascalientes, the private operator is

¹³ www.CONAGUA.gob.mx/Tarifas

monitored based on two main indicators (financial and technical efficiency). The concession is cancelled if the operator is not in compliance with 95% of the set goals. In addition, the private operator performed in 2010 its first survey of users' satisfaction aimed at understanding needs and expectations and published the results. The results showed that 75-80% of the concerned population is happy with the tariffs. The contract with the private operator in Cancun is monitored every 6 months based on a long list of performance indicators (including coverage, delay of repair, users' satisfaction...). The private operator points at micro-management by the responsible authorities – leading to important paper work, such as monthly reports. More consistent approach to performance based contracts would help both the municipalities and the utilities to build greater certainty and confidence in their relationship. Guidelines and tools exist that may help develop a common approach to performances indicators (see Box 6).

Box 6 – OECD Guidelines for Performance-Based Contracts

To support authorities in Eastern Europe and central Asia, the OECD has developed "Guidelines for Performance-Based Contracts between Municipalities and Water Utilities". These Guidelines address the key elements that need to be considered in connection with the preparation, negotiation, implementation, and periodic revision of a successful performance-based contracting mechanism. The good practices identified in the Guidelines have been subsequently tested in a number of EECCA countries.

The main issues covered in the guidelines include among others:

- Contract preparation (Choice of contract type and contract duration; Review of the legal and regulatory framework; Review of the utility's assets and liabilities – restructuring of the utility; Preparation of the bidding and selection process; and Accuracy of initial data and information).
- Performance indicators (Definition and selection of indicators; Definition of the baseline scenario; Monitoring of performance indicators; Choice of a technical auditor).
- Tariffs and financial obligations of the contracting authority
- Financial obligations of the contracting authority
- Monitoring of contract implementation
- Mechanisms for conflict resolution and contract enforcement
- Risk management
- Personnel management

Based on the review of selected cases, OECD makes two important considerations that are of relevance for Mexico. All the data collected during the tender process and used for calculating key indicators in the business plan should be updated before the contract starting date, particularly if time has elapsed between the starting date and the tender preparation. In case of uncertainties or difficulties to obtain reliable data at the start of the contract, it is preferable to set annual performance targets as a percentage of improvement (calculated on the basis of a baseline to be defined) rather than as fixed numbers (in order to avoid recalculating a fixed figure each year) (this is particularly relevant for the indicator on the continuity of service).

Sources: OECD (2011). Meeting the Challenge of Financing Water and Sanitation: Tools and Approaches; OECD (2006). Guidelines for Performance-Based Contracts between Municipalities and Water Utilities in Eastern Europe, Caucasus and Central Asia.

Initiatives to collect comparable information and benchmark performance across utilities are also underway and could be further strengthened based on international best practices in setting and monitoring performance indicators. An interesting experiment is the one led by the "Consejo Consultativo del Agua", a non-profit, independent organisation formed in 2000, with a mission to promote transparency, critical thinking, exchange of information and ideas and raise awareness on water issues. For three years now, the Consejo has been publishing information on critical performance indicators of WSS.¹⁴ The National Association of Water and Sanitation Companies, ANEAS, also has a role to play in gathering the industry

¹⁴ www.agua.org.mx/index.php?option=com_content&view=article&id=16991&Itemid=100034

input for the development of key performance indicators to benchmark utility performance. Given its wide net of State representations, CONAGUA already plays a monitoring role by reporting annually performance indicators of some 80 water utilities. It could also play an essential role in the development of a methodology recognised and accepted by all and in the gathering and publication of utility information. For the time being, though, it seems that three competing sets of key performance indicators are being developed – by respectively CONAGUA, ANEAS and IMTA. Combining them, or at least ensuring that the methodologies used to compute the indicators are consistent across data sources would help strengthen the credibility of the monitoring exercise.

6. Ways forward

Bridging the gaps generated by institutional and policy fragmentation for PSP and aligning programmes and institutions with the ultimate policy objectives (in particular of greater efficiency of WSS)

- A number of tools and institutions can play an important role in fostering coordination: The Diagnosis and Integrated Planning Study (DIP) is one of them as it provides a diagnosis and plan of the water utility, including the state of the water system, population projections, tariffs, the overall needs of the utility (infrastructure, organization, etc.) as well as a long term plan for improvement. Along with States with a strengthened role and more “capable” municipalities, CONAGUA has also an important coordination role to play, based on its core mission “to be an authority in technical terms and also to promote the participation of society and the three tiers of government in the integrated management of water resources and their inherent public goods.”
- Better align programmes and institutions with the ultimate policy objectives (in particular of greater efficiency of WSS) would involve ensuring greater coherence between the various programmes and other federal mechanisms that channel financing in the WSS. Within these programmes, more systematic use of incentives-based subsidies and the development of an accompanying solid monitoring system (involving monitoring indicators and regular follow up of performance) could help CONAGUA (and the Federal and State governments more generally) to better incentivise efficiency gains. Also, these programmes should be aligned with programmes developed in other sectors, including for health and agriculture.

Building resources, capacity and appropriate incentives at sub-national level of government in line with their responsibilities

- Building on examples from other sectors – such as solid waste management and environmental projects -, a number of participants in the CONAGUA/OECD workshops mentioned ways of reducing administrative burden (notably registration time) and building capacity at sub-national levels of government through the standardisation of PSP requirements and documents and the sharing of good practices.
- Typically, model documentation such as standard contracts and procurement documentation can be an important way to build capacity and support staff involved in PSP projects. CONAGUA is preparing model contracts of different PSP schemes and projects, like concessions, CPS (BOT) and public-private water utilities that will help reduce preparation time and the complexity for the utilities. Guidelines for drafting memorandum of information in support of the bidding and procurement process could also help.
- An interesting initiative to build the technical expertise on legal, financial and institutional framework for PPP at State level (not water-specific) can be found in the PIAPPEM (Programa

para el Impulso de Asociaciones Público-Privadas en Estados Mexicanos), an initiative of the Multilateral Investment Fund (FOMIN) and the Interamerican Development Bank.

- There is ample room for other institutions to play an important role in catalysing the expertise on PPP. CONAGUA for instance has an important role to play more generally in the water sector in providing a platform for information gathering and exchange of practices. In relation to PSP, mimicking other countries, the Investment Unit within the Ministry of Finance could play a greater role in catalysing expertise in PPPs and deploying good management tools such as cost-benefit analysis and value for money models.¹⁵

Put financial sustainability of utilities and of water systems and projects on a stronger footing

- There is room for tariff increases in some places. In any case, a phased approach involving greater bill collection would help improve bill collection and build consumer trust as a prerequisite for tariff increase (if still needed).
- Supporting the States and municipalities in finding “the composition they consider most appropriate between tariffs and subsidies”, as highlighted in Initiative 10 of the 2030 Water Agenda, could involve practically helping them with the tariff setting methodology and raising awareness in various circles, including in State Congresses, on the economics of the water sector, including the dynamics between the ultimate sources of revenues for the sector (the 3Ts: tariffs, taxes and transfers).

Strengthening the regulatory framework for PSP

- The work highlighted the need to further clarify the allocation of regulatory responsibilities across levels of government. This may be done through a specific WSS Law (under development). Additional OECD work on this area is expected in a second part of the Water Policy Dialogue.
- Past involvement of the private sector in the provision of drinking water and sanitation services has underlined the value of supporting the development of regulatory functions outside of the contracts – within CONAGUA or a specific regulatory body, and State-level dedicated regulatory entities -, including the mechanisms for PSP involvement, monitoring of private operator performance, as well as the establishment of clear dispute resolution mechanisms.
- A strengthening of the accountability mechanisms, including the monitoring and disclosure of information, could take the following forms:
 - Support the development of an information base on the state of sub-national infrastructure and assets and on the performance of utilities.
 - Support the development of a set of performance indicators common to all utilities, based on an agreed methodology (i.e. integrate existing approaches).
 - Consider public disclosure of the information, incentives for good performers and capacity building mechanisms for lagging municipalities / operators.

¹⁵ See OECD (2010). Dedicated Public-Private Partnership Units A Survey of Institutional and Governance Structures.

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Relevant websites:

www.oecd.org/water

www.CONAGUA.gob.mx

www.piappem.org

www.banobras.gob.mx

www.fonadin.gob.mx

Respondents to the questionnaire

- Comision Estatal de Servicios Publicos de Tijuana (CESPT)
- Santander (Bank)
- Jumapa Celaya (Municipality)
- Proactiva
- National Infrastructure Fund (FNI)
- Agua de Mexico
- Unidad de Inversiones (UI) de la SHCP
- Banco del Bajío
- Cámara Mexicana de la Industria de la Construcción
- CONAGUA
- Empresas Públicas de Medellin (EPM)
- Instituto Mexicano de Tecnología del Agua (IMTA)
- INTERAPAS
- SIAPA
- Unidad de Crédito Público (UCP) de la SHCP
- Consejo Consultivo del Agua (CCA)

ANNEX 1. INITIATIVES IN THE 2030 WATER AGENDA OF RELEVANCE TO PRIVATE SECTOR PARTICIPATION

Initiative 10. Giving a more relevant responsibility to state governments as regards drinking water and sanitation

Authorization requests for sufficient tariffs are applied in consideration for the services supplied by water utilities, and are presented by municipalities to State Congress for their analysis, discussion and approval; municipalities must present the necessary information and criteria for decisions to be made in full knowledge of the reality, to cover the costs, and to allow the adequate operation and development of water utilities. To maintain the sense of social justice that is usually applied to tariffs for public services, Local Congresses must define both the amount of the tariffs and the subsidies to be applied, in such a way that they allow the investment needs and costs to be covered. An alternative option to the current procedure consists of modifying Article 115 of the Constitution so that the authorization of tariffs, which is currently a faculty of the state congresses, can be delegated to the State Water Commissions which depend upon the state governments, or could be entrusted to the governing bodies of the water utilities themselves. A clear national regulatory framework would need to be established to allow natural monopolies to be controlled and facilitate the achievement of efficiency and economic sustainability goals that are necessary to obtain universal access and to provide good quality services.

The relevance is proposed of carrying out modifications to Article 115 of the Constitution so that states are authorized to contribute with city councils to the provision of water supply services with the quality, quantity and opportunity that the population demands. Similarly, in the removal and treatment of wastewater in compliance with related normativity; this should only be in cases when the municipalities do not have the possibility of doing so, whether it be because they do not have the necessary capacities or because they cannot develop them in the medium term. With this change, the intention is to give state governments a more active role without withdrawing municipal autonomy, but to lighten the load that for the moment it has not been possible for them to bear and to guarantee good quality services to the population. The aforementioned change is necessary since Article 115 of the Constitution currently negates the involvement of the states in providing drinking water and sanitation services, unless it is requested by the city council and even then only temporarily, or if the services are provided or exercised in a coordinated manner by the state and the municipality itself, subject to an agreement between the parties, the general standards on which are defined in the local legislation. In this case, the aim is to change the discretionary and optional character of the regulation to give it a sense of obligation. The proposed reform should include the notice that it is the responsibility of the federation, in coordination with the states, to promote and regulate the services and the establishment of a national regulatory framework.

Initiative 11. Promoting the systematic certification of management and technical staff of Drinking Water and Sanitation Utilities

With a few exceptions, water utilities do not have permanent training programs for technical, administrative and management staff. Some courses may be taught, and staff are moderately trained, but are subsequently fired from the utilities where they work as a result of the alternating municipal authorities. This situation gives rise to an excessive rotation in management and technical staff, making it difficult to professionalize the services of the water utilities. Through the Management Committee of Competences in the Water Sector, made up of authorities from the National System of Competences and created on October 8, 2010, the development of the necessary training services, evaluation and certification infrastructure should be promoted, in order to obey and enforce the regulations in the National Water Law which allow the human resources in the Water and Sanitation Sector to be trained, prepared, evaluated and, if possible,

certified in their diverse aspects, be they technical or operative. By promoting certified staff being entrusted with functions and responsibilities in the operation of utilities, and within the framework of the National Civil Service Career System in the Water Sector, the staff with capacity and experience will be encouraged to stay, and drinking water and sanitation water utilities will be made more efficient and effective. Furthermore, the possibility will be opened to transfer technical resources from limited and small systems to modern and self-sufficient ones.

Initiative 12. Promoting the definition of water tariffs that obey technical criteria, dissociated from political aspects

The intention, as various local laws already consider it, is to make service provision self-sufficient through real tariffs. However, consensus does not exist between sectors, political parties, government and society, on accepting the real cost of the services, on updating them periodically and reflecting their increases in tariffs, and separating both (costs and tariffs) from political fluctuations and temporary interests. This situation has led to drinking water and sanitation services for the majority of the country's municipalities being an economic and political burden. Furthermore, nationwide, it has been established almost as a general rule that the tariffs are determined by state congresses, in which partisan interests and political criteria dominate more than technical or economic reasons.

Additionally, it is essential that tariffs are realistic and include costs for the payment of duties for the use of the nation's water and for drinking water treatment; duties for the maintenance of the drinking water and sanitation networks; the cost of pumping; the payment for the debt services for the purpose of financing; the administrative cost; and the wastewater treatment or the payment of duties for the use of receiving bodies, according to the particular case. It would be desirable to also take into account the possibility of creating a savings fund that would allow the continual extension and improvement of services, as well as considering environmental externalities.

Initiative 13. Strengthening the capacities and attributions of the CONAGUA and its State Water Commissions in order to promote, supervise and regulate drinking water and sanitation services

The conditions in which water, sewage and sanitation services are carried out at the level of the locality under the responsibility of Municipal Water Utilities requires that the attributions of promotion, supervision and regulation are duly assigned and distributed between the CONAGUA and the State Water and Sanitation Commissions (CEAS). Although a clearly defined border does not exist, in general, it is considered that that the former should be in charge of the overall regulation of services, and the latter should ensure the technical and operative supervision of systems, whereas the promotion is a task that should remain shared. In both cases, capacities must be reinforced to guarantee that the service provision is undertaken in the best possible conditions, seeking to maximize the benefits for the end consumers. The tap water distribution and supply systems in networks, as well as the wastewater removal systems, do not allow the possibility of choosing between different providers, since it is not common to have competitive piping. In

this way, a natural monopoly is presented, in which the provider, as the only supplier of the service, theoretically could establish higher tariffs than those that would be set in a competitive situation. The most frequent case that is found is service provision with insufficient quality, without the users having the option to change provider. In this way, the need is created for regulators, whose function is to balance and protect the legitimate interests of users and service providers, whether the services are provided by public, private or public-private utilities. The regulation should not be limited to verifying the quantity and quality of the service provided, but should also include the standardization of the concession or service provision contracts, as well as the commitments to maintenance, rehabilitation and reinvestment in the extension of systems, to avoid the case of companies and/or water utilities neglecting to meet the needs of the

conglomerates in situations of poverty. The operating costs should be verified through accounting systems and auditors' reports drawn up according to strict accounting practices. All the accounting and operative information should be public and transparent, which minimizes the risk of costs being hidden or disguised, and acts as an obstacle for corruption.

A large number of water utilities, both municipal and state, do not completely cover the federal duties for the withdrawal of the nation's water, either from surface water or groundwater sources, or for the discharge of untreated water in receiving bodies that are the property of the nation. For this reason, the financial system of water is even further debilitated, since the public agencies themselves foster in practice the culture of not paying. Furthermore, they are breaching the terms of Article 115 of the Political Constitution, the National Water Law, the General Health Law and various official Mexican standards. Furthermore, the water supplied does not comply with drinking water quality fit for human consumption, they have deficient systems with leaks of up to 50%, the financial system is inadequate and they do not foster self-sufficiency, tariffs are very low and are insufficient to finance the operating costs, they do not have wastewater treatment plants, or if they do, they frequently do not work and those that do work operate with very low efficiencies compared to standards for the project. All of these actions violate legislation and are as a result punishable by law.

Because of these obvious facts, one of the most recurring complaints in forums of participation for the construction of the Agenda was that of the lack of presence of the National Water Commission as the authority in charge of obeying and enforcing the legislation and normativity as regards the nation's water. It is perceived as a weakness of the Mexican State, and as a contradictory attitude for its purpose of preserving this vital and strategic resource, a guarantor of development and of national security. The capacities of the CONAGUA need to be increased in order to: attend to the complaints and denunciations about water problems that are presented to it; to perform the relevant surveillance and consequently carry out inspection visits to the offending installations; to expeditiously accomplish the legal-administrative procedures to qualify and if appropriate forcefully impose sanctions in order to, when necessary, act against a reoffending behavior.

Initiative 32. Modifying state laws and their bylaws in order for them to regulate public-private investment in water infrastructure

For the last two decades, some state laws have been modified to make public-private investments possible in water infrastructure, with limited results due to the issue of tariffs which do not cover the total costs of the investments. However, the 2030 Water Agenda takes into account that for this type of investments to be successful, it is necessary to have effective regulatory frameworks that recognize the legitimate interests of stakeholders and concession systems that are harmonized with the development objectives.

ANNEX 2. SUMMARY OF SELECTED MUNICIPAL EXPERIENCES

| | Characteristics | Performance | PSP experience | Difficulties |
|------------------|---|--|---|---|
| Celaya | 150 000 users | Physical efficiency: 54% Commercial efficiency: 78.2% Global efficiency: 42.3% (2009 figures) | CPS in 2009 for the design, operation and construction of a treatment plant wastewater. Currently in the construction period. It is planned for completion in late 2012. | Difficult and extensive paperwork for the management of resources. Excessive bureaucracy and heavy and long response times between stages. Delays due to disputes in the bidding process. |
| Puerto Vallarta | 66 000 users (90% domestic, 8% commercial and 2% industrial) | Technical efficiency: 72% Bill collection: 95% 100% treated wastewater | 15 year BOT in 1992 for a WWT plant but it proved oversized and the municipality had difficulty to face the financing gap in the context of the 1994 crisis. The plant was bought back in 2004. | Unrealistic terms of contract: overestimation of population and of wastewater volumes Devaluation led to debt at high interest rate Change in political power |
| Tijuana | 546 000 users | 89% treated wastewater Very efficient service provision | PSP considered for district 8. The objective is to increase efficiency in a particular zone. | Red tape and fragmented administrative responsibilities |
| Guadalajara | 1 million connections (59% domestic, 41% commercial and industrial) | Technical efficiency: 70% Bill collection: 66% | Limited experience with PSP: for a water treatment plant in Toloquilla (BOT to be renewed in 2011). Project for a new aqueduct. | Tariff levels have not changed for past 6 years |
| Tuxtla Gutierrez | 118,300 users | Physical efficiency: 32.7% Commercial efficiency: 88.9% Global efficiency: 29.1% 2008 figures | Based on the good PSP experience in waste management, the municipality is carrying out a PSP project of two WWTP in Tuxtla Gutierrez | Delays because of disputes in the bidding process |
| Cancun | 200 000 clients (800 000 inhabitants) | Number of clients grew by 7.5% per year between 2002 and 2010. | Concession awarded in 1993 for 30 years | Population growth and disperse, uncontrolled urban development. Tariff regulation – cross subsidies and disincentive for hotels to stay in the scheme. |

| | | | | |
|----------------|---|---|--|---|
| Aguascalientes | 249 000 users (771 000 inhabitants) | Technical efficiency: 70%, Commercial: 93% Extraction went from 90 million m ³ to 80, while at the same time population served grew by 60%. 75-80% of satisfaction | Concession awarded in 1993 in a context of very low performance (70% water losses, no continuous supply). The partnership benefitted from political stability (regulated by governor with a 6 year mandate). | Tapping on BANOBRAS financial mechanisms to finance investments is not possible because the concession was not awarded on the basis of a competitive bidding. |
| Mexico | More than 1.6 million users. Attends 8.8 million people and similar amount of people in transit | Above 40% of leakages | Service contract for 10 years in 1992, renewed in 2003. 3 dimensions: installation of meters, billing, distribution of bulk water. | Opposition to PSP by congressmen. City complexity is an obstacle for a better PSP involvement. |

ANNEX 3. PRIVATE SECTOR PARTICIPATION IN WATER INFRASTRUCTURE - OECD CHECKLIST FOR PUBLIC ACTION (SYNTHESIS)

Organised around the 24 OECD *Principles for Private Sector Participation in Infrastructure*, the OECD *Checklist for Public Action* aims to help governments wishing to engage the private sector in the development and management of water and sanitation infrastructure. For each Principle, the Checklist lists the key specificities of the water and sanitation sector; the corresponding issues for governments; and some available tools and country practices. It highlights five areas of key importance for consideration by governments:

1. Deciding on the nature and modalities of potential private sector involvement;
2. Providing a sound institutional and regulatory environment for infrastructure investment;
3. Ensuring public and institutional support;
4. Making the co-operation between the public and private sectors work in the public interest;
5. Encouraging responsible business conduct.

Four main messages emerge from the application of the Principles to the water sector.

1. Clarify the ultimate objectives for service provision and the opportunities and risks involved in private sector participation.

The choice (principle 1) between different modes of service provision is a means to an end: ensuring access to sustainable and affordable services. It should follow an initial consensus on the service provision desired by society, an assessment of where and how private partners can add value and determination of the modalities of their participation. Quantitative tools exist, such as the Public Sector Comparator, which combined with qualitative analysis, can help governments better define the costs (including contingent liabilities) and benefits associated with private sector participation and can support policy dialogue on this issue. In some countries, the private actors are already catering for sections of the population on an informal basis or with little visibility – including the small-scale operators and the big users. The issue for governments is not only to decide upon private sector involvement. They also need to consider ways to ensure greater insertion of existing private activities into the formal chain of service provision and include them in the oversight mechanisms.

In order to reach the objectives, a wide range of risk sharing arrangements is available to policy makers, from the public sector assuming most of the risk to significant risk transfer to the private sector. Tailor-made models of private sector participation should take account of local specificities and make the best of private partners' strengths (principle 3).

An appropriate risk allocation should be driven by an assessment of the party best able to manage risk (the party best able to influence the probability of occurrence or to deal with its consequences), so as to ensure value for money and the sustainability of the partnership (principles 2-4). The success of a model can be assessed only in the long run when sustainability and adaptation to changes can be proved.

2. Develop a conducive framework based on high-quality regulation, political commitment (including to fight corruption) and an adequate allocation of roles and responsibilities.

Private participation in the water sector does not exclude a role for government. Indeed, the government has the essential responsibilities of establishing adequate policy and regulatory frameworks, institutions and contractual arrangements and overseeing their functioning (principle 17). It has the ultimate responsibility of meeting population's basic needs (principle 5). This is valid regardless of the private or public nature of service providers.

In that context, strong political commitment remains critical, notably in the fight against corruption (principle 6) and in addressing lack of access to water and sanitation and service affordability. A major lesson from past experience is the need to clarify the different roles for the public sector: political function, administration, regulation and operation of service delivery. A second important challenge is to ensure policy coherence. Water and sanitation infrastructure development is indeed closely related and dependant on other policies such as urban development, energy policy, etc. In particular, such infrastructure development should very often be addressed as part of an integrated urban planning programme that tackles housing, property right tenure and, where relevant, relocation.

In addition, water is a segmented sector, with oversight responsibilities for resource management and service provision often split horizontally between different Ministries, and vertically across national, regional and local authorities. This may raise important capacity challenges and also generate issues of consistency across government levels. Careful allocation of roles and responsibilities is needed across different authorities, taking into account existing capacity gaps, and based on resources allocated in line with duties and distributed in a predictable way (principle 10). Preserving consistency across government policies also involves strengthening co-ordination mechanisms across government levels (principle 12) and building common understanding across levels of government on the objectives, means and resources for water provision (principle 11). Regular monitoring and performance assessment can also help define capacity building needs and contribute to a better understanding of objectives.

3. Root the partnerships in strong accountability mechanisms, through clear and consistent contractual arrangements, monitoring and relations based on information-sharing and consultation with stakeholders.

Contractual arrangements with the private sector in the water sector are typically long-term and as such not likely to cover all aspects of the complex relationship between the private sector and the public sector. Many past difficulties have also arisen from dispute over the real state of water systems and the quality of baseline data. No contract can be comprehensive enough to eliminate all elements of uncertainty.

Mechanisms exist that may help reduce the uncertainty that comes with long-term incomplete contracts or deal with its consequences. They include: adopting performance based contractual arrangements (**principle 16**); providing for clauses and mechanisms to frame the discussions on future issues as well as formal dispute resolution mechanisms (**principle 19**); strengthening competitive pressure (**principle 7-15**) and promote information sharing (**principle 14**). Monitoring processes can also contribute to reducing uncertainties when they are focused on a small number of key indicators that are clear and easy to measure. In any case, good faith and willingness of the parties to co-operate and find solutions will remain crucial. In that context, starting the discussion early when challenges arise and before conflicts escalate can help diffuse the tensions (**principle 18**). Engaging the private actors to formulate their requirements and constraints can promote mutual understanding and better appropriateness of contracts (**principle 13**). Past experiences have shown that partnerships should not be viewed as simply a bilateral relationship between the public and the private sector as they generate strong interest from consumers and communities. Greater involvement of civil society (NGOs, consumer groups) may contribute to developing a feeling of ownership on the part of the users and the communities, to better protection of consumer rights and to monitoring service provision (**principle 9**). Public consultation should be developed according to the principles of clear focus, representation and transparency. It requires time and resources and, therefore,

should be organised strategically at important stages of policy-making and preferably start at the early stage of the projects. It may also require providing adequate training.

4. Private actors also have an important role to play and responsibilities in ensuring the sustainability of partnerships and that their contribution can make a difference in improving the lives of millions of people.

Water, as a vital good involving important economic, social, environmental and political repercussions, requires strong commitment on the part of the private partners to responsible business conduct (**principle 20**) and to participate in infrastructure projects in good faith (**principle 21**).

Businesses have a critical role to play to promote integrity (**principle 22**) by engaging in timely, reliable and relevant information disclosure on activities, structure, financial situation and performance (including participating with good faith and commitment in due diligence processes) and supporting the development of a high quality regulatory framework while avoiding undue involvement in local politics. Showing a strong anticorruption commitment also involves going beyond communication on anti-corruption policies and internal management systems to the staff. A new corporate culture that provides incentives to stop corrupt practices should be established.

Companies also have an important role to play in evaluating the social and environmental impacts of their activities (**principle 24**), mitigating the potential negative impacts and contributing to the country's development goals. They can contribute to the assessment and discussion of the consequences for the poor of technology choices, tariff setting policy, and planned investments. They can also evaluate the impacts of activities on the environment and continuously seek to improve environmental performance. The difficulty lies with the set of indicators that are chosen to support their evaluations of social and environmental impacts. Following internationally-agreed guidelines such as the Global Reporting Initiative can facilitate the monitoring and comparison across companies. In addition, if private actors have a role to play in terms of local capacity building and the transfer and diffusion of technologies and know-how, this should take place in the context of national discussions on appropriate levels of service and technology, as technology choices may lock-in country service provision profiles for years. Finally, being responsive to clients' claims (**principle 23**) and providing transparent and effective procedures to address complaints can contribute to building mutual understanding and improving service provision.