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■ AQ FEATURE

From “Make-Sicko” back to Mexico City: The Greening of Mexico’s Distrito Federal

BY [Marcelo Ebrard](#)

A former mayor chronicles the greening of Mexico's *Distrito Federal*.

Read a sidebar on [transportation](#).

Mexico City has one of the world’s most complex concentrations of people. In the early sixteenth century, Mexico City already had 200,000 inhabitants, and the Valley of Mexico almost half a million—which is to say, it has always been one of the world’s largest cities. Due to its longstanding position as Mexico’s capital city, industrial development in the twentieth century, and particularly the rapid demographic growth in the 1970s and 1980s, the city’s air quality was suffering by the early 1990s. Mexico City became known internationally as the most polluted city in the world.

In the past 20 years, the federal, state and city governments have carried out an ambitious program to improve air quality in the Valley of Mexico. The effort was one of the most efficient public policies ever developed in our country, where public policy planning, follow-up across different levels of government in different administrations, and critical and science-based policy evaluation are not very common.

Governing Mexico City presents the enormous challenge of simultaneous conservation and transformation. It requires an intense and efficient effort by the government to provide services to a population that demands safety, education, health and recreation, consumes 9,000 gallons of water per second, generates 14,000 tons of waste per day, and takes 28 million daily trips on public transit. While providing these services, the city must constantly remake itself to stay competitive and cutting-edge.

In the administration that I had the opportunity to lead, we wanted to start a transformation of the city that would make it more livable, sustainable and competitive—nothing less than a structural transformation that would refocus our culture’s most important values and encourage our citizens to return to public spaces.

Our goal was to offer the world a new vision of Mexico City: an open, equitable, progressive, safe, and, of course, green city.

Placing Mexico City’s environmental agenda high among the administration’s priorities required shaking up city bureaucracy, a task that involved not only an important planning effort but also the integration of policies to include notions of ecology and the environment. With this in mind, we launched Mexico City’s *Plan Verde* (Green Plan).

Going Green

Our efforts were grounded in the need to involve the community on the road to sustainability. This required a personal connection—seeking citizens’ opinions and, above all, receiving their mandate. Accordingly, the first step in the plan’s development was to carry out a *Consulta Verde* (Green Consultation), in which we solicited citizen approval of 10 high-impact environmental actions that we intended to pursue during our administration.

Through a direct referendum via the ballot box, telephone and Internet, citizens were asked if they supported municipal projects such as expanding the Metro and Metrobús, encouraging cycling as an alternative mode of transit, building a new waste-management site, and mandating efficient and energy-conscious school transportation. The proposals won overwhelming approval from the more than 1 million citizens who participated in the *Consulta Verde*. Just as important, they drew vital attention to the idea that a green city is both possible and a legitimate aspiration—even for the city once known as the world’s most polluted.



A view of downtown Mexico City, featuring the Alameda Central Park (left) and the Palacio Bellas Artes (Palace of Fine Arts) (right). Photo: Alberto Biscaro/Radius/Cobris



With the public endorsement of our new vision, we set out to develop the specifics of our Green Plan. We established a cabinet-level office in which all of the city government’s department heads participated, defining 27 strategies and 77 specific goals, each one selected for its impact and direct social benefit. Given Mexico’s unique ban on consecutive re-election, we needed to complete these within five years for an initial benchmark in 2012, with a set of goals and a specific

budget.

Our Green Plan was innovative from the start, for several fundamental reasons.

Our efforts involved the vast majority of city government departments, making them jointly responsible and committing them to action that specifically targeted environmental sustainability. We didn’t want our Green Plan to be a “silo” policy under the exclusive purview of the Secretariat of Environment and Natural Resources, but rather a plan for the entire government. Thirteen departments worked on the plan directly and another 11 collaborated indirectly.

In an effort to ensure policy continuity beyond the logic of six-year planning, the plan covered a 15-year timeline. Expanding the timeline was crucial, since the city’s environmental problems are the products of nearly a half-century of sustained deterioration. For the first time in the city’s history, all of the fundamental aspects of environmental policy were coordinated within specific parameters. The Green Plan covers seven fundamental dimensions: land conservation; habitability and public space; water; mobility; air; solid waste; and climate change and energy.

The introduction of the Green Plan also represented an important change in the city’s messaging and representation. The citywide initiative required government officials to collaborate on work carried out simultaneously by different departments and offices, to coordinate events and joint city operations, and to

share agendas, messages and events. The same approach was used in other important municipal projects on social development, public safety, equity, and culture.

But the most important transformation had to take place among citizens themselves. Changing the way Mexico City residents used water, managed their garbage and moved around the city was critical to altering their perceptions about the uses of public space. In the process, citizens could once again take pride in their city and find ways of living in harmony. This was more than just atmospherics: violence and crime continued to shadow other states throughout the country.

One of the hardest challenges was setting the plan in motion. Despite public approval of our overall goals, several of the initiatives faced significant opposition, such as closing the city’s main avenue (the *Paseo de la Reforma*) to make way for Sunday bicycle outings; extending the weekly road space rationing program to include one Saturday per month (the Saturday “No-Drive Day”); making school transportation obligatory for large schools; raising the water rate to make it more reflective of actual costs; and streamlining traffic flows and excavations for the construction of Line 12 on the Metro. But although such measures were initially perceived as annoyances, people gradually recognized the long-term benefits.

That provided a solid foundation for more complex and innovative Green Plan initiatives.

Rescuing the Magdalena

The Magdalena River is the only usable waterway left in a city that once boasted over 60 rivers, and when I came to the mayor’s office it was in trouble. Although the 12-mile (19-kilometer) river is pristine at its origin in the city’s forestlands, by the time it flows out of the city, it carries the bulk of domestic waste discharges.

Could we change things after decades of urbanization and substandard water management? We did, but perhaps more important, we proved that we could. The rescue included: a participatory planning process; the ecological restoration of the upper basin; the installation of nine miles (14 kilometers) of collectors on the riverbanks to capture drainage; a treatment plant; and the renovation of nine public plazas along the margins of the river for community gatherings and recreation.

Restoring the City Center

The emotional and cultural heart of the capital has always been its center, and it was especially important to restore its historic beauty during the 2010 bicentennial of independence and centennial of the Mexican Revolution. Along with a few other iconic public spaces, the city center was the target of a stunning makeover. More than 1,000 colonial-era facades were restored with public and private investment. The city government modernized hydraulic and electrical services in the area west of the city center; rehabilitated 11 plazas and gardens; and formalized street vendors. We also made the Calle Madero a pedestrian-only thoroughfare. At the same time, the city’s principal monuments, including the Plaza of the Republic, the Monument to the Revolution, Alameda Central, and the Plaza Tlaxcoaque, were refurbished to their former splendor.

And even more tellingly, citizens could now enjoy the renovated urban landscape without worrying about pollution from cars. A Sunday bike ride program was put into place along the Paseo de la Reforma, closing vehicle traffic from eight in the morning to two in the afternoon every Sunday. This played a vital role in returning community life to the city center, drawing pedestrians, cyclists, people in wheelchairs, and pet owners to occupy our main avenue for collective outdoor activity.

Building Sustainable Transportation

Twenty-eight million trips per day are recorded in Mexico City, posing immense challenges of traffic congestion and air pollution. Rethinking mobility involves not only rebuilding existing systems of public transport, but creating new modes of transportation.

To address the city’s demand for west-to-east infrastructure, we built Metro Line 12—at 16 miles (26 kilometers) long, the most important public work in Latin America. We also strengthened the *Metrobús* system of dedicated-lane transportation, expanding the network to 59 miles (95 kilometers) from its original 12 miles (19 kilometers) under the previous administration. For this system, we selected state-of-the-art technology, including hybrid buses, for the city center. Today, those buses carry more than 760,000 passengers daily, replacing 5,800 smaller buses that were uncomfortable, unsafe and highly polluting.

That was just the beginning. The *Red de Transporte de Pasajeros* (Passenger Transportation Network) added natural gas buses and a special service for the exclusive transport of women in marginalized areas, called *Atenea*.

At the same time, the system of trolley buses was updated, and three electric Zero-Emission Corridors were created in the city. More than 80,000 taxis were retrofitted with greener technology. The first charging stations for electric vehicles were also installed, and the Zero-Emission Taxis program was put into place, with more than 20 electric units that provide service in the city’s historic center.

Introducing EcoBici

Many visitors to Mexico City are surprised to see that one of the most popular vehicles in the central district is the bicycle. Yet just four years ago, bikes were quite rare in our city. The *EcoBici* Individual Transportation System, launched in 2010, was the first public bicycle system installed in any megacity in the Americas.

The effort amounted to a paradigm shift, but not surprisingly, the program engendered skepticism at the beginning. The system had to be planned meticulously and precisely; there was little room for error. Because of the high stakes and importance of success, we designed a Bicycle Mobility Strategy for the city, which included the planning of infrastructure, protected bike lanes, signposting, traffic lighting, installation of bike parking stations, road safety, an urban cyclists’ manual, and modifications to transit regulations, among many other measures.

Three years since its launch, *EcoBici* boasts 258 stations with 3,680 bicycles, and has attracted 100,000 members who take nearly 10,000 trips daily, accumulating over 11 million trips to date on this new mode of transportation. In addition to reducing pollution and complementing other transit systems, *EcoBici* introduced a new urban culture to Mexico City: the cyclist culture of coexistence, freedom and respect, which provides users the chance to enjoy their city, exercise and even change their lifestyles.

At the end of my administration’s term, in 2012, we conducted a survey and held focus groups to better understand the initiative’s impact. The conclusions were clear: 64 percent of users did not ride bicycles before signing up for the system, 86 percent noted improvements in their quality of life, and nearly 50 percent of trips connected with another mode of transportation. I am certain that the success of the system in Mexico City subsequently inspired the world’s other large cities—such as São Paulo, New York, Bangkok, Chicago, Toronto, and Tel Aviv—to introduce public bicycle programs and that it continues to inspire many other cities throughout the world.

Busing Schoolchildren

Private cars transporting children to and from schools constituted some 30 percent of the city’s car traffic during peak hours. Some 50 percent of the city’s students went to school in private cars. We knew it was critical to reduce those percentages for the health of our citizens and city.

The program we introduced called for a graduated shift to public buses. Despite its complexities, including the necessity of monitoring and regulating the program and setting user fees, over 15,000 Mexico City schoolchildren now arrive by bus. Parents pay an annual fee of \$30 to cover trips up to 45 minutes. As a result, the number of private vehicles used to transport schoolchildren was reduced by 30 percent. And there was an additional benefit: on the roads nearest to the schools in which the program was implemented, average speeds increased by four miles per hour, reducing the stops and starts that cause pollution—thus contributing to a nearly 60-percent reduction in carbon dioxide emissions.

Reducing Carbon Emissions

Mexico City was the first city in Latin America, and one of the first in the world, to pledge to reduce greenhouse gas emissions to combat global warming. The Climate Action Program, presented in June 2008, defined 26 actions for reducing greenhouse gases, 13 for adapting the city to climate change and six for communication and education.

In just four years (2008 to 2012), we met our target of reducing nearly 8 million tons of carbon dioxide equivalent. To achieve this, we successfully implemented a cycle of planning, execution and evaluation, and required all the city departments involved in the program’s goals to communicate to the population their climate goals and the importance of citizen involvement in this environmental challenge.

The program received enormous international recognition, and led to our hosting the 2010 World Mayors Summit on Climate Change, which attracted 138 mayors. The resulting Global Cities Covenant on Climate commits city governments to report on their efforts annually to build more sustainable, environmentally friendly cities and to serve as global leaders. So far it has been signed by 300 mayors.

Developing a Barter Market for Recycling

Mexico City produces nearly 14,300 tons of solid waste each day. One of the Green Plan’s most important public policies was to encourage waste separation and to promote recycling and composting. To reduce the generation of trash and to drive the development of local products, a new exchange program was introduced in 2012: the Barter Market. It provides incentives for local citizens to collect inorganic waste and sends it to different companies that specialize in recycling, so the waste can be re-used.

In return, citizens receive “green points” that can then be exchanged for fresh food grown locally with organic and traditional techniques. In just 10 months, over 20,000 people participated in the Barter Market, recovering more than 165 tons of waste for recycling, and producing, in turn, great social, environmental and economic benefits.

To Mexico

These accounts illustrate the profound ways in which the Green Plan has changed Mexico City. It’s still only a beginning, but our programs, which have earned a dozen international awards, prove that a community can build a better and healthier future if it’s willing to spend the time and effort and take the risk of public criticism.

There’s no doubt that if we had not made those efforts, grim predictions that the city was heading toward

environmental disaster would have come true. But what’s important is that this was not just a government-led initiative. To succeed, it needed to be driven by citizens themselves. Mexico may not be entirely “green” yet—that could take another two decades—but showing other cities what is possible may be our proudest achievement.

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I would have loved to hear Mr. Ebrard's comments on what these exaggerated results (reality is not as pretty as he describes it), added to a number of non-listed populist activities did to public finances and general management of the city.

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