

Three geographical obstacles compound Mexico City's pollution challenge: high mountains surround the Mexico City Valley and prevent the natural dispersion of pollution by the wind; the city's very high altitude of 2,235 metres (7,333 feet) permits the entry of solar radiation, which transforms hydrocarbons and nitrogen oxide into ozone; and the area is vulnerable to thermal inversions that trap pollutants in the Valley.

The largest source of air pollution is vehicular emissions although the second source, industrial emissions, has greater toxicity. A series of measures has been implemented or planned to counteract the city's pollution challenge. These include:⁵⁵

- the acquisition of signed pledges from 1,400 operators of plants and industrial facilities for the scheduled installation of pollution control equipment;
- expansion of the Atmospheric Monitoring Network from 25 to 32 stations;
- hourly broadcasts of the metropolitan air quality index (IMECA) to alert residents to fluctuating pollution levels;
- requirement for catalytic converters on all new cars, buses and taxis since 1991;
- the phase-out of leaded gasoline;
- reduction in the sulphur content of diesel and fuel oil;
- extension of the metro system to 131 miles;
- increased use of natural gas by public transportation;
- replacement of all public transport vehicles by 1996;
- equipment of 3,500 urban buses to meet the most stringent emission standards in the world;
- replacement of 6,000 suburban buses by vehicles with reduced emission capacity;
- addition of anti-pollution equipment to 55,000 taxis and 12,000 minivans;
- conversion of 144,000 public and cargo vehicles within three years to cleaner burning natural gas or liquid petroleum;
- annual emissions inspections for private cars in the Federal District and in the suburban municipalities (in 1991, fines for non-compliance were paid by more than 4,000 owners);
- emissions checkpoints at all entrances to Mexico City;
- reduction of suspended particle emissions by up to 90 per cent at the city's 220 most polluting industries;

55. Ibid., September 1992.