

Air Quality Management: Thailand's Experiences



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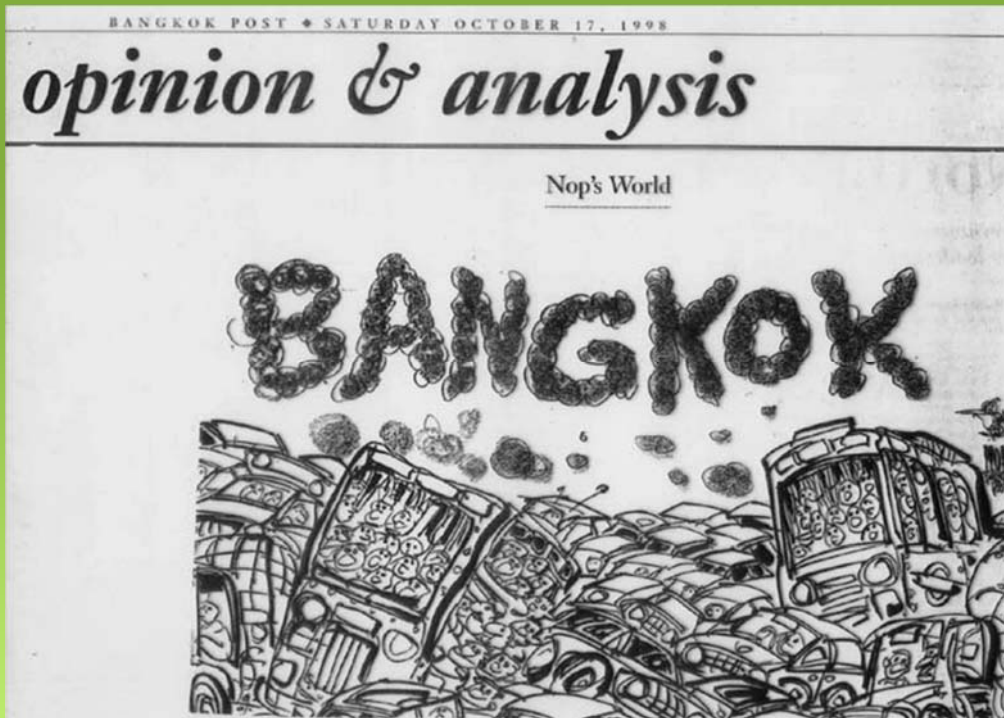
Regional Resource Centre for Asia and the Pacific (RRC.AP)
Asian Institute of Technology (AIT)

The Problem Bangkok's Air Pollution in Early 90's

- Air pollution has been identified by the public as a major environmental issue in Bangkok
- High levels of air pollutants, i.e. Pb, CO, SPM, and PM10, usually exceeded the prescribed limits
- High blood lead level in school children and traffic policemen
- Health effects of air pollution was increasing
- Motor vehicles and fuels contribute to the air pollution problem



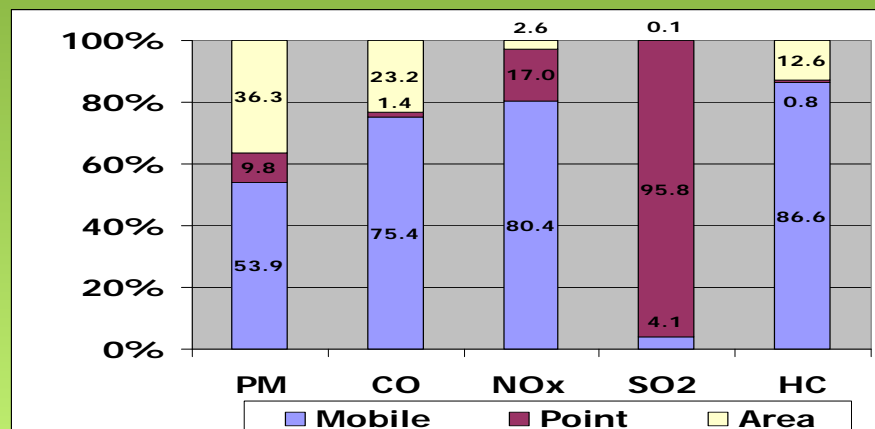
News Headline on Air Pollution in Bangkok in 1998



Sources of Air Pollution

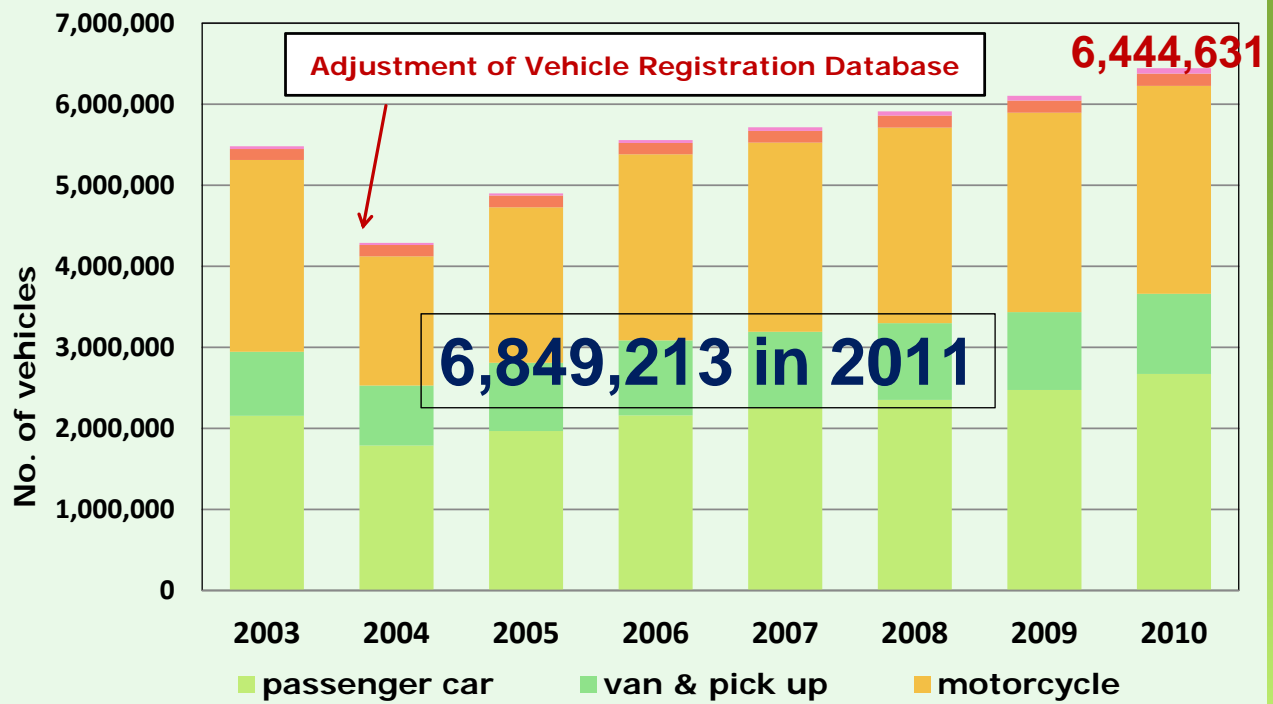
ALL SOURCES

Sources	Emission Loads in BKK in 1997 (Tons/Year)				
	PM	CO	NO _x	SO ₂	HC
Mobile	20,602	349,771	264,648	9,973	232,973
Point	3,735	6,266	56,002	229,859	2,005
Area	13,855	107,738	8,511	184	33,904
Total	38,192	463,775	329,161	240,016	268,882

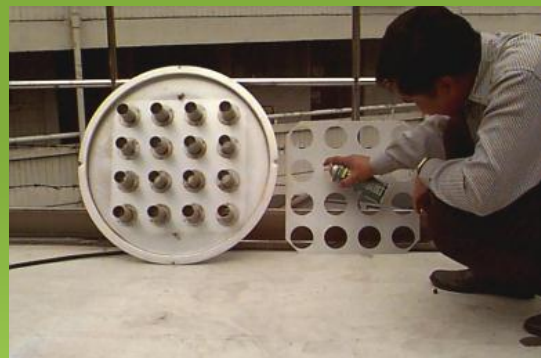




Number of Vehicle Registered in Bangkok until 2010

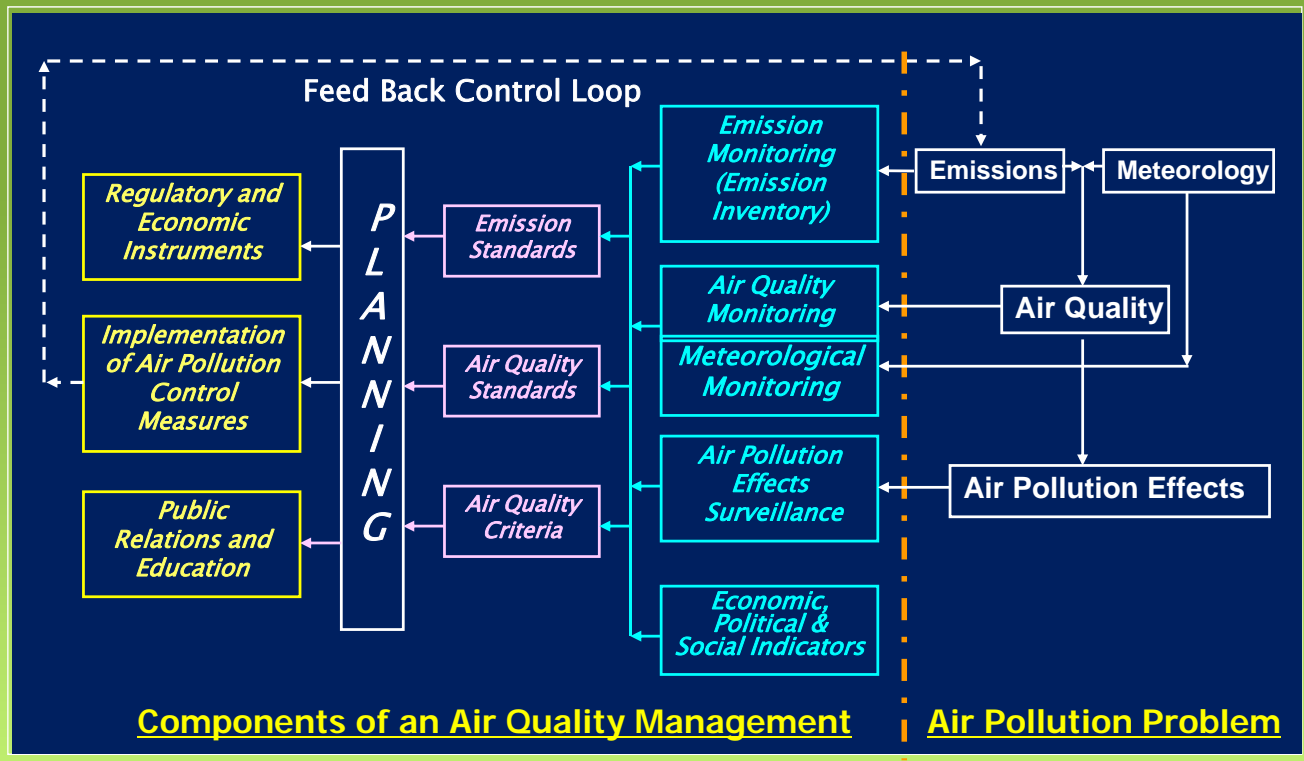


Particulate Matter in Bangkok's Air

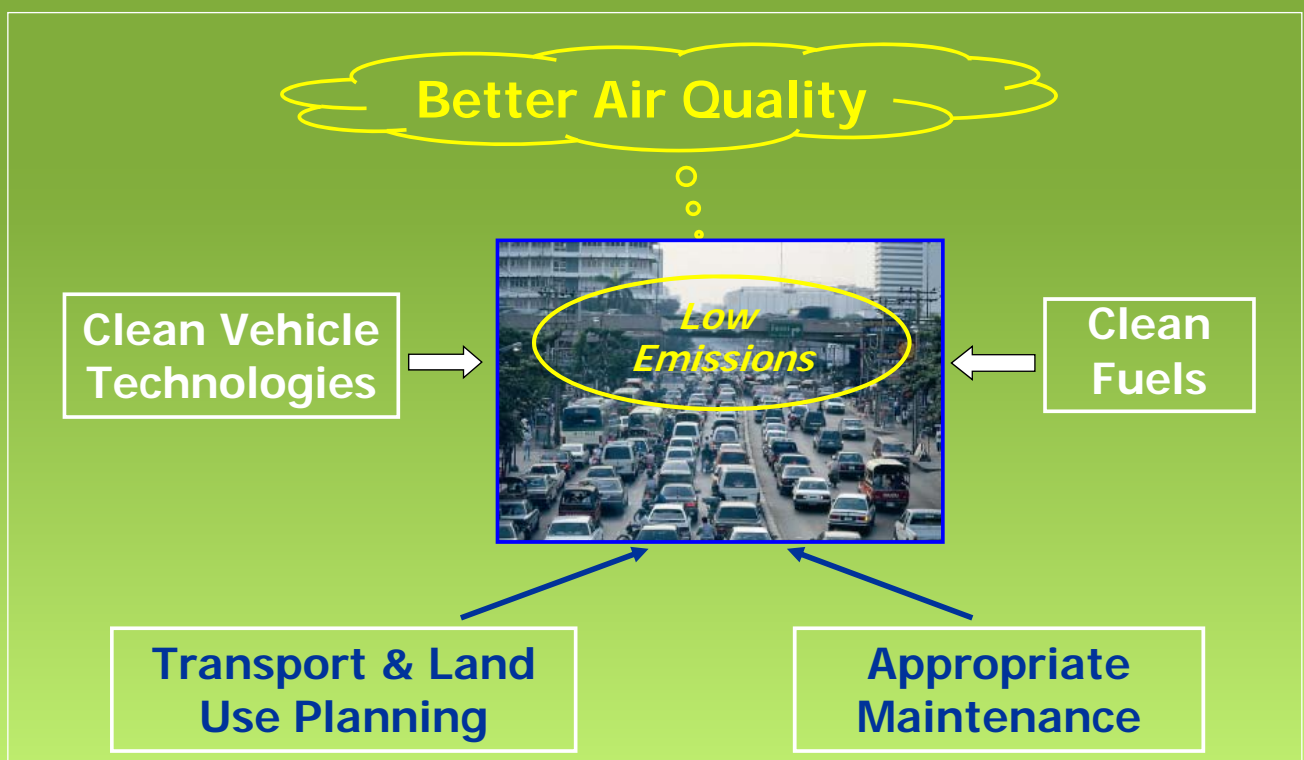




Air Quality Management System



Elements of a Comprehensive Vehicle Pollution Control Strategy



*Clean fuels and clean new vehicles
are major factors responsible for
today Bangkok's cleaner air*



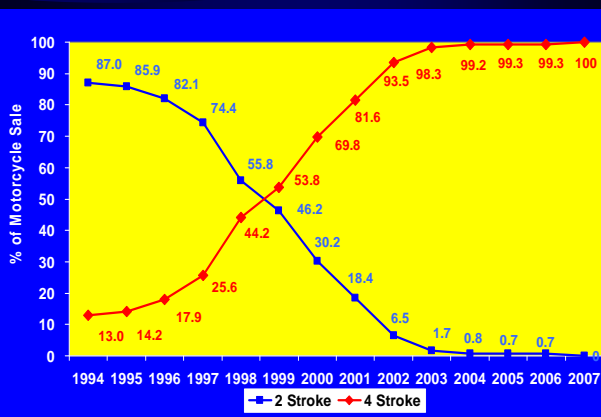
12 Lines of MRT Network in BMR in 2029 covering areas of 680 sq.km



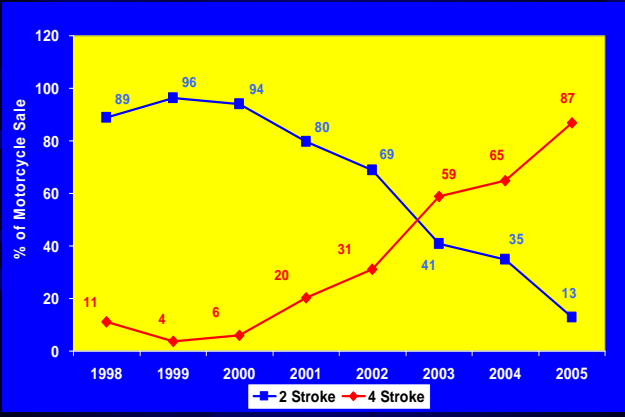


Motorcycles in Thailand

Motorcycle Sale in Thailand from 1994-2007

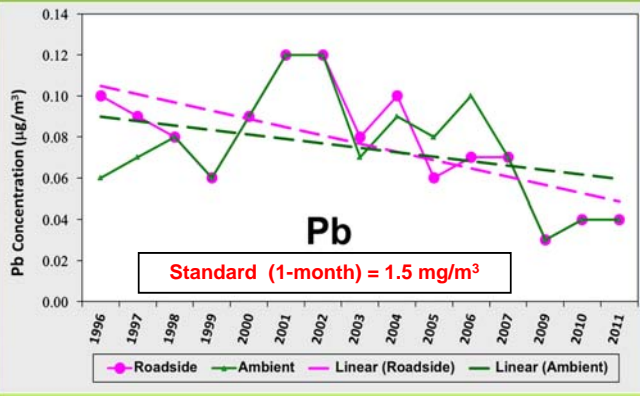
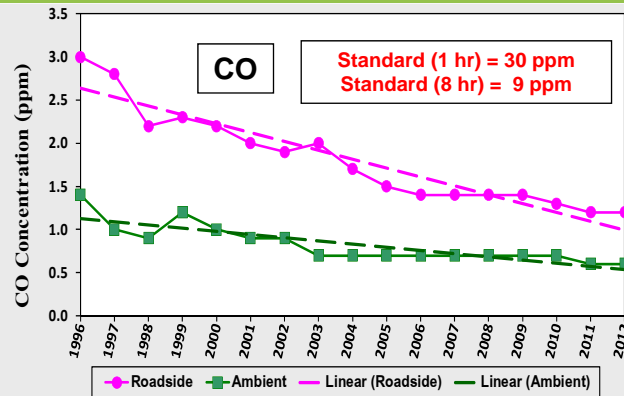
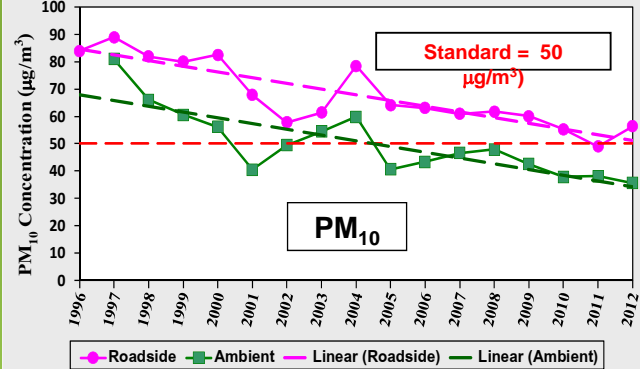
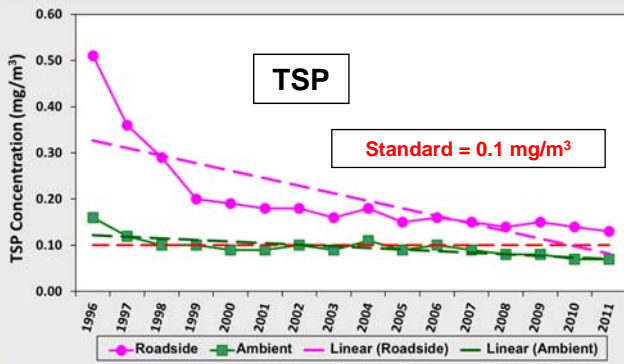


In-Use Motorcycle in Thailand from 1998-2005

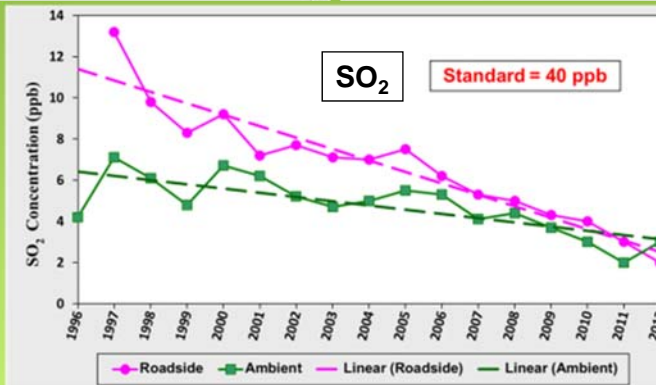
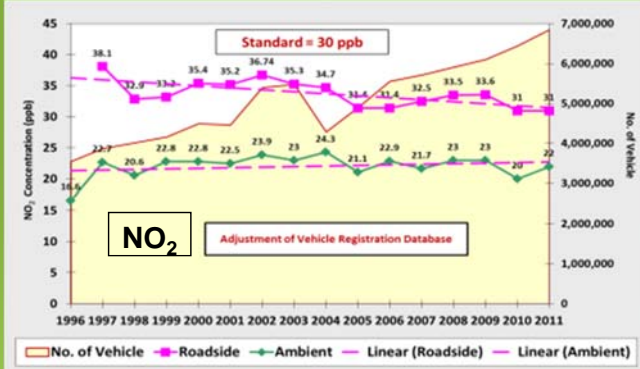
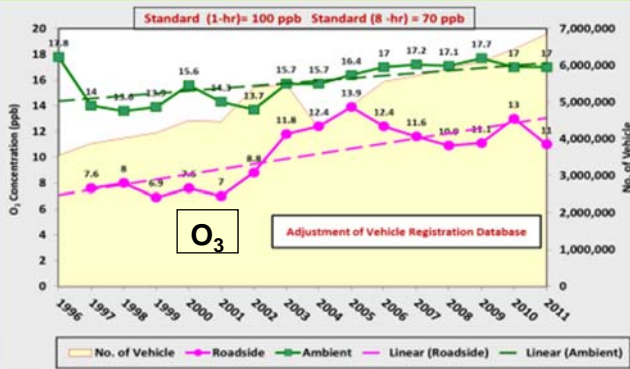




Trends of Air Quality in Bangkok



Trends of Air Quality in Bangkok





Conclusion

- Air quality in Thailand during the past decade has been improved. The ambient levels of key air pollutants (particulate matter, lead, sulfur dioxide and carbon monoxide) in Bangkok and other major cities have fallen dramatically.
- All air pollutants, **except PM and O₃**, are now complied with Thailand National Ambient Air Quality Standards.
- VOC is a problem in some urban and industrial areas



Challenges Ahead

- 1) Targeting PM (PM₁₀ and PM_{2.5}) and O₃ reductions
- 2) Improving Inspection and Maintenance Program
- 3) Improving public transport & transport management
- 4) Improving air quality management governance
- 5) Broadening public participation
- 6) Obtaining political will
- 7) Harnessing global opportunities (Climate Protection) for local air quality improvement - Co-benefit

For Better Air Quality in Asian Region

