

URBAN WATER MANAGEMENT IN MEXICO

By David Barkin

Mexico has created yet another crossroads in water management. In April 2004, the Law of National Waters was amended to change the regime of water management in Mexico. On the one hand, the National Water Commission (CNA) was confirmed as a relatively powerful organisation charged with the oversight of the sector; the law mandated a decentralisation process that leads to significant changes in the control of important parts of the system, including a reduction in the power of the CNA. In this regard, the creation of local water basin management councils (*Consejos de Cuenca*) is one of the more innovative structures that place control of irrigation systems in the hands of the water users, while charging them with the responsibility to finance their operation and maintenance.¹ Urban water systems are also under pressure to change their management structures.

Drinking water and sewage systems are the responsibility of municipal government, of which there are about 2,500 in the country. Most are small administrative organizations, with water being managed by a department staffed by people with little expertise. There are about 435 water systems operated as independent agencies, either semi-autonomous organisations dependent on municipal governments or concessions from these governments that are either wholly owned by private

¹ Unfortunately, these councils have been conceived without the participation of small (peasant) users and other water basin groups whose conservation efforts are frequently crucial for the maintenance and recharge of the aquifers upon which (urban/industrial) consumers frequently depend.

companies or are joint ventures between public and private parties; all of the major international water companies – Suez, RWE, Aguas de Barcelona, Vivendi – along with many smaller international firms, participate in the management of one or more local water and sewage systems.² A recent development is the separate concession of sewage systems as an independent enterprise, let out to a private company for a fixed period, often under a BOT (build, operate and transfer) scheme, with costs being transferred to the rate payers. At present, less than one-quarter of the water systems have sewage treatment plants, and only about 22% of the plants that have been built are actually in operation.

The major challenge facing in urban water management in Mexico is assuring a universal drinking water service and adequate facilities for treating sewage water in an efficient and financially viable manner. At present, no water system is financially self-sufficient and almost all are plagued by huge problems of water loss through their distribution systems, which are old, often poorly designed and suffer from decades of neglect. Just as serious is the absence of any systematic ecosystem management of either areas that supply water to the urban areas or, more ominously, areas where wastewater is discharged. This water is still frequently channelled into the irrigation systems of fruit and vegetables cultivated for local markets.

² A unique service contract was negotiated with joint ventures between foreign and Mexican capital for the administration of billing and rate collection in each of four sections of Mexico City. The companies are also responsible for maintenance of the secondary distribution network in their areas. In this case, all policy matters and the tariff structure are decided by the local legislature and companies are compensated in accordance with their original bids for the contracts; since initiated in 1994, one foreign partner has withdrawn and the quadrant is managed by a wholly owned Mexican enterprise.

Another serious problem facing authorities is their inability to regulate the large water users on the one hand, and the “culture” of irresponsibility among consumers to pay for water use. These problems are exacerbated by technical and political features of the Mexican system that have not been attended to. Constitutionally, water is a resource owned by the nation and subject to political control; long-term concessions for drilling and using wells have been let to private parties, primarily for agricultural use since the beginning of the 20th century. With urban expansion and industrial growth, new demands for water have led to the emergence of a lucrative “parallel” market for water rights for commercial and industrial purposes; they pay a fixed permit fee to federal authorities and, although they draw water from the same aquifers on which urban water supplies depend, these users remain outside the control of the local water agencies, in terms of both quantity and financial responsibility. Throughout the country, most consumers do not have their water use measured, and even when consumption is metered, many do not work correctly and others operate incorrectly because air running through the pipes when water is not being pumped also advances the count. Exacerbating the problem is the large number of unregistered consumers – often medium-sized commercial and industrial enterprises – who have connected themselves to the system without informing the water agencies. Finally, very little attention has been devoted to the problem of the “culture of water”, which requires an educational campaign among users about their water-use patterns, controlling leaks and the possibility of reusing water within the household. In contrast, many large industrial users are installing treatment and recycling facilities because the CNA has implemented an effluent fee for discharges of polluted water.

The most far reaching aspect of the reformed water law in Mexico is likely to be the move towards the private management of urban systems during the coming years. As in most of the world at present, private companies control less than 5% of consumption, but the government argues that the public sector lacks the technical and financial capacity to meet the challenges of assuring adequate supplies of high quality water to meet the country's needs during the coming period. Recent experience, however, belies this assessment. In this short introduction, we will mention only a few of the several dozen cases where privatisation is leading to serious problems.

Cancún, a large tourist resort, was originally served by a subsidiary of Enron, Azurix, which, after declaring bankruptcy, sold its interest to Ondeo, the water subsidiary of the French water giant, Suez, who in turn financed its purchase with a loan from the Mexican government bank, Banobras. The stipulated investments in water treatment are yet to be made and sewage effluents are discharged into the Caribbean. Water rates are high but protests are limited since most of the charges are paid by the hotels.

Saltillo, a northern industrial city, bid out a long-term concession for potable water service to a joint enterprise owned by a subsidiary of the Spanish water company, Aguas de Barcelona, and the municipal government. During its first two years, water rates rose between 32 and 68%, in contravention of the terms of the concession, which stipulated that rates be limited to the rate of inflation, after 11%. In this case, the municipal members of the board of directors were negligent in overseeing the decisions taken by the Spanish executives. Although the company has increased fee collections and the proportion of the population with service, its flagrant violation of the terms of its operation has provoked energetic protest that is still playing itself out at the time of writing.

The water system of Aguascalientes was let out to a private company with significant participation from the water subsidiary of another French giant, Vivendi. In this semi-arid industrial center in northern Mexico, demand for water is rising rapidly but services are being extended to the poorer regions only after serious public discontent got the government to "persuade" the company to modify its investment programme. Rates are among the highest in Mexico and the aquifer on which the city depends is being dangerously depleted with no effective measures to either reduce consumption or change watershed management practices. Although not accepted by local authorities, knowledgeable experts generally anticipate this region will be one of the first to suffer a water crisis that will force a dramatic curtailment in plans for economic expansion.

In contrast, the title of best-managed system in Mexico is generally awarded to the public agency in Monterrey, Mexico's second largest city. Other agencies vying for the title are water companies in the northern border region. These organisations have succeeded in assuring widely available service while reducing service water loss through their networks and increasing collections from their customers.

The biggest challenge facing Mexico at the present time is assuring adequate and affordable service to its urban population. With the notable exception of Mexico City, water charges do not generally provide for lower fees for basic services. Even more problematic, at present there is no adequate process that allows the government to impose an effective regulatory system on water agencies, be they private or public, and the financial resources allocated to this infrastructure is insufficient. Perhaps the greatest problem facing the country in attempting to resolve these problems, however, is the reluctance of the

government to encourage or even permit public participation in the discussion of management, oversight or management of public services. Until these problems of financial solvency, regulatory capacity and participation are resolved, it is unlikely that the country will be able to effectively modernise its water system.

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