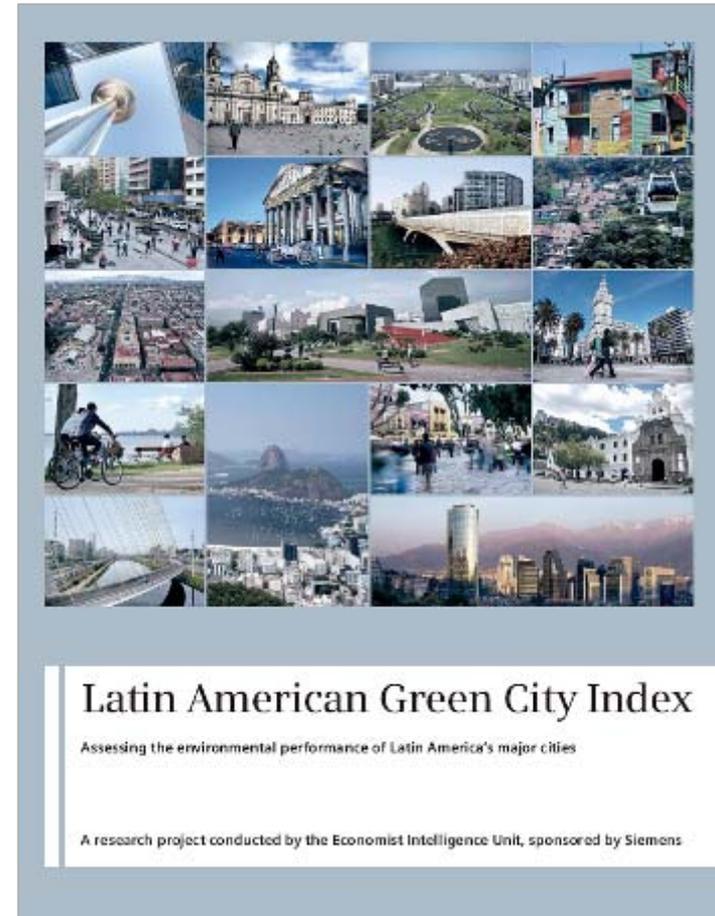


Latin American Green City Index

World Mayors Summit
on Climate

Mexico City

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Overview

The Latin American Green City Index

- A unique Index that compares 17 major Latin American cities based on their environmental performance and policies
- Builds on the European Green City Index published in Copenhagen, December 2009
- Researched independently by the Economist Intelligence Unit
- Intended to help Latin American cities learn from each other, to better address common environmental challenges

Overall results

	well below average	below average	average	above average	well above average
	Guadalajara Lima	Buenos Aires Montevideo	Medellín Mexico City Monterrey Porto Alegre Puebla Quito Santiago	Belo Horizonte Bogotá Brasília Rio de Janeiro São Paulo	Curitiba

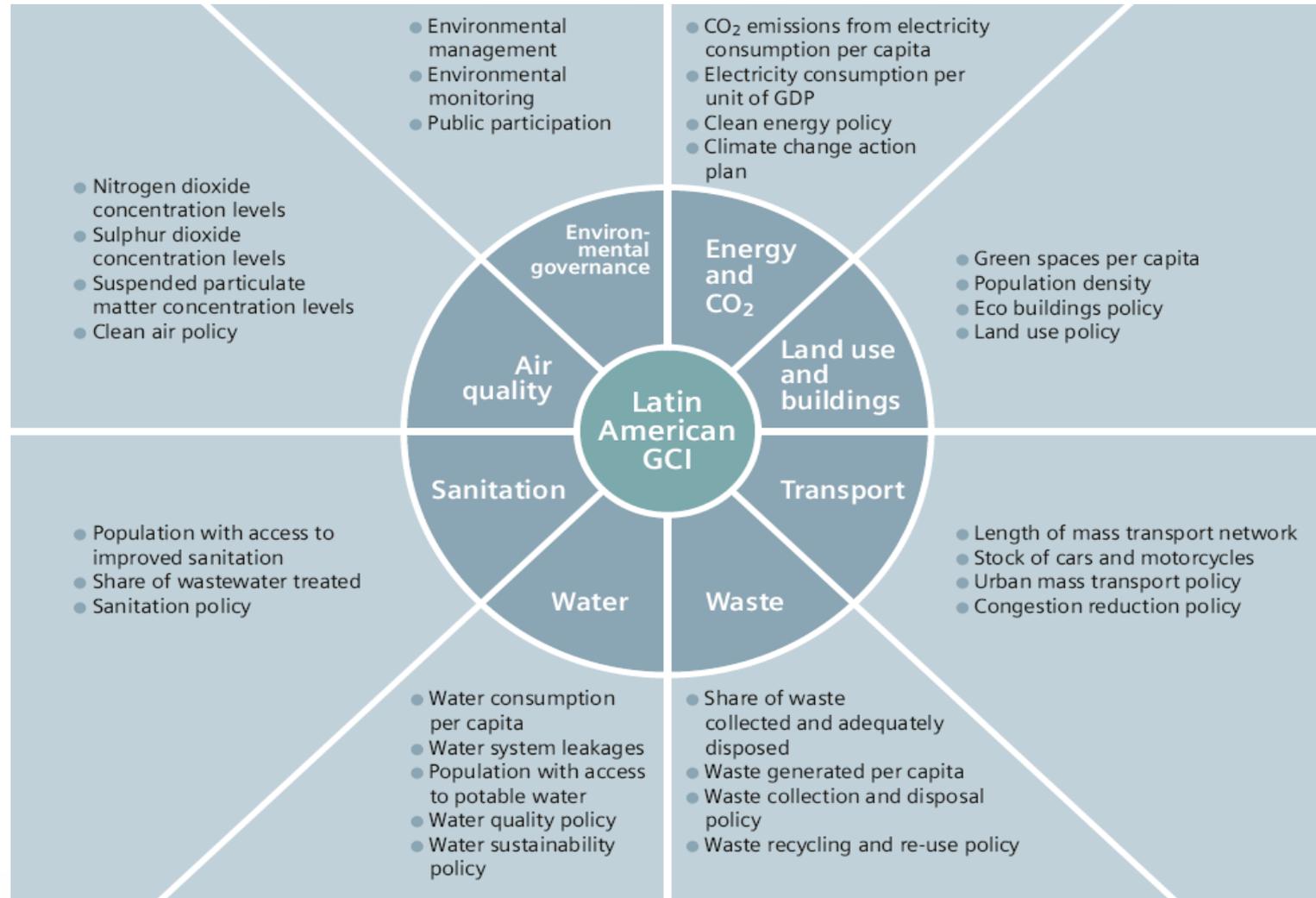
The cities

- The 17 cities selected for the Latin American Green City Index include most major Latin American urban areas
- Capital cities and leading business capitals were selected, both for their size and importance
- The cities were chosen independently rather than on an opt-in basis by individual cities
- Data availability was a decisive factor in the selection of cities



Belo Horizonte
Bogotá
Brasília
Buenos Aires
Curitiba
Guadalajara
Lima
Medellín
Mexico City
Monterrey
Montevideo
Porto Alegre
Puebla
Quito
Rio de Janeiro
Santiago
São Paulo

A unique index



Data collection

- Data collected from publicly available sources, generally for the years 2008 and 2009
- Indicators were selected with advice from an independent panel of experts
- Cities were scored across 8 categories and 31 individual indicators:
 - 16 quantitative indicators
 - 15 qualitative indicators
- Data far less available than in Europe
- Due to data concerns, the Latin American Green City Index is presented in groups of cities, or bands



Key findings

Category results

	well below average	below average	average	above average	well above average
Energy & CO2	Santiago	Guadalajara Medellín Montevideo Porto Alegre Puebla	Belo Horizonte Brasília Buenos Aires Lima Monterrey Quito	Bogotá Curitiba Mexico City Rio de Janeiro	Sao Paulo

	well below average	below average	average	above average	well above average
Land use & buildings	Lima Montevideo	Medellín Quito	Brasília Buenos Aires Curitiba Guadalajara Monterrey Porto Alegre Puebla Santiago	Belo Horizonte Bogotá Mexico City Rio de Janeiro São Paulo	

Category results

	well below average	below average	average	above average	well above average
Transport	Brasília	Guadalajara Monterrey Porto Alegre Puebla	Belo Horizonte Buenos Aires Lima Medellín Montevideo Rio de Janeiro	Bogotá Curitiba Mexico City Quito São Paulo	Santiago

	well below average	below average	average	above average	well above average
Waste	Brasília	Belo Horizonte Buenos Aires Lima Medellín Montevideo	Guadalajara Mexico City Rio de Janeiro	Bogotá Monterrey Porto Alegre Puebla Quito Santiago São Paulo	Curitiba

Category results

	well below average	below average	average	above average	well above average
Water	Buenos Aires Guadalajara	Lima Montevideo Rio de Janeiro	Medellín Mexico City Porto Alegre Puebla Quito	Belo Horizonte Bogotá Brasília Curitiba Monterrey Santiago São Paulo	

	well below average	below average	average	above average	well above average
Sanitation		Bogotá Buenos Aires Guadalajara Lima Mexico City Montevideo Quito	Belo Horizonte Porto Alegre Puebla Rio de Janeiro	Brasília Curitiba Monterrey Santiago São Paulo	Medellín

Category results

	well below average	below average	average	above average	well above average
Air quality		Bogotá Buenos Aires Lima Mexico City Monterrey Montevideo	Guadalajara Porto Alegre Puebla Rio de Janeiro Santiago São Paulo	Belo Horizonte Brasília Medellín Quito	Curitiba

	well below average	below average	average	above average	well above average
Environmental governance	Gudalajara	Belo Horizonte Lima Monterrey Porto Alegre	Buenos Aires Medellín Puebla Quito Santiago São Paulo	Bogotá Brasília Curitiba Montevideo	Mexico City Rio de Janeiro

In search of a holistic approach

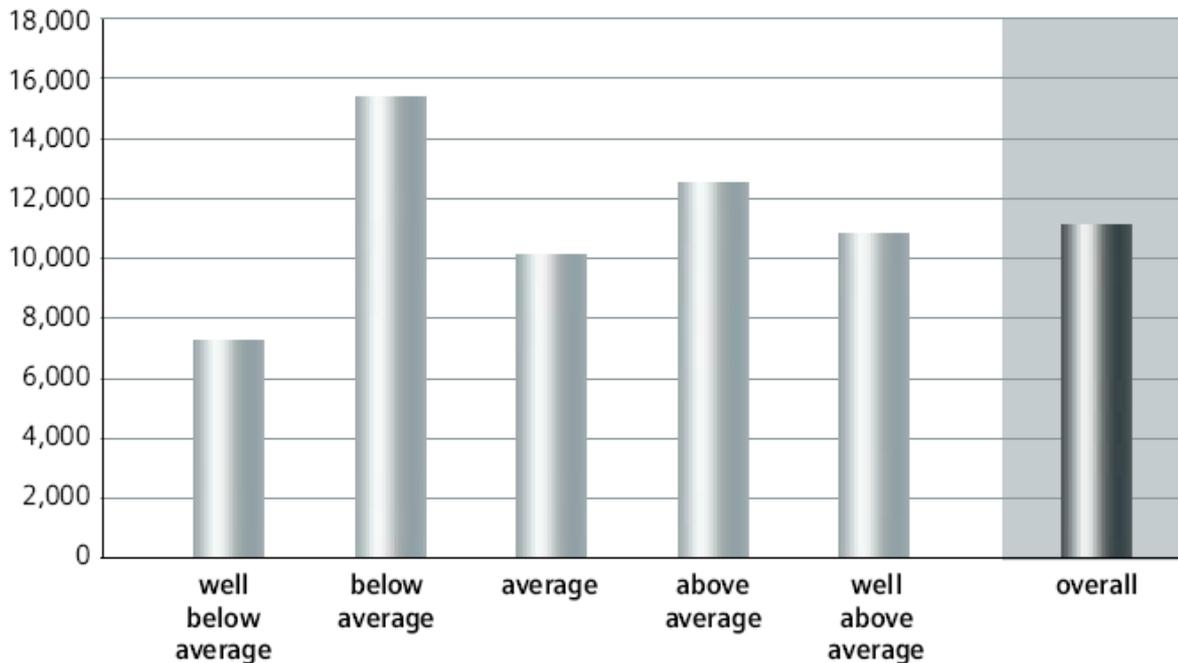
- Latin American cities face a number of serious environmental challenges that require immediate attention
 - This has shifted the focus away from a strategic perspective
- This ad hoc approach is reflected by the Index
 - Some cities perform well in some categories and poorly in others
- Experts agree that an integrated approach for environmental governance and comprehensive forward planning are the best ways to break the pattern of...
 - Crisis > policy response > next crisis
- Curitiba has a strong track record of such a holistic approach



Income and environmental performance...

...the missing link in Latin America

Average City US\$ GDP per Person in each Overall Performance Band

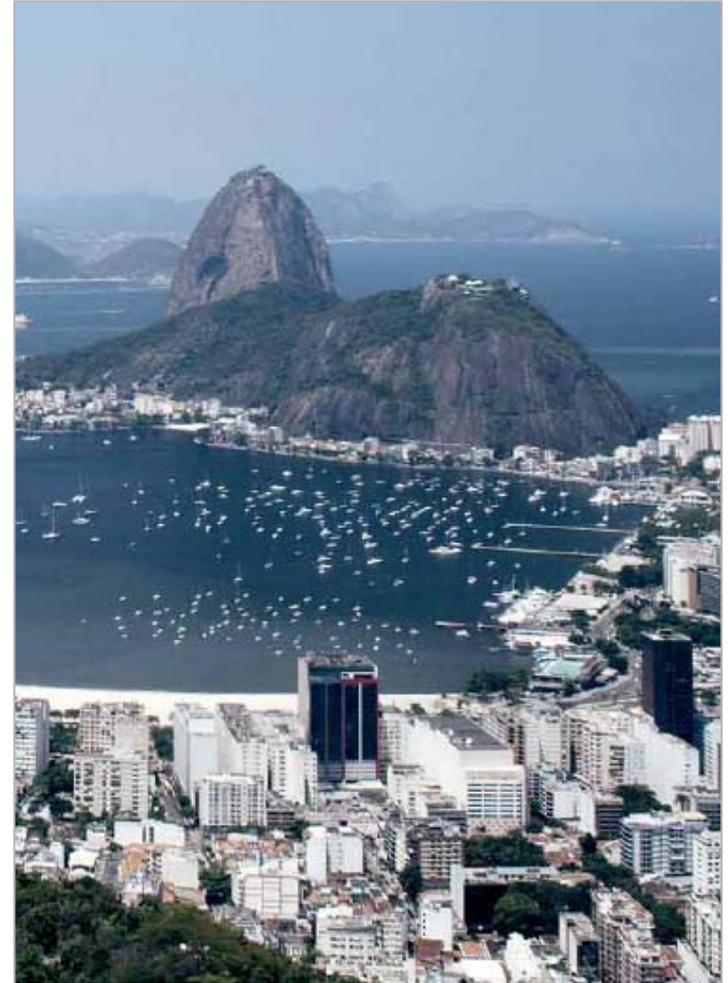


- Lack of correlation between GDP per capita and “Green Cities” performance
- Conversely, the effect of GDP per capita is very clear in Europe and Asia

City trends

Brazilian cities: leading the way on policy

- Brazilian cities perform surprisingly well
 - Five of the six cities 'above or well above average' are Brazilian
- Strong environmental policies
 - Early adoption of constitutional provisions for municipal environmental policies (1988)
- Five of the six Brazilian cities perform significantly better when only the policy indicators are assessed
- Impact of strong policies on actual results hasn't fully come through
- Brazil has a very high share of renewable electricity use (hydropower)



Key findings from the categories I

- Energy and CO2

- Impressive record on renewable energy; nine of 17 cities generate more than 80% of electricity from renewable sources; gaps on climate change plans



- Land use and buildings

- Many Latin American cities face major challenges with informal settlements and urban sprawl; policies on environmental building standards not widespread



- Transport

- While many Latin American cities have extensive public transport networks, they have not succeeded in getting people out of their cars
- Only 8 cities have comprehensive mass-transit policies or well-integrated pricing



- Waste

- The average for waste disposal in all cities is 96% in *recognised residential areas*
- Waste generated per person, at an Index average of 465 kg per year, is noticeably lower than in Europe, at 511 kg per year



Key findings from the categories II

- Water

- Water quality and access, even in informal settlements, is taken seriously
- Water consumption on average is 264 litres per person per day; low compared with the European average of 288 litres
- Leakage is high at an average of 35%



- Sanitation

- Waste-water collection covers on average 94% of cities' inhabitants *in recognised residential areas*
- But only an average of 52% of waste-water is treated, and eight of 17 cities treat less than half their water; two treat none at all



- Air quality

- Air quality is taken seriously
- A 'car culture' still leads to serious issues, such as high NO2 levels



- Environmental governance

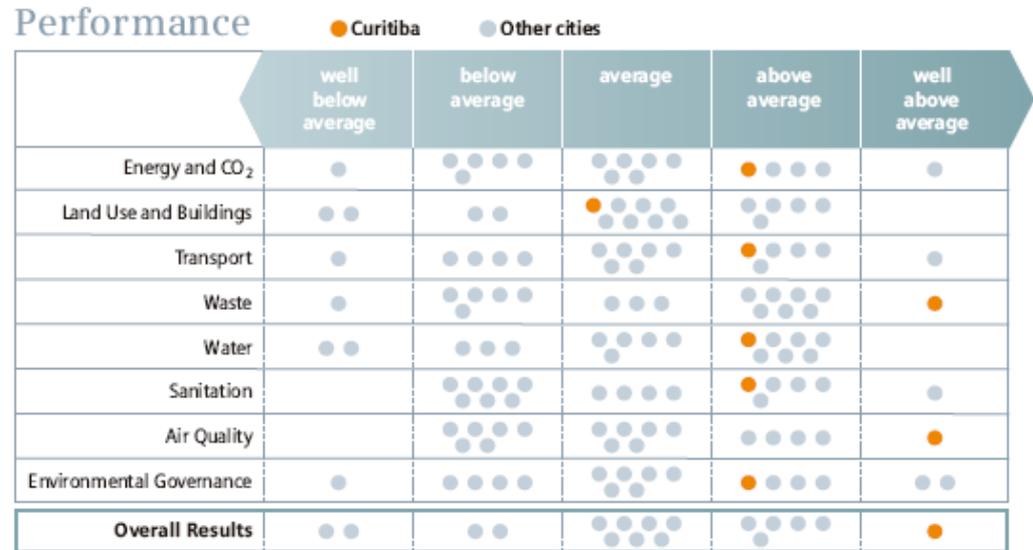
- Latin American cities have formal environmental governance structures but they are often undermined by limitations on the areas they cover



**Lessons from the leaders/
Best practice**

Curitiba: a class of its own

- Only city in the Index to rank 'well above average' overall
- Long history of taking a holistic approach to the environment
- As early as the 1960s proposals implemented to reduce urban sprawl, create pedestrian areas, and provide effective, low-cost rapid transit
- The city's BRT has since become a model
- 1980s: Urban plan involved integrated initiatives that addressed issues such as the creation of green areas, waste recycling and management, and sanitation



Curitiba: a class of its own

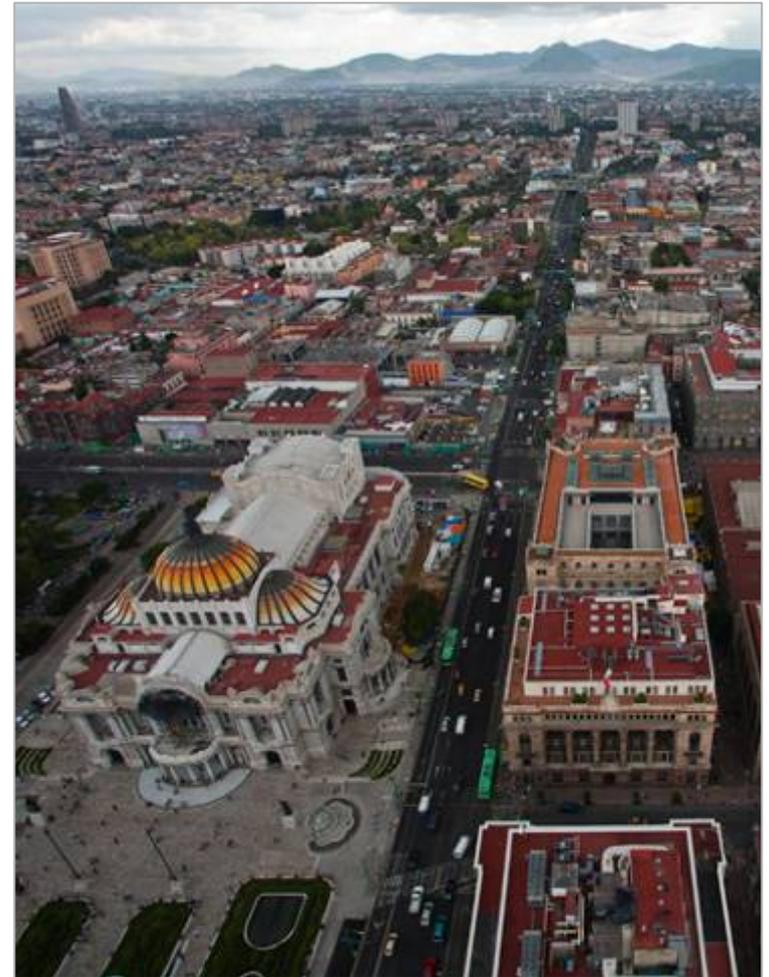
- ‘Well above average’ in two individual categories, air quality and waste, and ‘above average’ in five others
- Environmental oversight consistently strong
- Working to relocate those living in informal settlements to low-cost housing—where sanitation, waste collection, and water are easier to supply
- Concern about environmental issues became a part of citizens’ identities
- The public expects politicians to look ahead



Morio

Air quality: Mexico City

- 1992: UN said Mexico City had the most polluted air on the planet
- Since 1992: Series of clean-air strategies
- Impressive reductions of nitrogen dioxide, sulphur dioxide, particulate matter, other pollutants:
 - 2002: airborne lead was no longer an issue
 - Sulphur dioxide was one-sixth level of early 1990s
 - Average levels of ozone dropped by 20% and average daily maximum levels by 28% through the 2002-10 period
- Definite progress, but still a long way to go
- PROAIRE IV has been launched for 2011-2020



Transport: Buenos Aires

- 'Plan for Sustainable Mobility' addresses integrated city transport
- City aims to get 5% of the city's commuters, or 300,000 people, to use bicycles
- Introducing BRT lines on key routes has cut travel times by 10% to 25%
- By the end of 2010, 100 km of new bicycle paths should be open in the city centre as well as a public bicycle rental system
- The municipality is also offering its 120,000 employees subsidised loans to buy bicycles
- Increasing pedestrian areas
- Modernising traffic-light systems



Mexico

A closer look at Mexico

- Mexico City
- Guadalajara
- Monterrey
- Puebla



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A closer look at Mexico

- All Mexican cities but Guadalajara rank 'average' overall
- Guadalajara suffers from 'well below average' environmental governance; weak policies affect all other categories
- Mexico City benefits from 'well above average' environmental governance; held back only by its 'below average' sanitation and air quality
- High CO2 emissions in Mexico owing to low share of renewables in electricity
- Most initiatives conducted at a state level



Progress is being made

- **Water in Monterrey**
 - Reduced leakage in its water system from an estimated 32% in 1998 to 21% by 2008
 - Comprehensive programme: checking and replacing valves, upgrading pipes, installing pressure gauges and household meters, leak detection, eliminating illegal connections
- **Waste in Puebla: Turning waste into cash**
 - “Green Wallet” is a private initiative to promote recycling in Puebla
 - Members join the scheme and receive a debit card; they get one “peco”, an electronic credit, for every kilogram of waste they bring to depots located throughout the city
 - Introduced in early 2010; by August 2010 it had collected 22 tonnes of solid and electronic waste
 - Small compared with the estimated 819,000 tonnes that the municipality produces annually, but an impressive beginning for a private initiative
 - Likely to grow, with plans to begin collecting organic waste in the future and to begin similar projects in the surrounding region soon
 - Eventually hopes to open franchises throughout Mexico

Thank you