Chapter 6

Recommendations and Suggestions
The following control measures are recommended towards reducing air pollution in the city. These measures are suitable to be applied at the source itself, since the pollutants are being released in the atmosphere by virtue of natural phenomena such as wind, thermal convection and rain wash out.

1. Subsidized public mass transport must be strengthened to minimize use of personal vehicles.

2. Improvement in traffic management.

3. Encroachment should be removed for smooth flow of traffic.

4. Public awareness programme on automobile pollution.

5. Burning of wood, agriculture wastes and many other solid matter must be stopped at open places.

6. Use of natural gas or low sulphur containing fuel should be encouraged in place of petrol, diesel.

7. Vehicular emissions must be checked periodically.

8. Vehicles whose operational life has expired should not be allowed within the city.

9. All sorts of waste materials must be disposed properly.

10. Industries must adopt proper waste treatment before releasing it to air.

11. Importance should be given to utilize solar energy.

12. Use of chlorofluorocarbons (CFC’s) must be reduced or substituted.
13. Toxic materials must be reduced or substituted.

14. Environmental pollution as subject should be introduced in school/college as a compulsory subject of studies.

15. Polluting industries should be kept far away from the city. They should have one complex where all the industrial pollution norms are observed. Offices should not be situated in silence zone. Roads should be well maintained. By pass roads may be provided for inter city traffic. Flyovers may be built to avoid traffic jams.

**Air quality modeling**

Because of resource limitations and practical considerations, it is desirable and even necessary to utilize approaches other than air quality monitoring to determine the impact of pollution on air quality in the region (particularly under worst case conditions). Use of air quality models to predict the impact of new and existing sources on ground level concentration of emitted pollutants or pollutants produced as a result of atmospheric reactions, addresses, in many cases, these limitations and constraints.

Air quality models are important tools for determining the environmental impact of pollution sources. Their use provides a relatively inexpensive and reliable means of determining compliance with National Ambient Air Quality Standards (NAAQS) and the extent of emission reductions necessary to achieve standards in an area not in compliance with NAAQS. They are widely used by regulatory authorities as surveillance tools to assess the effect of emissions on ambient air quality. Models are also used to evaluate permit applications associated with permissible increments under prevention of significant deterioration (PSD) requirements and new source review (NSR) programmes.
Alternative fuels

Variety of fuels have been evaluated or are being used as lower-emission alternatives to conventional gasolines. These include alcohol-gasoline blends, C₂H₅OH, CH₃OH, liquefied natural gas (LNG) and liquefied petroleum gas (LPG). Such fuels have the potential to improve air quality, particularly in urban areas. Reduction in emissions and improvement in air quality depend on the type of fuel used and other factors. Alternative fuels may improve air quality by reducing mass emission rates from motor vehicles or reducing emissions of photo chemically reactive hydrocarbon compounds.

Control of emissions from stationary sources

Stationary sources are significant sources of pollutant emissions. These emissions are quite varied in both their nature and quantity, depending on the industrial and commercial activities involved, pollutants may be emitted to the atmosphere through specially designed stacks and local exhaust ventilation system or escape as fugitive emissions.

Emissions from stationary source can be controlled, or their effects reduced by application of one or more control practices. These include use of tall stacks, changes in fuel use, implementation of pollution prevention programs, fugitive emissions containment, and "end of the pipe" control systems that remove pollutants from waste gas streams before they are emitted into the ambient environment through stacks.
Green belt development

Green belt plantation around the air polluting unit can never be a claim for the removal of air pollutants at the region, but effectively planted trees in the green belt may potentially remove the toxic gases in considerable amount.

Management of air quality as well as in selection of suitable plant species (with high APTI) for plantation in industrial area as well as on the roadside may become one of the strategy for the abatement of city’s air pollution because it will have a marked effect on many aspects of the quality of the urban environment and the richness of life in a city.

Legal control of air pollution

In India, air pollution control legislation envisions the formation of air pollution boards at the central and state levels “with powers to invoke and revoke licenses to polluting industries, enforce emission standards and frame rules and regulations for the control of air pollution.” The legislation is primarily directed at the highly polluting industries such as iron and steel, textile and power plants. The board will have power to prohibit certain trades and manufacturing processes in notified areas and prescribe emission standards in scheduled premises. The legislation is also understood to ban the burning of garbage and other waste products in urban areas as well as the fouling up of air by burning, smoking fuels for domestic purposes. Recently, Mumbai Smoke Nuisance Act has been enforced only for smoke emanating from the chimneys of industrial units. However, there is a need of legislation to deal with fumes of petro-chemical units, ash carbon particles, unpalatable smell and even noise from industrial units.
Suggestions for Future Study

1. Ambient air quality monitoring with respect to RSPM, PAH, CO.

2. Lichen diversity study can be taken up.

3. IgE level in traffic policemen of different areas.

4. To evaluate the deposition of heavy metals in different plant species for different areas.

5. Effect of aerosols on plant samples and development of air quality models.

6. Air pollution tolerance index for different seasons with different parameters.


8. To assess the impact of bioaerosols (bacteria and fungi) on human health.