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# The Politics of Water in Mexico City

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# The Politics of Water in Mexico City

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*The privatization of water in the Mexico City Metropolitan Area is a long and complex process that continues today. The city's greatest privatization effort, the National Water Law of 1992, was imposed by the federal government with assurances of improvement in accessibility, quality and sustainability. The resulting system that exists today has been largely ineffective in achieving these initial goals. Despite some progress in infrastructure, the partially-private system has aggravated the very social inequalities it aimed to alleviate, further marginalizing the poorest citizens through their water's high costs, far-reaching inaccessibility, and poor quality. In the decentralized water system, contradictions become apparent. Promises of expansion and improvement are unkept and unpunished, accountability is lost between government and private agencies, leaving citizens confused about who holds the responsibility, the blame, and most importantly, the solution.*

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## **Introduction**

The management of water in the Mexico City Metropolitan Area (MCMA), located in the North-Eastern region of Mexico, has proved difficult for centuries. However, since entering the

era of urbanization and globalization it has experienced overwhelming growth in population and industrialization, which has exacerbated the water crisis for the 20 million people living there today. The state's shrinking capacity to manage the water system and failure to improve water allocation, accessibility and efficiency, allowed the private sector to assume the responsibility in 1993. In line with the neoliberal climate of the time, the Mexican Government looked for solutions in the form of autonomous, "better-abled" institutions -foreign companies. The 1993 National Water Law placed Mexico City's water burden into the hands of private entities and was rationalized by the government and proponents by pledging that water accessibility and quality would be improved, while both financial and environmental sustainability would be attained.

Since then the city's water system has been a center of public and legal attention, undergoing few profound changes since privatization, and making little expansion or improvement since the privatization efforts. Numerous attempts of minor policy reforms to combat the water crisis in Mexico City since the 1980s have resulted in a partially-private water sector. Today, inaccessibility, social inequality, and general distrust of tap water still define water culture. In the partially-privatized water system, policies claimed to expand water availability ended up making access more exclusive, further marginalizing poverty-ridden communities.

## **Methods**

The primary materials used for research were scholarly economic, political, and occasionally environmental articles related to water management during the time of study;

1990's - 2014. While most studies on public sector privatization emphasized the transition period during the 1990s, this paper aims to fill in gaps between that period and contemporary times. Early research was conducted using Google Scholar, later research was specified through exploration of the sources from more broad articles found. While most research was based on studies in the field of water management and privatization, some was drawn from official statements and legislation by the World Bank, the Mexican Government, and other related institutions.

I aimed to organize my findings in a chronological manner, emphasizing those time periods and transformations most critical to the story of water privatization in the MCMA. In the following section, I present the demographic factors relevant to the challenge of water provision and management, population growth being the most prominent. In the next section I turn to the neoliberal policies that characterized the 1990s on a global scale, and analyze their influence on Mexico's public sectors. The process to privatization in the MCMA has gone through many superficial and substantial revisions, making it difficult to follow chronologically. Despite this, I attempt to highlight the most significant steps toward private sector participation in the penultimate section. The ultimate section is an assessment of water privatization in the MCMA in 2014, and includes analysis of improvement in water quality, access, and sustainability. In conclusion, I present the current debate about the future of MCMA water; important discrepancies are found between the government's proposals-- backed by those private entities involved in planned development projects, and proposals put forth by those in opposition, including water rights activists and environmental groups.

### **Demography of MCMA**

Demographics within the city have provided one of the most difficult challenges for government water planners and the private sector. For decades leading up to the current crisis Mexico City has been the nation's center for industrialization, urbanization, capital investment and population growth. The Mexico City of 1940 looked a lot different, with a population of 1.75 million people, by 1950 industrial and economic activities were increasing along with a steady population growth. As the population grew to an unprecedented size, the government of Mexico made efforts to organize the urban chaos, including a ban on additional housing being built. By 1960 the population experienced a 73 percent increase in just ten years, with 5 million people, the metropolitan area now included fifteen boroughs of the Federal District and four municipalities in the State of Mexico. As a result of urban developments and investments, urban land use increased 73 percent between 1960 and 1970 (Tortajada 358). Today, the MCMA alone is home to eighteen percent of Mexico's total population; a result of the rural-to-urban migration trend, which had much to do with urban development and low employment rates. In the MCMA, people come in search of economic opportunity and access to services, but face economic obstacles in obtaining these services, it is important to note that poverty is most severely entrenched in these urban areas (Wilder & Lankao 1981).

The steadily increasing demand on the water supply meant more pressure on the local government -where public scrutiny was generally directed. The Mexican government aimed to preserve land and discourage further migration into the city from rural regions. It is illegal to build and reside on conservation land, reducing access to water, sewage and electricity for those who already live there. However, the "illegal" settler community holds a huge part of the demographic in Mexico City. By 2003, some 80 percent of new houses were constructed on illegal land (Tortajada 358).

## **Geography of MCMA**

Mexico has two percent of the global population and only one percent of the global water supply. Water provision is a national obstacle, “In 2000, 12 Mexican states were declared federal emergencies due to prolonged drought” (Wilder & Lankao 1980). Many regions are prone to drought, inefficiency in provision, maintenance and expansion, leaving millions of Mexicans suffering from long term water scarcity. The MCMA has more rainy days with London, about 28 inches of precipitation per year, explaining the vast lakes that characterized the area during the reign of the Aztecs. However, rainfall is not harnessed efficiently, and only supplies the city with a fraction of the water supply (Wilder & Lankao 1981).

While geographical factors do pose a challenge to water administration, they alone are not responsible for widespread scarcity and inaccessibility. In order to meet water demand in the MCMA, over 30 percent of the water supply is imported from outside of the basin. In fact since the 1990s, average per capita water distribution in the MCMA has been about 300 liters per day, three times higher than minimum international standard of 100 liters per day (Castro 332). The concept of “artificial” scarcity is applicable to water in the MCMA, the resource is present, but inefficient management and infrastructure make it unavailable in many areas. In the 1990s the MCMA was losing an average 40 percent of water volume through faulty pipes each year (Wilder & Lankao 1982). At a national level, only twelve percent of the Mexican water supply is consumed by urban or public users. This in contrast with the eighty percent consumed by the agricultural sector, which produces a mere four percent of the national GDP. Industrial water use is only eight percent of Mexico’s total water supply, but the sector is highly polluting and unregulated (Wilder & Lankao 1982).

## **Neoliberal Solution**

Neoliberalism, by definition, is an economic policy model that puts great emphasis on property rights, rule of law, and free markets to maximize individual freedoms and lead society to its maximum potential. The sole role of the state is to create and maintain legal and financial institutions to facilitate free trade among individuals and businesses. In this model, “private enterprise and entrepreneurial initiative are seen as the keys to innovation and wealth creation” which translates into a new approach for poverty alleviation (Harvey 164). Through this lense, the development of a country is dependent on their government's ability to create a business-friendly environment within which enterprises can compete. The government administration of public goods or services without cost-recovery is argued to create a culture of dependency among citizens, who, as the direct beneficiaries should pay full market value for all commodities. A government is seen as inept, unstable, or irresponsible for providing public services or enforcing protectionist regulations, as they discourage trade and capital growth.

Therefore, development strategies reflect economic policies favorable to private sector participation in all public life and the adoption of market value for all commodities. All public enterprises, including education, electricity, transport, public health, water, and sewage, should be sold and bought on the international market, where they (usually) end up in the hands of foreign firms with a large capacity for investment (Goldman 789). The increase in private sector participation has been promoted as the best model for improving efficiency of infrastructure, extending delivery to poorer areas, and relieving government expenditure (Castro 334).

## **World Bank**



An important thing to note about global neoliberalism, is that its relatively recent development and rapid growth were the result of concentrated efforts to subtly but dramatically alter the ideology of the global policy network on poverty alleviation. The process of how neoliberal philosophy came to dominate so many policy agendas in Southern countries began in the 1980s, when World Bank, IMF and major development investors became involved in the War on Poverty. Privatization soon dominated the conversation on resource management solutions, as “the World Bank and others maintain that decentralization leads to improved accountability, empowerment of local communities, and benefits for the management of natural resources” (Wilder and Lankao 1978). This approach being presented globally as “consensus” can be attributed to the Bank’s successful efforts in; creating and maintaining exclusive elite transnational policy networks, and issuing loans targeted at water privatization while imposing requirements on borrowing countries to open their markets to foreign capital (Goldman 790).

The role of the World Bank, the primary investment facilitator worldwide in development projects, cannot be underestimated. Looking back, we see that the agenda of the World Bank of the 1950s and 1960s had little to do with poverty alleviation or global development. During this time the World Bank operated out of Washington, largely under Wall Street bankers. Loans to Southern governments were generally small, range remained within capital-intensive infrastructure projects like railroads or power plants. Post-independence Southern governments were struggling to meet citizens demands that had been promised to come with liberation, while suffering immense divestment from the North. As industrialization and urban investment became central to economic focus throughout the 1980s and 1990s, the institutional jurisdiction of the Bank and IMF became expanded to (what they call) global development and poverty alleviation (Goldman 788).

This transformation is most notable under Bank President Robert McNamara, who through new policies on the allowance of profitable international bonds, created a market-friendly environment for huge “development” investors. This secure and profitable arena presented the Global South in a whole new light to multinational investors, an untapped market of natural resources paired with bankrupt governments created a large demand for basic services and an enormous margin for profit. Financial security for these huge Bank loans came from political and economic guarantees that would minimize risk and maximize control for the Northern investors that lent to economically or politically unstable countries. The creation of a low-risk/high-reward market came with new knowledge production sites and think tanks, as well as pervasive international training in the World Bank development approach. These contributed to an exclusive professional class of global expertise, being newly regarded as a “development community”. In the first five years under McNamara (1968-1973), the Bank financed more projects and loaned more money than in the previous 22 years combined (Goldman 788). Through the creation of exclusive data analysis sites and the export of the Bank’s neoliberal ideology, McNamara’s “global expertise” on poverty rapidly began gaining power and influence. In fact, “by the late 1980s, the Bank’s training center was preparing thousands of professionals annually, with more than 3000 in the field of economic development alone (Goldman 789).

### **Global Water Policy**

The global policy on water embodied neoliberal philosophy, which under the guise of “consensus”, led powerful international institutions to accept market logic and set agendas accordingly. The 1992 United Nations Conference on Water and the Environment resulted in the adoption of the Dublin Declaration, whose fourth principle enshrines the neoliberal view of water as an economic good whose allocation can be governed through the market (Castro 334).

Through the neoliberal conception, water scarcity in Southern countries is the result of public policy and institutional failures. A state that suffers recurrent financial or political crisis can not provide or develop the services or infrastructure required by their citizens. Private entities are therefore prompted as alternatives to government mediation. In Mexico, the water crisis was argued to be the result of inefficient administration, the absence of market mechanisms, and the legal insecurity of water rights (Castro 335). Privatization is put forth as a key strategy for; “more efficient provision of service by local authorities, private companies and water users, and for a more efficient and equitable allocation and use of the resource” (Wilder & Lankao 1978).

Full commodification of the natural resource is a strict conditionality for private sector involvement; the assertion being that without the enforcement of property rights, market mechanisms will not be effective in achieving goals of efficiency, accessibility, and quality. The need for a new culture was justified deeming the one that prevailed as an “ingrained dependency culture”, one in which the state guaranteed the resource, while users reaped the benefits for free. This claim has been met with public opposition and a growing perception of illegitimacy in government (Castro 169). The “consumer-pays” and “polluter-pays” principles define the private sector ambition to obtain financial efficiency and environmental sustainability. These principles mean that external costs of water provision are assumed by water users via water tariffs. Despite large discrepancies between high costs and the average family income, these principles are presented as economic incentives to preserve the resource (Wilder & Lankao 1980). The neoliberal recommendation for water system management is to; adopt international accounting methods, submit to grading by international credit agencies, charge full market price, and establish public-private partnerships.

### **Political Context of Mexico**

Water rights were a central theme during the Mexican Revolution, which led to the declaration of water as a public good in the 1917 Mexican Constitution. We see that neoliberal doctrine did not always define Mexico's approach to natural resource management. Article 27 of the Constitution stated; "The property of land and water within the the boundaries of the national territory belong originally to the Nation, which has had and still as the right to grant control over them to individuals thus constituting the private property... The nation will permanently retain the right of imposing on private property the requirements dictated by the public interest, as well as regulating, for the social well being, the development of natural resources" (Castro 329). Despite the revolutionary promises of equal access to water and democratic control of its systems, Mexico has yet to achieve either. Mexico's neoliberal transformation began in the late 1980s under Carlos Salinas de Gortari, President from 1988 to 1994. While his party was born out of the Revolution, the country's faith in democracy has diminished under the 71 year rule of the Party of Institutionalized Revolution or PRI.

Historically, Mexico has experienced strong state involvement and control of the economy and civil society. The diminishing role of the state in public life is seen through the passing of neoliberal reforms of all major public services. Salinas de Gortari's tenure showed his compliance with neoliberal ideology through his modernization strategy deemed the National Development Plan. The plan outlined the opening of the Mexican economy to international markets via free trade agreements and the removal of protectionist measures. These policies were aimed at reducing the role and responsibility of the state while increasing private sector involvement, for example state investment in water infrastructure has been declining since the National Water Law, despite the steady rise in demand (Wilder & Lankao 1979). Endless urban

expansion put impossible pressure on the poorly managed water system while the government was losing popularity and the means to invest, making private sector involvement inevitable.

### **National Water Law**

The most expansive reform in Mexican Water Policy, the National Water Law of 1992, was enshrined in the National Development Plan, and was much in line with “Global” Water Policy, as it depended heavily on World Bank funding. This new law “decentralized water system management from the federal level to state and municipal governments and opened the door for privatization of municipal service provision” (Wilder & Lankao 1982). The primary investors in the new water-development initiative were the International Monetary Fund, who loaned US\$200 million, and the World Bank, who loaned a generous US\$350 million (Wilder & Lankao 1982). After going 38 revisions in Congress, the outcome included an amendment to the Mexican Constitution, the full commodification of the natural resource, the privatization of water services, the creation of a public register of water rights, and a diminishing state role in public life. The amendment to Article 27 of the 1917 Constitution changed the status of water from a public good to an economic resource now subject to market fluctuations and possessing economic value and tradability in the same way as land. To quote water authorities; “water has ceased to be a free good and from now on it is a resource which has an economic value and society must pay for it” (Castro 334).

The Law also called for full governance of water based on market principles, with full private sector involvement. In 1993, the Federal District Water Commission signed provision contracts with private firms Suez, Vivendi, Severn Trent, and United Utilities. Among the responsibilities assumed by the European companies were the formation of a complete register of

water users, the administration of water metering and the enforcement of water billing. The formation of the “Public Register of Water Rights” required users to surrender any existing water titles, then re-apply. The application process often included the submission of property titles, a defining obstacle for the millions living out of city bounds. Approved users were subject to the “conditions” of their service, which could translate into volume restrictions or excessive fees (Castro 335).

In Congress, the opposition was vocal about their concerns, stating that the law would facilitate the monopolization of the water sector, thus leaving users vulnerable to the “market-set” prices. Additionally, they pointed to the large discrepancy between provisions meant to protect the market and those meant to protect users’ rights and the prevention of environmental degradation, the latter of which were almost non-existent. Public opposition came in the form of popular protest as well as payment and registration refusal by users after implementation. This resistance was so widespread that even with the appropriate and effective instruments to enforce the law, non-compliant users only occasionally faced any legal consequences (Castro 170).

### **Cutzamala Water Provision**

“The amount of water coming out of the taps mirrors inequality... Pipe pressure matches income levels” (Barkin 5). This statement rings true when examining water’s journey from the city’s main source - Cutzamala. Supply cuts are more common in low income neighborhoods and costs of water are high -largely due to the hefty electric bill of Cutzamala system, which essentially includes lifting a small lake 100 km and a journey of 100 km through 30 year old pipes in desperate need of maintenance. The Cutzamala reservoir system was an expensive development project aimed at alleviating water shortages and the associated social unrest. The

head of SACMEX, Manuel Reyes described Cutzamala water as the most expensive in world, while describing the city's water department as, "understaffed, underfunded, and overworked". The city allocates 2.4 billion pesos to tap water provision, and passes the remaining costs to consumers through set costs based on "expense-recovery", a burden heavier in the most marginalized areas.

The Cutzamala system for example, has deep social implications at its source as well as its final destination; as with most other reservoirs it lies outside of the MCMA and was imposed upon an already existent community -the Mazahua, one of Mexico's oldest indigenous groups. The Cutzamala system provides about 30 percent of MCMA water, and is met with resistance from its source community, who claim the system has created scarcity and other environmental degradation in their area. Since the construction of the plant and treatment facility, the community has mobilized frequently demanding clean water in every home -an almost absurd deficiency in an area characteristic of natural springs and healthy rivers. The Mazahua attempts against the invasion are often met with federally issued riot police, adding to the already persistent public insecurity.

Cutzamala water passes firstly through the wealthy neighborhoods of Miguel Hidalgo and Cuajimalpa, where consumers enjoy high water pressure and quality; this area is also home to the city's golf courses and many residents afford lawn sprinklers. The aggravating nature of the system is seen as the pipes run eastward; area incomes levels and pipe pressures decline. The most eastern settlement of Iztapalapa constitutes 1.8 million people and is known for its deeply entrenched poverty and high crime rates. The growing community represents a larger trend of urbanization; the past four decades have brought unprecedented numbers of illegal settlements of people in search of better economic opportunity and access to resources and services. The

development of Iztapalapa was unplanned, and the grievances of its citizens have been largely ignored due to their illegitimate settlement status. Upon arriving at Iztapalapa, tap water has lost a third of its volume and even more of its pressure through 150 km of pipes and their associated 40 percent leakage rate. In Iztapalapa, “taps are dry more often than not” and residents are heavily reliant on imported water from tanker trucks, which “remain a lifeline” despite their relatively outrageous costs -which can consume up to a fifth of the average family’s income (Watts 7).

### **Waste Water**

The growing development of urban industry without enforcement of environmental regulations, explains the high levels of pollution found in urban and development areas (Castro 331). The effective management of wastewater has yet to be achieved as well, as there is no natural exit, discharging wastewater is one of the largest and most expensive feats for the city. The system today exists in about 11,000 km of piping through three main channels, which all end in areas surrounding the MCMA. Water within the city is not recycled, thus it arrives at its final destination untreated and highly polluting. Tula Valley, about 100 km north of the city, is home to one of the three largest wastewater plants, making it another high-profile contention location.

Toxins in the water have been proven to affect crops and cause other water-related diseases, angering locals who claim that their territory has been turned into a dumping ground without their consent or compensation. Local Sabino Juarez, describes the tendency of the government to discriminate against indigenous communities by constructing the highly polluting plant then blatantly disregarding protective measures. In 2008, hundreds of community members united in protest against toxins in the water. The government responded by deploying riot police



to the small town of La Cruz, where protesters were assaulted with batons and rifle butts, while others were forcibly removed and/or tortured. Over six years later, little effort has been made by the Mexican government to address their claims.

### **Assessment of Water Privatization**

While the concessional model did increase revenue for water companies, the system did not achieve one of the most popular arguments in its favor: financial self-sufficiency. Mexico has in fact increased expenditure in the water sector since the privatization efforts. Progress in efficiency in the water sector can be seen between 1993 and 2000 through the slight improvement of “installations of taps, meters, creation of customer’s inventory, and water billing” (Wilder & Lankao 1986). More equitable access to water was another supposed goal of the water reforms, however privatization has in some cases worsened unequal access to water. The polluter-pay principle was a central part to address environmental concerns. Costs of environmental consequences are internalized by private management and passed on to drinking water users in the form of high water rates on provision and water imports (Wilder & Lankao 1980).

Interestingly, the jurisdictional regions allocated to private firms excluded a portion of the MCMA, whose inhabitants continue to rely on the government for water provision and regulation (Barkin 3). Water users in illegal conservation land in the surrounding MCMA tend to be the poorest, lacking any legitimate access to water, they are most reliant on imported and bottled water and most subjected to the corresponding high rates. A contradiction arises in the

privatization argument when the most poverty-entrenched areas marginalized further by high costs, inaccessibility, and poor quality. Urban areas are home to 75 percent of the population, the MCMA the most marginalized communities are those built on private or conservation land surrounding the city. Due to the illegality of these settlements, services are not provided by the government. Residents in these communities lack official titles and property rights and are therefore heavily reliant on illegal, home-made water hookups, which are often unreliable and insufficient for large populations. Water quality is questionable despite being “treated”. Water testing is not enforced or made available. Many people must purchase water brought by large tanker trucks from surrounding areas, which costs up to 600 percent more than city tap water as private vendors have the freedom to set prices according to demand. Tanker water is also subject to high import fees, a burden assumed by consumers (Tortajada 358).

Mexico City’s title as the thirstiest city in the world continues to be relevant today. In 2014, engineers estimate that 300 litres are required for each of the 8.8 million residents, the highest demand of any city in the world. The millions of people that commute daily into the MCMA for work add to an ever growing demand. Problems of efficiency remain. 40 percent of water is still lost through leakage in the system, showing about two percentage points of improvement since 1995 (Wilder & Lankao 1980). Furthermore, 70 percent of residents’ taps run for less than 12 hours per day, while those of 18 percent provide only an hour or two of service every few days (Watts 3).

## **Conclusion**

While demography and geography are challenges to water management in the MCMA, they are not solely responsible for the water crisis. Artificial scarcity arises when the resource is

poorly managed or unevenly distributed. The late 1980s brought the opening of the Mexican economy to the international private sector. The neoliberal climate of the time caused a wave of privatization of public assets throughout the global South. The neoliberal logic to resource management advocates a passive state role, governance on market principles and an unregulated private sector. This approach was presented as a “consensus” on global water policy, but reflects the dominance of neoliberal ideology permeating the world’s most powerful institutions, namely the World Bank and International Monetary Fund. In the case of Mexico, the World Bank was the primary investor in the Mexican National Development Plan of 1990, an ambitious policy which included an extensive economic reform of public sectors and infrastructure. Under this umbrella, the National Water Law left a partially private system that is maintained today through the renewal of short term concessional contracts with foreign water companies (Castro 333).

Proponents of water privatization and the Mexican government promised improvement in infrastructure, quality and accessibility, and attainment of environmental and financial sustainability. Under my assessment, their efforts failed to meet these standards. Despite some progress in infrastructure, the partially-private system has aggravated the very social inequalities it aimed to alleviate, further marginalizing the poorest citizens through the high cost of water, lack of access, and poor quality. The flaws of the partially-private system are most visible in Cutzamala water provision, where accessibility and quality varies greatly depending on the neighborhood. Illegal settler communities lack property titles, which are a requirement to apply for water rights under the National Water Law. In this way, vast poverty-entrenched communities are left vulnerable to market prices and poor water quality, exacerbating financial instability and poor access to health services.

Contradictions are seen between the supposed benefits and realities of a decentralized and privatized water system as many communities continue to suffer from intermittent water service, inaccessibility, and poor quality. The MCMA water system that exists today is similar to the fragmented partially-private system implemented in 1993 since it has undergone only minimal modifications. Comprehensive reform in the water sector should include considerations for all citizens, which could be achieved through re-centralization of water management, democratization of the decision making process, and equalized provision. The neoliberal ambitions of the 1990s have proved incompatible with social equality. Today, the path forward depends on the empowerment of people, while solutions depend on the creativity of the collective.

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