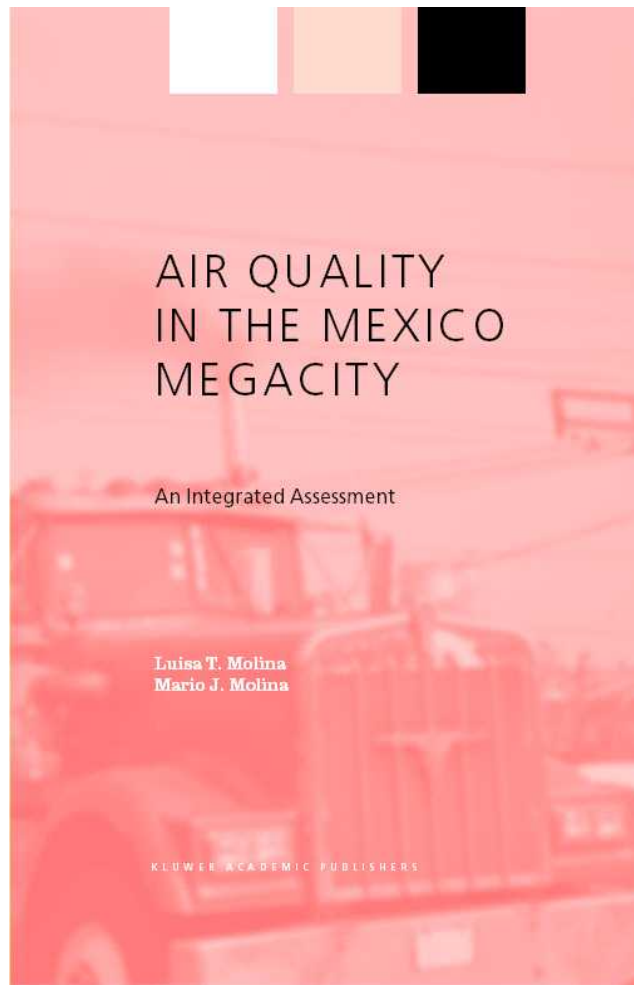


Summary of the First Phase of the Mexico City Air Quality Program



Chapter 1. Air Quality Impacts: A Global and Local Concerns

Chapter 2. Cleaning the Air: A Comparative Overview

Chapter 3. Forces Driving Pollutant Emissions in the MCMA

Chapter 4. Health Benefits of Air Pollution Control

Chapter 5. Air Pollution Science in the MCMA: Understanding Source-Receptor Relationships Through Emissions Inventories, Measurements and Modeling

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Chapter 7. Key Findings and Recommendations

Chapter 4

Health Benefits of Air Pollution Control

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Health benefits of 10 percent reduction of levels of key carcinogenic air toxics in the Mexico City Metropolitan Area

	US EPA Classification	Background Concentration (µg/m³)	Unit Risk Value (lifetime risk per 1 µg/m³)	Risk Reduction (cases/yr)
Benzene	A	10	5 x 10⁻⁶	1
1,3-Butadiene	B2	2	3 x 10⁻⁴	20
Formaldehyde	B1	3	1 x 10⁻⁵	1
Diesel Exhaust Particles	--	5	3 x 10⁻⁴	40
PAHs	B2	0.05	3 x 10⁻⁴	< 1
Chromium	A	0.01	1 x 10⁻²	1
All Air Toxics		n/a	n/a	100

1. Risk reduction for a 10 percent reduction from the base concentration.
2. Uses 20 million persons as the population of the MCMA.
3. Uses 70 years as a nominal lifetime.
4. All values reported rounded to 1 significant figure.

Estimated Health Benefits of a 10% Reduction of Pollution Levels in the MCMA

PM10	Background Rate (case-persons-yr)	Risk Coefficient (% per 10 μ g/m ³)	Risk Reduction (cases/yr)
Cohort Mortality	10/1000	3	2000
Time Series Mortality	5/1000	1	1000
Chronic Bronchitis	14/1000	10	10 000

Ozone	Background Rate (case-persons-yr)	Risk Coefficient (% per 10 μ g/m ³)	Risk Reduction (cases/yr)
Time Series Mortality	5/1000	0.5	300
Minor Restricted Activity Days	8000/1000	1.0	2,000,000