

First Coordination Meeting of Regional Initiatives and Programs on Air Quality in Asia  
16 June 2004, Bangkok, Thailand

## Minutes of the Meeting

### OPENING SESSION

Daniele Ponzi of the Asian Development Bank read the opening remarks of the Chairperson, Clean Air Initiative for Asian Cities (CAI-Asia), Supat Wangwongwatana, and welcomed representatives from twenty-two organizations participating in the First Coordination Meeting of Regional Initiatives and Programs on Air Quality in Asia.

Surendra Shrestha, Regional Director and Representative of the United Nations Environment Programme Regional Office for Asia and the Pacific (UNEP ROAP), expressed his optimism that this gathering of regional initiatives on air quality will promote better air quality for the people of Asia. UNEP's ongoing work at the policy level is aimed at achieving this goal. He remarked that UNEP has a focus on transboundary air quality issues.

Glynda Bathan of the CAI-Asia Secretariat provided a brief background of the meeting. She also identified the main objectives of the coordination meeting, which are to identify air quality management (AQM) priorities for Asia and to strengthen the coordination and cooperation among regional programs and initiatives.

Before the opening session ended, the twenty-four participants and five observers gave a brief introduction about themselves and their organization.

### SESSION 1 STATUS OF AIR QUALITY MANAGEMENT IN ASIA

#### Draft Results APMA – CAI-Asia Benchmarking Study on Air Quality Management Capability in Asia

Cornie Huizenga, Clean Air Initiative for Asian Cities Secretariat

This presentation discussed the drivers, pressure, trends, state, impact, and response (DPTSIR) of air pollution in Asia. It is clear that the drivers of air pollution (population growth, urbanization, motorization and increased energy use) can result in an increase in air pollution if no adequate control measures are put in place. With respect to the state of air quality in Asia, it was observed that: (1) several cities have recorded improvements in air quality on an annual basis, e.g. Bangkok, but these cities continue to surpass short-term standards on a regular basis, (2) it is hard to describe the state of air quality in Asian cities due to paucity of available data, (3) because pollutants are not measured, e.g. ozone or fine particulate they can not be assessed; it does not mean, however, that the problem is not there, and (4) different cities and countries use different scales to define air quality, which makes comparison of data and results difficult.

The Response to the growing air quality problem was discussed based on the draft results of the Benchmarking Study on Air Quality Management Capability of 20 Asian Cities jointly undertaken by the Air Pollution in the Megacities of Asia (APMA) and CAI-Asia. The study is based on a self-assessment air quality management capability questionnaire and a city profile drawn up by APMA and the CAI-Asia Secretariat. Initial findings show that, in terms of air quality management capacity, cities can be classified into five stages as follows: **Stage 0** – Pre-problem stage; no or very basic AQM; **Stage 1** – Moderate and increasing levels of air pollution; ad-hoc monitoring and ad-hoc control measures; **Stage 2** – High but stabilizing levels of air pollution; ad-hoc legislation, start of monitoring, tail-pipe/ stack emissions control; **Stage 3** – High but decreasing levels of air pollution; manual and continuous monitoring, comprehensive legislation and AQM Action Plans; **Stage 4** – Moderate and decreasing levels of air pollution; continuous monitoring, full fledged policies and control measures, emerging focus on air pollution prevention; **Stage 5** – Low and

decreasing levels of air pollution; routine review and updates in legislation, monitoring, policies and strong focus on air pollution prevention.

### **Discussion of Status of AQM in Asia**

The main points of the discussion centered on the following issues:

- The need to see more policy work on AQM making use of the results of the Benchmarking Study. The World Bank and the Asian Development Bank expressed interest in supporting the publication of a Regional Air Quality Monitor which could be issued in the name of CAI-Asia (J. Shah, World Bank and D. Ponzi, ADB) C. Huizenga of the CAI-Asia Secretariat agreed that this is a good idea but offered a suggestion to have it once every two years.
- UNEP's work at the policy level is ongoing. Focus is in instituting prevention measures in satellite cities. An example of this is the work ongoing in a city in Thailand for the removal of taxes on PV solar cells for solar power and the reduction of taxes imposed by the Thai government on hybrid vehicles. UNEP's Sustainable Cities Program includes preventive measures such as energy efficiency in buildings, urban planning with human mobility as a focus. (S. Shrestha, UNEP)
- With regard to the stages of AQM capability, the representative from GTZ commented that up to Stage 3, pollution reduction can be done by instituting technical solutions. However, cities in Stage 4 need to reduce pollution through transport planning, land use planning, etc. (R. Haas, GTZ) The ADB representative concurred by stating that, indeed, CAI-Asia's programs are leading towards a greater emphasis on not only technology-driven responses to air pollution, but also broader management and planning options. This is clear in the Sustainable Urban Transport Program in Asia which is being implemented by CAI-Asia with EMBARQ (D. Ponzi, ADB)
- There was a consensus among the participants of the need to analyze how cities have been able to move higher in the stages of AQM capability (e.g. from Stage 1 to 2 or higher).
- In response to the question of C. Lowry of USAID/ANE on whether CAI-Asia is considering the use of policy analysis tools in the Benchmarking Study, C. Huizenga stated that CAI-Asia is interested to move towards this direction in the next phase.
- Regarding the matter of emissions inventories, the CAI-Asia Secretariat informed the participants that J. Shah requested CAI-Asia to undertake a hands-on training program on emissions inventories. CAI-Asia will work with J. Shah of the World Bank to design this project and to allow different approaches for different parts of Asia depending on their need. (C. Huizenga, CAI-Asia)

## **SESSION 2: CASE STUDIES**

Selected regional initiatives presented their regional programs as case studies. Case study presenters focus their presentation on how their program addresses the following objectives: (a) advancement of the knowledge base, (b) capacity building, (c) policy advocacy, and (d) regional exchange and coordination. The case study presentations were followed by discussion.

The following regional initiatives were presented as case studies:

Case study 1: Regional Programs: Public Health and Air Pollution in Asia  
Robert O'Keefe, Health Effects Institute

Case study 2: Regional Programs: AIRPETT Program  
Nabin Upadhyay, Asian Institute of Technology

Case study 3: Integrated Environmental Strategies Program  
Kevin Rosseel, United States Environmental Protection Agency

Case study 4: Regional Air Pollution in Developing Countries (RAPIDC)  
Gary Haq, Stockholm Environment Institute, University of York

Case study 5: Male Declaration and Acid Deposition Monitoring Network in East Asia (EANET)  
Mylvakanam Iyngararasan and Jiang Wei, United Nations Environment Programme

### **Discussion of Case Studies**

The main points of the discussion centered on the following issues:

- On EANET, R. Haas of GTZ wanted to know what the next steps were after air quality monitoring is done in Bhutan, Nepal, Pakistan, Sri Lanka, and other countries. M. Iyngararasan of UNEP replied that the data from the monitoring network would then be made available to the public after it is validated by EANET. A further next step would be to put protocols in place to be agreed upon by the East Asian countries. D. Ponzi mentioned that in his discussion with S. Shrestha of UNEP, it seemed that UNEP is preparing a protocol or treaty to address transboundary air pollution.
- On acidification, D. Ponzi of the ADB mentioned the work of the European Economic Commission on this issue and that the regional initiatives in Asia should endeavor to harness and use this knowledge gained in Europe for Asia.
- On the importance of buy-in by the policymakers, C. Huizenga of CAI-Asia recognized the important role that UNEP plays in being able to push the air quality agenda to policymakers. K. Onogawa of UNCRD supports the idea that policymakers' buy-in is very important. He spoke of the manner by which UNCRD discusses priority needs and actions with the governments even before any projects are designed and implemented. USAID/US-AEP mentioned that it is undertaking a project in Asia which brings together environmental lawyers and policymakers (W. Bowman, USAID/US-AEP) The USEPA representative proposed that successes in gaining buy-in from policymakers are surely present in Asia only that these lessons and best practices are not documented and disseminated (K. Rosseel). C. Huizenga mentioned the need to work together in needs assessments.

## **SESSION 3: PRIORITIES FOR AQM IN ASIA**

### **Air Pollutants of Concern in Asia**

Robert O'Keefe, Health Effects Institute

The Health Effects Institute (HEI) based in the United States prepared a summary of the health effects of outdoor air pollution in developing countries of Asia based on 138 papers published in peer-reviewed literature between 1980 and June 2003. The HEI presentation discussed the results of the study with emphasis on the pollutants, which require the most attention because they pose the gravest health impacts.

### **The CAI-Asia perspective on Priorities for AQM in Asia**

Cornie Huizenga, Clean Air Initiative for Asian Cities Secretariat

In the second presentation, CAI-Asia, based on its experience of working for more than three years on AQM issues with the different sectors (eg. national and local government, international development agencies, private sector, NGOs and academic institutions), presented its ideas on the possible AQM priorities that regional initiatives and programs might want to focus on in the next five years in order to achieve better air quality in Asia. The potential priority areas that CAI-Asia proposed were:

- Comprehensive approach to air quality management
- Impact assessment of air pollution
- Roll-out air quality management to more cities
- Pollutants of concern: PM, ozone, volatile organic compounds (VOCs) and heavy metals

- Increased emphasis on prevention of pollution rather than managing pollution from the tailpipe and the stack
- Integrate local air quality management with transboundary air quality management
- Integrate local air quality management with greenhouse gas (GHG) abatement
- Funding for AQM

### Discussion on AQM priorities in Asia

The main points of the discussion centered on the following issues:

- It was made clear that this forum of regional initiatives is not intended to exclude the stakeholders, the main decision-makers, in the process of setting priorities for AQM in Asia. Regional initiatives are considered “helpers” while the stakeholders in the different countries are the “drivers” in this process of priority setting. (J. Xie, World Bank and C. Huizenga, CAI-Asia)
- On the matter of which are the pollutants of concern that projects should address, R. O’Keefe of HEI stated that particulate matter (PM) is both an urban and a rural phenomenon and thus deserves attention. But ozone (O<sub>3</sub>) is increasingly becoming a cause of concern (R. O’Keefe, HEI; R. Haas, GTZ; and C. Huizenga, CAI-Asia)
- M. delos Angeles of the World Bank stated that programs should go for breadth rather than depth in priority-setting on particular pollutants because accuracy in information is not required for some of these pollutants of concern.
- Several approaches are being taken to address PM emissions. Sulfur levels in diesel fuel is being lowered to reduce PM from vehicles. In India, PM levels have gone down because of the shift from diesel to compressed natural gas (CNG). There are about 100,000 CNG vehicles in Delhi. There are very few conversions of diesel vehicles to CNG; new CNG vehicles are being used. The fuel shift to CNG has helped in also addressing fuel adulteration issues in the use of diesel fuel. (K K Gandhi, SIAM). On CNG conversion, R. Haas of GTZ stated that CNG conversion must go hand-in-hand with the use of catalytic converters.
- K K Gandhi had a comment on the use of the graph in the HEI publication (dated 2004) which shows Delhi having very high pollution levels for the years 2000-2001. This situation is not reflective of the current situation, according to Mr. Gandhi. People might think that this data reflects the 2004 situation in Delhi because the publication was issued this year.
- R. Haas also mentioned that on the matter of prioritization of pollutants, initiatives are on the right track if they focus on PM and ozone, however, he pointed out that programs must never lose sight of the importance of reducing ALL emissions from vehicles through transport planning, promotion of public transport and non-motorized transport and the like.
- D. Ponzi requested that a new point be included in the list of priority areas and this is – addressing the issue of poverty and air pollution.
- W. Bowman of USAID/US-AEP commented that if the focus of activities in AQM would be cities with populations of at least 100,000 people this would entail a program shift on the part of USAID/US-AEP. The mix of pollution sources and approaches in tackling air pollution would differ between those cities with a population of at least 5,000,000 and those with only 100,000.
- It was also observed that there is too little being done to change the mind-set of decision-makers with regard to the issue of air pollution (H. Preschern, AVL) On this point, D. Ponzi suggested that there is a need to reiterate the importance of disseminating best practices on AQM and raising awareness in order to influence policymakers.
- M. delos Angeles of the World Bank suggested that a rapid assessment with a complete set of economic sectors be done for the cities. This exercise is intended to help in setting priorities for cities on which source of pollution, etc. needs urgent attention. R. Haas of GTZ supports the idea of engaging smaller cities in the process of rapid assessment and air quality management.

- Social awareness is a priority action that needs to be taken. It was also suggested that the synergy between local air pollution and climate change be made clear in awareness raising campaigns. (M. Lyngararasan)
- Other considerations in priority setting of projects should include their feasibility (C. Lowry, USAID/ANE)
- W. Bowman took the opportunity to update the participants of the possible direction of USAID/US-AEP and this is to take a more regional approach with a focus on transport sources of air pollution. USAID/US-AEP would take measures to ensure that concrete development impacts are documented. No final decision has been taken on this matter so it should be considered as a “proposed” direction for USAID/US-AEP which has yet to be approved.
- Priorities of the AIRPET project. AIRPET will continue the first phase of its program and will move towards management programs and conduct more experiments with focus on managing the pollution (Nabin U., AIRPET)
- Priorities of the Kitakyushu Initiative. The initiative will prioritize on measures to improve the air quality in cities through continued stakeholder involvement. There will be a pilot project in Surabaya and Bangkok. (M. A. Khan, UNESCAP)
- C. Lowry of USAID/ANE recognized that the on-the-ground presence of USAID staff in the different countries is more important than the dollars that go into its programs.
- On sources of funding, D. Ponzi stated that there are many possible sources of funding such as the GEF, EU, and others, which can be tapped to spur action in addressing local AQM and greenhouse gas abatement. He also suggests that capacity-building be expanded from mere training to also needs assessment and social marketing. With regard to the cities that need most attention, he believes that priority should be given to the megacities, to have them become more involved in CAI-Asia. Also, the issues of dust and sandstorms, haze, transboundary air pollution need to be integrated with local AQM issues. ADB can endeavor to integrate these issues into its lending program.
- R. O’Keefe suggested that regional programs take a sample of a megacity, a rural area, and a small city and address the air quality issues in each. This will help achieve balance and comprehensiveness in the scope of AQM work.
- Yan He of the Kitakyushu Initiative informed the participants that it has an ongoing program of linking local networks with international initiatives. They noticed that there is lack of information available on how cities can apply for support or access training opportunities offered by these regional/international networks. The initiative is organizing a capacity-building workshop for the cities for this purpose.
- Summary: C. Huizenga summarized the important considerations in setting priorities for air quality management in Asia. These are:
  - Area sources as a key issue
  - No consensus on whether to target pollutants of concern or to have more comprehensive approach
  - Need for more social awareness on air pollution issues
  - Need for breadth in priorities
  - Need to determine the scale of intervention
  - Urban AQM means sometimes reaching down to the household level, and sometimes up to the peri-urban, and regional level
  - Bundling of health and economic impacts
  - Greenhouse gas abatement and local AQM as considerations for policymaking
  - Commitment to involve stakeholders in the process of priority-setting
  - Mainstreaming of clean air issues

#### **SESSION 4: STRENGTHENING COORDINATION AND COOPERATION OF REGIONAL AQM PROGRAMS AND INITIATIVES**

Coordination and cooperation on AQM can take different shapes and forms. This session reviewed and discussed possible areas of coordination and cooperation. It discussed the coordination and cooperation needed at the global, regional, national, and local levels. The role of regional AQM programs and initiatives and the coverage of their projects in terms of theme and

geographical location as shown by the results of the survey conducted by CAI-Asia was discussed.

### **CAI-Asia perspective on coordination and cooperation**

Cornie Huizenga, Clean Air Initiative for Asian Cities Secretariat

The presentation included the results of the survey conducted by CAI-Asia among regional air quality programs and initiatives. It further spoke about the importance of having the organizational capacity to coordinate. Coordination can be at four levels: global, regional, national and city. Most important is that coordination and cooperation requires mutual trust and can not be structured too closely.

### **Discussion on strengthening Coordination and Cooperation among Regional Programs and Initiatives on AQM in Asia**

The main points of the discussion centered on the following issues:

- UNESCAP requested that its project involving coal-fired power plants be included in the compendium. This is a project jointly funded by UNESCAP and ADB (M. A. Khan, UNESCAP)
- D. Ponzi of ADB requested the inclusion of “policy and advocacy” in the slide on CAI-Asia 2004 objective for global coordination
- M. A. Khan of UNESCAP suggested that regional initiatives can show real cooperation by working together in one city (e.g. Surabaya) and each organization/initiative takes care of a component of AQM (e.g. awareness raising, establishment of local network, transport planning, etc.). This would be real cooperation and coordination that the cities will appreciate.
- D. Ponzi also mentioned the need for coordination on the side of the recipient countries. C. Huizenga agrees that we have yet to find an approach that ensures there is coordination in the different agencies in the recipient country’s side.
- H. Preschern of AVL wanted an answer on why the Middle East seems to be excluded from the efforts to strengthen AQM. J. Xie of the World Bank said that there is some work ongoing in the Middle East but that there is a need to coordinate with that department in the World Bank in-charge of this region.
- M. delos Angeles requests that we come up with a database of local networks which have been established. C. Huizenga mentioned that these local networks are not the property of CAI-Asia and that all regional initiatives are welcome to contact these networks for their work in these countries.
- D. Ponzi requested that best practices continue to be disseminated widely. C. Huizenga was happy to inform the participants that Murdoch University (Frank Murray) will be working with the Kitakyushu Initiative and CAI-Asia to compile these best practices on AQM and to disseminate them. There was a request to use instead “communication strategy” instead of “social marketing” to convey clearly that ideas need to be disseminated and mainstreamed (R. Haas, GTZ)
- Permission was given to the CAI-Asia Secretariat to post the final minutes of the meeting on the website.

Prepared by:

Glynda Bathan  
CAI-Asia Secretariat

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