

AIR POLLUTION IN THE MEGACITIES OF ASIA (APMA) PROJECT



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■ CHRISTINE KIM
KOREA ENVIRONMENT INSTITUTE

■ CAI-Asia WORKSHOP:
REDUCING VEHICLE EMISSIONS
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■ Introduction

- The Air Pollution in the Megacities of Asia (APMA) project was initiated in November 2000 by the United Nations Environment Programme (UNEP), in collaboration with the World Health Organization (WHO), Korea Environment Institute (KEI) and Stockholm Environment Institute (SEI)
- The project is funded by the MOE, Korea, and the Swedish International Cooperation Development Agency and implemented by KEI and UNEP, in close cooperation with WHO and SEI

Background

- APMA builds upon UNEP/WHO efforts on air pollution in megacities under the urban air quality monitoring programme (GEMS/AIR), which formed part of the UN Global Environment Monitoring System (GEMS) to acquire scientific data and information on the environment through monitoring and assessment

Objectives

- To contribute to the improvement of urban air quality in Asian Megacities and to reduce its impact on human health to achieve a more sustainable urban environment
- To strengthen air quality management (AQM) practice in large urban conurbations and megacities of Asia by establishing an information network to provide information on AQM, technical support and training and to facilitate the adoption of regional and local AQM action plans

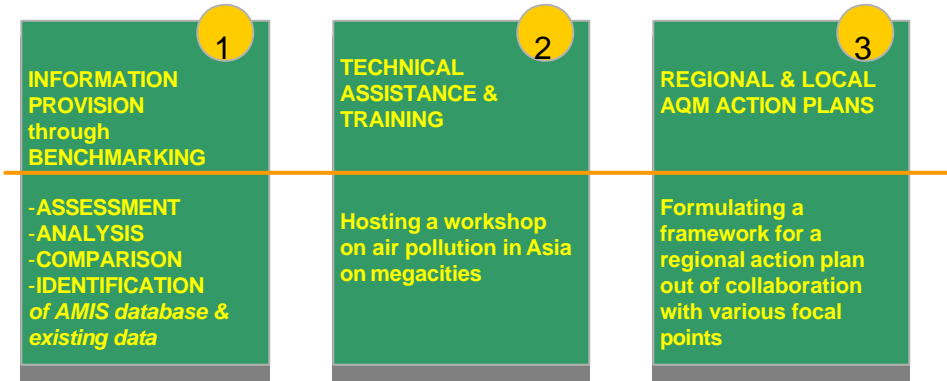
■ Sub-objectives

The APMA project has three main objectives:

- **Information provision** - to undertake a benchmarking exercise for AQM in Asia by collating and disseminating existing information on urban air quality, determining gaps in information and identifying best practice and lessons learned
- **Technical support and training** - to provide technical support on specific AQM related issues and to provide appropriate training in order to enhance capacity in the region
- **Regional and local AQM action plans** - to facilitate the harmonization of AQM approaches and the adoption of regional and local AQM action plans

■ Phase I: goals

- *determine the current state-of-the art in air pollution management in the Asian region*
- *identify the gaps in their capacity to address urban air pollution*



■ Phase I: outputs

INFORMATION PROVISION

Benchmarking

1. A report on the current state of air pollution in selected cities (based on the AMIS database)
2. A report on best practice in AQM in Europe
3. A report on best practice and lesson learnt on AQM in Asia
4. Development of a Website (www.asiairnet.org)

■ Phase I: outputs

TECHNICAL SUPPORT AND TRAINING

1. Proceedings of the APMA workshop
2. Report on air quality management and practice in major and mega cities of Asia

REGIONAL AND LOCAL AQM ACTION PLANS

1. A Framework for a regional plan for urban AQM.

Phase II: goals

1. Continued maintenance and development of the APMA website
2. Hosting of workshops on specific issues related to AQM in Asia and the development of training materials
3. Organizing a regional policy dialogue to facilitate the adoption of a regional action plan on AQM
4. Enthuse concern and participation from municipal authorities in the Region
5. OVERALL ASSESSMENT

Phase II: outputs

1. New Delhi Expert Meeting in November 2002: Roundtable/Policy Dialogue on "URBAN AIR QUALITY, HEALTH AND TRANSPORT IN MAJOR AND MEGA CITIES OF ASIA"
2. Finalized Proposal for a Regional Action Plan
3. Extend the APMA Network through partnerships in the Region and networking with local and national authorities
4. Phase II report benchmarking the activities of APMA and the status of AQM in the Region.
5. To be discussed in detail at the Second Planning APMA Task Force Meeting in Nairobi, 11-12 March, 2002

Project Methodology

DATA COLLATION

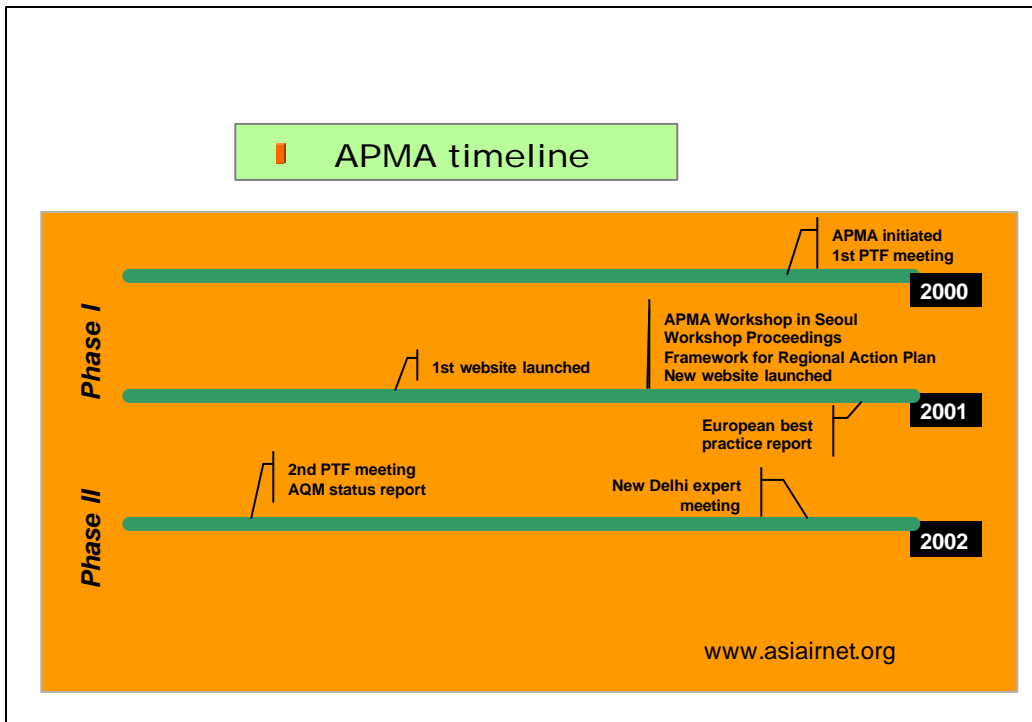
- 1) Primary source of information: WHO AMIS database
 - Air Pollutant Concentration (where available):
 - => SO₂, NO_x, NMHC, CO, Pb, O₃, TSP, PM₁₀, PM_{2.5}
- 2) Additional information on air quality management, air pollutant emissions, concentrations and health effects in megacities not provided by AMIS database
 - => information gathered in collaboration with the focal points
 - => online resources, research, requests for information and data

Preliminary Findings

Out of 12 large or megacities studies in Asia, the following AQM trends were found:

- 12 countries have established national ambient air quality and emission standards but are not revised periodically.
- 10 countries have cities with air quality monitoring networks but only some have established quality assurance (QA) and quality control (QC) programs.
- 9 countries have prepared emission inventories. However, these inventories are usually incomplete and are not updated regularly.
- 9 countries have established pollution control measures but only 5 have evaluated their impact.
- Some countries have conducted studies using air quality models. The models, however, are usually inadequate and have limited local application.
- In many countries, the level of knowledge about air pollution impact on health is limited or minimum, even though it is considered a high or medium priority issue.
- Information, training and public awareness on air quality is a low priority topic in many countries.

MARC 1996 & APMA 2001



- Target Audience**
- National and local governments responsible for the setting and enforcement of policies, law and regulations, air quality monitoring and control, monitoring of air pollution impact on health and education, training and awareness of the population
 - Transport, energy and industry organisations responsible for improving air quality and air pollution prevention a strategic goals in their daily activities
 - Organized society and non-governmental organizations responsible for education, training and awareness of the population
 - Academic and scientific institutions, responsible for research on technological, economic, and social problems concerning AQM
 - International organisations , responsible for providing technical, financial, and human support

Project Scope

- Target Megacities: based originally cities included in the WHO's air management information system (AMIS) database

=> Information of 21 megacities are available on AMIS

=> Other cities will be considered through availability of reliable monitoring data and contacts with local authorities.

Project Scope

- 21 cities involved in the APMA project
- “Megacity” defined as urban center with 10 million + in population although the APMA Project also includes major cities

Bangkok Beijing Busan Calcutta Chongqing Dhaka Guangzhou Hanoi Hong kong Jakarta	Karachi Kathmandu Manila Mumbai New Delhi Osaka Seoul Shanghai Singapore Taipei Tokyo
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APMA Members

Advantages for APMA members

- Opportunities to foster collaboration with other members
- Share information on AQM issues and practice
- AQM training and capacity initiatives
- Advice from international organizations on specific issues (e.g. Health impacts, transport issues, emission inventories and dispersion models)

Requirements of APMA members

- **Support** the benchmarking exercise of AQM by assisting the collation of information on air quality issues
- **Share** information and experience, ideas and solutions for AQM
- Contribute **to the best practice and lessons learned case studies**

Next Steps

- Second Planning Task Force meeting in Nairobi at UNEP Headquarters, March 11-12 to discuss and plan Phase II and potential partnerships
- ? Consolidate the process of establishing the APMA Network in close collaboration with CAI-Asia.
- ? Extend the APMA Network and gain further support for APMA from the target audience.
- ? Finalize the Regional Action Plan for Urban Air Quality Management in Asian Megacities.
- Expand AQM database and start collation for next year
- New Delhi Expert Meeting planned for November 2002
- Plans for Phase III...

■ APMA online - www.asiainet.org

•Visit APMA online at its new website:
<http://www.asiainet.org>

•APMA publications
(including workshop proceedings with AQM
status reports on various cities)

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•AQM news articles & links

•Discussion forum

•Networking with other AQM
professionals & stakeholders