BAQ 2004: Session Outline

Simple Interactive Databases and Models to Support Air Quality Management Decisions

Summary: This interactive session seeks to provide an introduction to modern databases and models that can be used to assist in making informed decision for air quality management. A special focus will be to introduce new-generation tools that are simple and interactive and help make good use of modern information technology advances. Under each session, demonstration of some simple interactive systems will also be provided along with useful reference material, followed by hands-on training. A feedback session would solicit views from participants about the utility of the various types of systems presented.

Target Group: The target group for this training would be focused on those who have an interest in using modern information and analytical tools for decision support on air quality management. This could include environmental regulators, city managers, researchers, financial institutions, private sector, and various government agencies and NGOs. Prior knowledge of some aspect of air quality management or modeling is preferred.

Note: It would be useful to bring a laptop to facilitate your participation in the hands-on training – the training modules would be loaded onto your laptop. In addition, all participants are requested to bring data pertaining to a city/town of their choice to facilitate the development of simple air quality models for their location of interest in the hands-on training sessions. All participants are also expected to complete a survey before the workshop and provide feedback at the end of the workshop.

Session Outline for Saturday, December 4, 2004:

9:00-9:30 am Registration

9:30-10:15 am Session I: Introduction
• Integrated Air Quality Management
• Typical types of Air Quality Decisions to be made
• Typical data available and limitations
• Typical models and limitations

10:15 - 11:15 am Session II: Air Quality Data and Knowledge Base Development
• Data needs, availability and quality (emissions, dispersion, impact, options assessment)
• Spatial information systems (e.g. GIS, Remote Sensing)
• Web-based tools (web-based GIS, web-based databases, monitoring)
• Demos/Discussion

11:15 - 11:30 am Tea Break

11:30 am - 12:30 pm Session III: Air Quality Modeling
• Typical types of air quality models
  o Emission Inventory
  o Dispersion
  o Source Apportionment
  o Impact Analysis (primarily health and agricultural)
  o Management options assessment (technical, policy, economic)
  o Integrated modeling system
• Evolution of Modeling Frameworks and Decision Support Systems
• Demos/Discussion

12:30 - 1:30 pm Lunch

1:30 - 3:00 pm Session IV: Simple Interactive Frameworks: Examples of Simple Tools
• Data/Knowledge base management for cities
• Integrated modeling for air quality management
• Targeted Modeling Applications
  o Scenario Analysis
  o Economic analysis
  o Environmental Assessment
  o Partial emission assessment (e.g. for mobile sources)
• Demos/Discussion

3:00 - 3:15 pm Tea Break & Selection of Hands-on Training Groups

3:15 – 5:15 pm Session V: Hands-on Training
• Building a Simple AQM Model from scratch
• Scenario Analyses using various Models

5:15 – 6:00 pm Session VI: Discussion on Future Possibilities & Feedback