

Online EAERE pre-conference workshop

The economic impacts of air pollution and the implications for policy

Air Quality Programme Committee

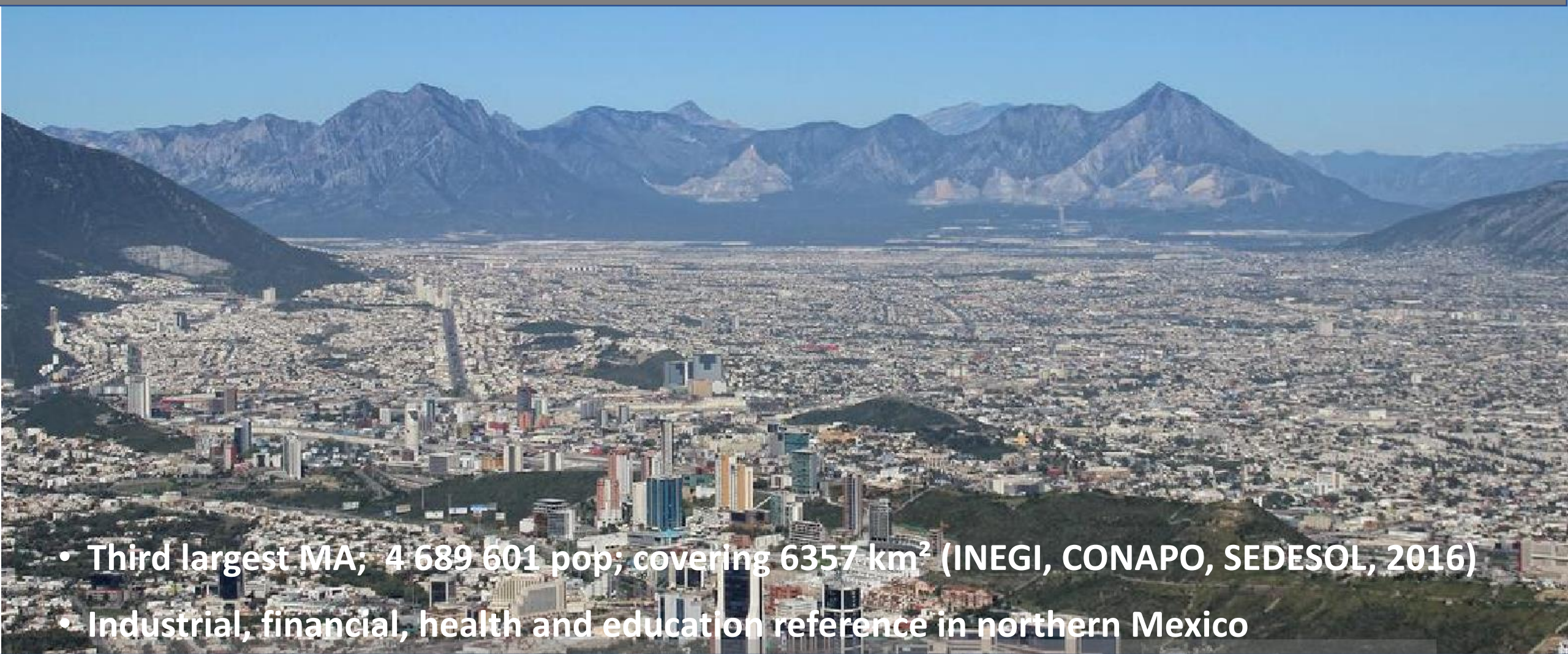
Plan FAMM Aire

June the 24th, 2020

Fondo de Agua
Metropolitano de
Monterrey

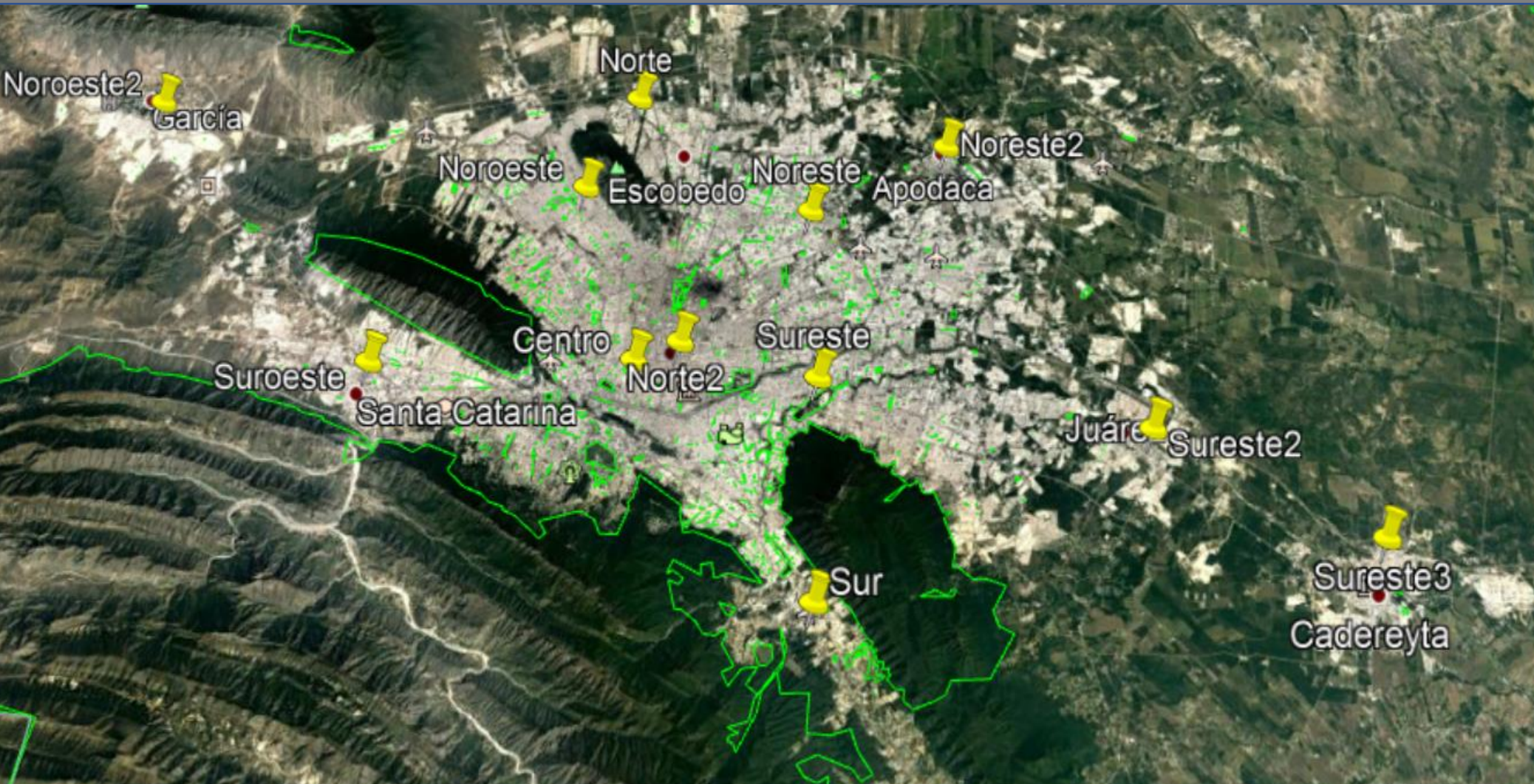


The Monterrey Metro area



- Third largest MA; 4 689 601 pop; covering 6357 km² (INEGI, CONAPO, SEDESOL, 2016)
- Industrial, financial, health and education reference in northern Mexico
- Home to the largest industrial concentration after the MCMA; More than 2,200,000 motor vehicles

Monitoring Air Quality in Monterrey Metro area (1994)



13 stations, 8 pollutants; 3 major concerns: PM10, PM2.5 and O3

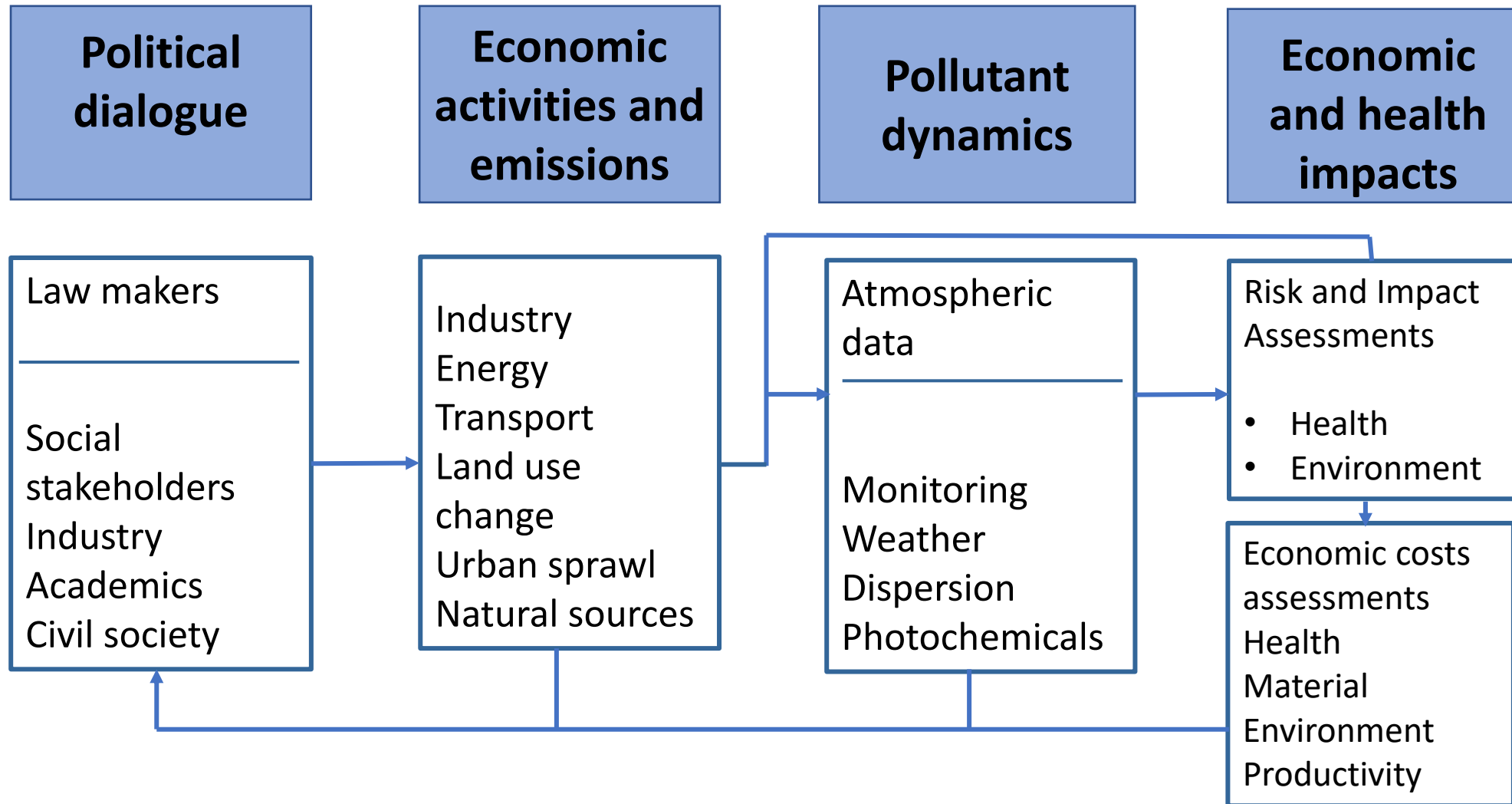


Air Quality through the last 25 years

- The monitoring network was established in 1993
- Some pollutants have shown a significant decrease, such as CO, HC y NO_x
- TSP, PM₁₀ and PM_{2.5} are still a real challenge. O₃ also increased in the last years. VOC is reported as a new challenge, and its is closely linked with O₃.
- The lockout demonstrated a decrease in PM₁₀ (considerable) and PM_{2.5} (less significant). Ozone remained in the usual figures.
- Fuel consumption was reduced almost 45 % in the Monterrey Metro area



Decision making for improving air quality



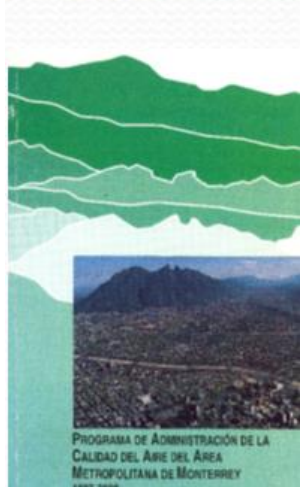
Source: After Mejía, Molina & Molina (Air Quality Programmes for Mega Cities)





Air Quality programmes, some actions

- Improving air quality: reducing environmental impact of mobile sources, improving performance of stationary and area sources
- Energy security and transition towards low impact fuels and sources: energy efficiency and clean energy uses
- Transport and mobility: linking urban development, mobility and environment through joint planning and investing in consistent projects, including non-motorised modes
- Land use: Fostering re-densification and re-use of strategic urban spaces
- Reforestation and other green solutions in the MMA



Source: *After Mejía (2019)*



Some words on air quality management

- Most of research and institutional work has been focused on particles (TSP, PM10, PM2.5)
- No detailed studies for industrial emissions (including oil refinery, energy production) and VOC
- Very scarce information on natural sources (dust) and black carbon
- There are no regular assessments of air policy and air governance conducted; future scenarios are still lacking
- Current resources associated to air quality management are not sufficient on the managing side, hence, air quality prediction is not conducted
- Urban mobility and transport and urban planning must be associated to air quality and other environmental programmes



Conclusions

- Environmental expenditures decreased due to budget cuts
- Federal support of fossil fuels, including carbon, affected the entire clean energy markets
- Insufficient and ineffective public transport solutions in the MMA reflect on the constant increase of the private cars fleet and traffic
- Urban sprawl, and therefore land use planning, a major issue for bad air quality
- Lack of incentives (economic instruments) to foster environmental performance beyond “meeting the standards”
- More stringent standards are required



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