

## Country Overview- Mexico



### The Drinking Water, Sewerage and Sanitation Sector in Mexico

#### 1. The Drinking Water, Sewerage and Sanitation Sector in Mexico

One of the greatest challenges facing humanity in this century is the integrated management of water resources. 2.5% of all the existing water in the planet is fresh water, that is to say, apt for human consumption; of this, most is inaccessible in glaciers, in the poles, etc., so we only have 0.5% for consumption, which is groundwater or superficial water, constituting a scarce resource on which all the social processes depend.

Added to the above, the scarcity of water, the inadequate use, the increase in population and the activities carried out by different sectors (business, economic, social and environmental), which have contributed to this situation.

As for the uses of water in Mexico, 75.7% of the water under concession is destined to agriculture; followed by public supply with 14.7%; in third place is electrical energy, excluding hydroelectricity, with 4.6% and with 4.9% the self-supplied industry.<sup>1</sup>

An additional problem that impacts the availability of water in our country is its population and economic growth, as well as its naturally irregular territorial distribution. The greatest growth has occurred in the areas with the least availability of water. Thus, the central, northern and northwestern regions have a third of the country's renewable water, are home to four fifths of the population and contribute four fifths of the national GDP; while the southeastern regions have two thirds of the renewable water and with a fifth of the population contribute a fifth of the national GDP.<sup>2</sup>

In view of the great challenge and the reflection of a water supply model in our country, the National Program (PNH) 2020-2024 was designed. It is a special program derived from the National Development Plan (PND) 2019-2024. The PNH is the result of a consultation process that began with the forums for the construction of the PND, and was complemented with 44 special forums for the PNH, in addition to 8 consultation forums for the Environment and Natural Resources Sector Program (Promarnat). It is based on strategic and critical elements that provide it with support, form and reason to be, in response to current water needs and those that are anticipated to arise in the next three or four decades as a result of the processes of national growth and development, as well as the effects of Mexico's increasingly intense interaction in the concert of nations of the world within the processes of globalization.

The objectives of the PNH are:

1. Progressively guarantee the human rights to water and sanitation, especially for the most vulnerable population
2. To make efficient use of water to contribute to the sustainable development of the productive sectors
3. Reduce the vulnerability of the population to floods and droughts, with emphasis on indigenous and Afro-Mexican people
4. Preserve the integrity of the water cycle in order to guarantee the hydrological services provided by basins and aquifers
5. Improve conditions for water governance to strengthen decision-making and battle corruption.<sup>3</sup>

Thanks to the evolution of institutional development in the water sector, important achievements have been made in our country, but these are not sufficient. The problem of water supply and sewerage in our country has not yet been resolved; millions of Mexicans do not have drinking water service and lack sewerage service. The federal, state and municipal governments are working together to expand service coverage among the most vulnerable population, especially in rural areas with a high degree of marginalization, where access to the aforementioned services represents a heavy burden for the inhabitants.

## 2. The provision of services

The National Development Plan highlights about preserving our natural heritage, so it is necessary to care for the environment as a source of tangible benefits. Sustainability includes the responsible management of water resources and increasing the coverage of drinking water, sewage and sanitation services.

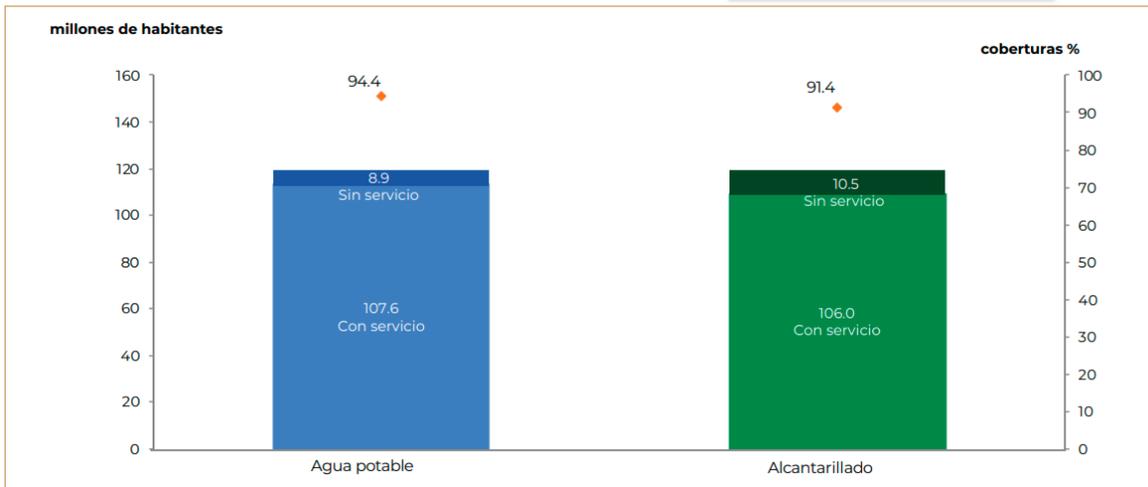
Today, water should be appreciated as an integrating element that contributes to giving peace to Mexicans, to avoid conflicts and to give security to all; that contributes to being a factor of social justice, that all Mexicans have access to the resource in a sufficient, affordable manner, of good quality and opportunity to enforce the human right provided for in article four of the Constitution, that is an element that contributes to diminishing poverty in the country and that promotes social welfare.

Thanks to the evolution of institutional development in the water sector, important achievements have been made in our country, but these have not been sufficient. The integrated cycle of water and sanitation services includes drinking water supply, as well as sanitation.

According to the results of the 2015 intercensal survey conducted by INEGI, a national coverage of 94.4% in drinking water and 91.4% in sewage was recorded.

The difference between these data and those reported in the last edition is due to the fact that in the intercensal survey the questions for the collection of information on drinking water service were changed, a criterion that modified the final results.

## Drinking water and sewerage coverage 2015 according to the Intercensal Survey INEGI 2015 (percentage)



Fuente: Conagua/SAGAPDS/Gerencia de Estudios y Proyectos de Agua Potable y Redes de Alcantarillado

According to the same source, drinking water coverage in urban areas, i.e., in towns with more than 2,500 inhabitants, is 97.2 percent, a result of 89.4 million inhabitants have the service, and only 2.6 million people lack it.

While in rural areas, towns with less than 2,500 inhabitants, 23.3 million people have the service, which represents 85 percent coverage; whereas 4.1 million people lack the service.

The concentration of the population in urban areas meant that even though 7.3 million inhabitants were provided with sewerage service from 2010 to 2015, the population without service decreased by 100,000 inhabitants, consequently coverage increased by 0.3 percent.<sup>4</sup>

As for the treatment of waste water, the Mexican State has implemented a series of actions aimed at improving environmental conditions, seeking to improve the standard of living of the national population; for this reason the purification, disinfection and treatment of waste water is a priority objective for the current Federal Administration.

Wastewater discharges are classified into municipal and non-municipal. The municipal ones are generated in the population centers and collected in the urban and rural sewerage systems, the non-municipal ones are those generated by other uses, such as the self-supplied industry which are discharged directly to national water bodies without being collected by sewerage systems.

During 2018, the 2540 municipal wastewater treatment plants in operation throughout the country treated 137.7 m<sup>3</sup>/s, or 64% of the 215.2 m<sup>3</sup>/s collected through sewerage systems.

### 3. Water management (tariffs and metering)

In order to better manage the resource, it is necessary to establish real rates for the collection of water supply services that promote its sustainable use by society. To this end, rates should be designed based on technical issues, since they represent the main source of income for the operating agencies to cover their operation, administration and maintenance costs, and to expand the coverage and quality of services. Therefore, it is also important to mention that CONAGUA is working on the creation of a system to help measure water, particularly to measure the variables of surface, groundwater and water quality, as well as to know the situation of the country's water bodies

in terms of quantity and quality, in order to improve the administration and preservation of national waters.

On the other hand, tariff adjustments should be supported by awareness and education programs that allow for adjustments in service charges and consumers' willingness to pay.

Unfortunately, there is no single methodology for setting tariffs that could be used in all cases, since the costs of providing services vary from one place to another, depending on the processes of supply, drinking water treatment, distribution, collection, as well as the sector that uses it and wastewater treatment.

#### 4. Investment in the country

For Mexico, investment in infrastructure is a strategic and priority issue because it represents the means to generate development and economic growth and is the key to increasing competitiveness. For this reason, and in order to raise the level of well-being of society, the necessary conditions must be created to make possible the integrated development of all regions and sectors of the country, so that all Mexicans can develop their productive potential in accordance with the goals they have set.

On the other hand, national water policy must respond to a double challenge. On the one hand, to reduce the lags that the sector faces in terms of drinking water supply, sanitation, protection works for population centers and hydro-agricultural infrastructure works in some regions and areas of the country; and, to face the new conditions that are emerging in the 21st century, related to demographic, social and economic changes, as well as the effects of climate change on the territory and respect for the environment.

It is worth mentioning that the investment projection is integrated from the analysis of the infrastructure requirements that the country's entities present to the CONAGUA, as well as the agricultural producers themselves.

#### 5. Finance of the WASH sector

The Mexican State, fulfilling its role as a promoter of national development, coordinates the financing of infrastructure in the drinking water, sewerage and sanitation subsector through different investment programs, strengthening the technical development and financial self-sufficiency of the country's operating agencies, with the aim to provide quality service to the national population. Thanks to the greater participation of the federal, state and municipal governments and the private sector, a constant behavior in investments has been fostered, allowing the provision of drinking water and drainage services to a greater number of inhabitants, both in urban and rural areas. While increasing federal investment, private investment, both domestic and foreign, will be encouraged and a framework of legal certainty, honesty, transparency and clear rules will be established.

The Federal Government, through CONAGUA and in coordination with other levels of government and the private sector, makes investments through different programs that are governed by operating rules, prepared in compliance with the provisions issued in the federal budget for each fiscal year or by its own guidelines. Due to their importance, the following programs stand out:

- Drinking Water, Drainage and Treatment Program (Proagua)
- Program of Return of Rights (Prodder)
- Mexico Valley Water Supply and Sanitation Program.<sup>5</sup>

## 6. Opportunities

Our country and its different regions are facing scenarios in which it is necessary to continue working and give greater impetus to drinking water, sewerage and sanitation services in the short and medium term. This is why it is important to design public policies correctly and to have an adequate legal framework in this area.

It is within this complex context that CONAGUA has carried out consultations for the construction of regional water programs for each of the 13 hydrological-administrative regions in the country. They represent a great opportunity since each region and its communities have different needs and realities, which merits a broad, plural, informed and participatory process.

One of the relevant issues facing water resource management is the issue of financing. The multiple investment needs of the water sector in terms of coverage and access to water in quantity and quality for the entire population, the maintenance of existing infrastructure and the development of new public works, as well as the development and use of new technologies require the promotion of new financing models and tools.

It is necessary to promote schemes and incentives for private resources and investments to complement public budgets, such as public-private partnerships and performance-based contracts, among others, especially considering that fiscal resources are increasingly reduced.

## 7. Recommendations

As a government, it is important to continue working to reduce the lags that the sector faces in terms of drinking water supply, sanitation, protection works in population centers and hydro-agricultural infrastructure works in some regions and areas of the country, and to face the new conditions that are emerging in the 21st century related to demographic, health, social and economic changes, as well as the effects of climate change on the territory and respect for the environment.

To this end, the water sector must successfully advance in the encounter of opportunities and synergies with Mexican society under different guidelines, in order to improve the management and protection of the nation's water resources, structuring mechanisms that facilitate and strengthen relations with legislators, academia, the private sector, social organizations, the media, and elements of education, communication, and dissemination.

We will work to expand the coverage of water services to the national population and for agricultural exploitation, making sustainable use of the resource to ensure this vital liquid for future generations.

## 8. References

<sup>1</sup> Data issued by the Water Planning Management of CONAGUA.

<sup>2</sup> Publication Water Statistics in Mexico 2018

[http://sina.conagua.gob.mx/publicaciones/EAM\\_2018.pdf](http://sina.conagua.gob.mx/publicaciones/EAM_2018.pdf)

<sup>3</sup> National Water Program 2020 – 2024

<https://www.gob.mx/conagua/articulos/consulta-para-el-del-programa-nacional-hidrico-2019-2024-190499>

<sup>4</sup> Status of the Drinking Water, Sewerage and Sanitation Subsector, 2019 edition

[https://www.gob.mx/cms/uploads/attachment/file/554702/DSAPAS\\_1-20.pdf](https://www.gob.mx/cms/uploads/attachment/file/554702/DSAPAS_1-20.pdf)

<sup>5</sup> Status of the Drinking Water, Sewerage and Sanitation Subsector, 2019 edition