



Technical Assistance Report

Project Number: 39342
December 2005

Technical Assistance Rolling Out Air Quality Management in Asia (Financed by the Government of Finland)

ABBREVIATIONS

ADB	–	Asian Development Bank
AQM	–	air quality management
ASEAN	–	Association of Southeast Asian Nations
CAI-Asia	–	Clean Air Initiative for Asian Cities
CATNet-Asia	–	Clean Air Training Network for Asia
DMC	–	developing member country
eKH	–	Environment Knowledge Hub
PM	–	particulate matter
PRC	–	People's Republic of China
SO ₂	–	sulfur dioxide
TA	–	technical assistance
TSP	–	total suspended particulates
UNCRD	–	United Nations Centre for Regional Development
UNEP	–	United Nations Environment Programme

TECHNICAL ASSISTANCE CLASSIFICATION

Targeting Classification	–	Targeted intervention
Sector	–	Multisector
Subsector	–	Environment and biodiversity
Themes	–	Environmental sustainability, governance, regional cooperation
Subthemes	–	Urban environmental improvement, global and regional transboundary environmental concerns and issues, environmental policy and legislation

NOTE

In this report, "\$" refers to US dollars.

Vice President	G. van der Linden, Knowledge Management and Sustainable Development
Director General	B. Lohani, Regional and Sustainable Development Department (RSDD)
Director	N. Ahmad, Environment and Social Safeguard Division, RSDD
Team leader	M. Tsuji, Environment Specialist, RSDD

I. INTRODUCTION

1. Asian cities and countries recognize the need to improve their air quality, as reflected in a number of key strategic documents: (i) Framework for Environmentally Sustainable Cities,¹ adopted in December 2003 by the Association of Southeast Asian Nations (ASEAN) member governments; (ii) Regional Implementation Plan for Sustainable Development in Asia and the Pacific Region, 2006–2010,² adopted by the Meeting of Ministers at the Fifth Ministerial Conference on Environment and Development in Asia and the Pacific in March 2005; and (iii) Aichi Statement on Environmentally Sustainable Transport,³ adopted in August 2005 by representatives from ASEAN, People's Republic of China (PRC), Republic of Korea, and Mongolia. All these documents acknowledge the importance of a regional approach to air quality management (AQM) in Asia and the major role that regional organizations such as ADB can play in this effort.⁴

2. The regional technical assistance (TA)⁵ will help Asian cities and countries reduce air pollution more speedily by intensifying efforts to develop AQM capacity. An important step is integrating AQM into the strategies, policies, programs, and projects of developing member countries (DMCs) and development agencies such as the Asian Development Bank (ADB).

3. The TA is based on a needs assessment to determine the priorities for regional AQM. The assessment was part of the evaluation of the Clean Air Initiative for Asian Cities (CAI-Asia).⁶ Local stakeholders representing government and nongovernment organizations from PRC, Indonesia, Nepal, Philippines, Sri Lanka, and Viet Nam were consulted during a CAI-Asia coordination meeting in Bangkok, July 2005. The design and monitoring framework of the TA is in Appendix 1.

II. ISSUES

4. Air pollution continues to threaten the environment, quality of life, and people's health in urban Asia. While some cities have stabilized the levels for some parameters such as sulfur dioxide (SO₂), total suspended particulates (TSP), and particulate matter less than 10 micrometers in diameter (PM₁₀), pollution levels in most cities are still above World Health Organization (WHO)-recommended guidelines and national air quality standards.⁷

5. To improve AQM in Asian cities, ADB, World Bank, and other development agencies established CAI-Asia in 2001,⁸ a regional multisector network with over 120 institutional members and more than 700 individual members. The first phase of CAI-Asia (2001–2004) saw

¹ Available at www.aseansec.org/framework.htm.

² Available at www.unescap.org/mced/mom/ and www.unescap.org/mced/documents/presession/english/SOMCED5_5E_RIP.pdf.

³ Available at www.uncrd.or.jp/env/est/regional_est_forum/first_regional_est_forum_top.htm.

⁴ AQM includes the measurement of air quality through air quality monitoring; evaluation of air quality data; formulation of air quality improvement strategies; and prevention or control of emissions from mobile, stationary, and area sources.

⁵ The TA first appeared in *ADB Business Opportunities* (internet edition) on 2 September 2005.

⁶ Available at www.cleanairnet.org/evaluation.

⁷ The briefing paper and graphs compiled by CAI-Asia on air quality trends are available at www.cleanairnet.org/caiasia/1412/article-59689.html.

⁸ CAI-Asia receives funding from development agencies and its private sector members. Development agencies fund CAI-Asia projects such as the Partnership for Sustainable Urban Transport in Asia, cofinanced by the Swedish International Development Cooperation Agency (Sida) and the Shell Foundation. The private sector members pay annual membership fees. Information on CAI-Asia, its membership, and its activities is available at www.cleanairnet.or/caiasia.

efforts to set up its organizational structure, and activities were mostly aimed at knowledge management, capacity building, and advocacy of the need to develop and implement integrated AQM strategies. A number of pilot programs aimed to generate new knowledge on air pollution, its impact, and its management.⁹ In the second phase (2005–2007), attention will shift to (i) strengthening the implementation of AQM programs, (ii) promoting preventive approaches to manage air pollution, and (iii) strengthening local ownership for and involvement in AQM.¹⁰

6. This TA builds on several ADB projects.¹¹ The main lessons learned from them are that (i) real and lasting improvements in urban air quality require policy changes and supportive investment projects; (ii) local multisector networks of stakeholders are important to promote ownership and implementation of AQM policies, and to ensure continuity of AQM efforts initiated or catalyzed by AQM investment projects; and (iii) policy reforms in AQM are long-term processes and require substantial local awareness raising, knowledge management, and stakeholder networking.

7. While ADB has developed a strong profile in addressing water and solid waste management, it has provided only limited support for AQM and sustainable urban transport. ADB must develop a more balanced approach to improving the urban environment, with greater attention to urban AQM. Multilateral development organizations such as ADB are well placed to provide lending and nonlending assistance to catalyze the introduction of better AQM approaches and environment-friendly technologies. The East and Central Asia Regional Department has started to include air quality issues in the PRC road sector, and the Southeast Asia Regional Department is implementing the Metro Manila Air Quality Improvement Sector Development Program and the TA for Indonesia for Preparing the Urban Air Quality Improvement Sector Development Program. Other regional departments will be enabled to incorporate air quality components into their loans and TA projects if (i) information on air quality and effective air quality interventions is readily available, (ii) institutional responsibilities for AQM in DMCs are properly assigned, and (iii) AQM policy frameworks in DMCs are adopted.

⁹ Support was provided through ADB. 2001. *Technical Assistance for Clean Air Initiative for Asian Cities*. Manila. (TA 6016-REG, approved on 19 December 2001, for \$150,000) and ADB. 2003. *Technical Assistance for Better Air Quality Management in Asia*. Manila. (TA 6144-REG, approved on 28 November 2003, for \$300,000).

¹⁰ The CAI-Asia Strategy (2005–2007) and the Business Plan (2005–2006) are available at www.cleanairnet.org/strategy and www.cleanairnet.org/businessplan.

¹¹ This TA builds on previous and ongoing work carried out under ADB. 2000. *Technical Assistance for Action Plans Reducing Vehicle Emissions*. Manila. (TA 5937-REG, approved on 26 September 2000, for \$900,000); ADB. 2001. *Technical Assistance for Clean Air Initiative for Asian Cities*. Manila. (TA 6016-REG, approved on 19 December 2001, for \$150,000); ADB. 2003. *Technical Assistance to the South Asian Subregional Economic Cooperation Countries for Regional Air Quality Management*. Manila (TA 6159-REG, approved on 19 December 2003, for \$400,000); and ADB. 2004. *Technical Assistance to Indonesia for Preparing the Urban Air Quality Improvement Sector Development Program*. Manila (TA 4361-INO, approved on 20 July 2004, for \$700,000). TA 5937-REG resulted in policy guidelines to reduce vehicle emissions in Asia, and a number of studies and action plans, which have resulted in follow-up action by ADB in Indonesia, and by the United States Asia Environmental Partnership program in Viet Nam. In other cases, such as the study on compressed natural gas versus ultra-low sulfur diesel in Mumbai, a substantive impact was made on shaping the policy debate on this topic. TA 6016-REG established CAI-Asia, which is co-funded by 10 private sector firms. A website has been set up and a successful internet-based discussion group established. CAI-Asia established a capacity-building program—Clean Air Training Network for Asia (CATNet-Asia). Four pilot projects have been initiated: (i) Public Health Impact of Air Pollution in Asia, (ii) Reducing Diesel Emissions in Bangkok, (iii) Cost of Refinery Upgrading for Diesel Refineries in Asia, and (iv) Partnership for Sustainable Urban Transport in Asia. TA 6159-REG established a national air quality network in Nepal and Bhutan; laid the groundwork to establish similar networks in Bangladesh and India; created air quality databases in Bangladesh, Bhutan, India, and Nepal; and facilitated the formulation of integrated AQM system studies and town-based air quality action plans in all four countries. TA 4361-INO will help prepare the urban air quality improvement sector development program to strengthen enforcement strategies and the framework of urban AQM in Indonesia.

8. Previous efforts to strengthen AQM in Asia focused mostly on local sources of air pollution. Evidence increasingly points to the link between local, national, regional, and global air pollution.¹² Urban AQM will need to take account of the impact of transboundary air pollution on cities' air quality.¹³ The potential links between efforts to improve regional and local urban air quality must be fully optimized. Growing awareness of the impacts of climate change could strengthen AQM. Many conventional pollutants such as carbon monoxide and black carbon worsen urban air pollution and global warming. A co-benefit approach, which combines efforts to reduce greenhouse gas emissions and local urban air pollution, can obtain additional resources for and greater acceptance of AQM policies and measures.

III. THE TECHNICAL ASSISTANCE

9. The TA supports efforts by countries and cities in Asia to improve AQM.

A. Impact and Outcome

10. The project impact will be stabilized air pollution levels in major Asian cities, with some cities improving air quality for selected parameters.¹⁴ The project will help local, national, and regional organizations stabilize or partly improve air quality over the next 5 years. Improvements in air quality are expected to be mostly for TSP, PM₁₀, and SO₂. Ozone (O₃) and oxides of nitrogen (NO_x and NO₂) are not expected to improve because Asian cities are motorizing rapidly, and stabilizing these pollutants at current levels can be considered a positive result.¹⁵

11. The expected outcome will be the better integration of AQM into the strategies, policies, programs, and projects of DMCs and development agencies such as ADB. This outcome reflects the project's orientation toward two main groups of clients: (i) decision makers in DMCs responsible for planning and implementing AQM policies, programs, and projects; and (ii) development agencies, which are important partners for DMCs in strengthening AQM. The project outcome will have been achieved if (i) the status and importance (relevant inclusion and mainstreaming) of AQM in strategy, policy, and regulatory documents of DMCs and development agencies have increased;¹⁶ (ii) more AQM-related programs and projects are supported by bilateral and multilateral agencies than in 2000–2004; and (iii) ADB engagement in AQM-related topics upon TA completion is greater than in 2000–2004.

¹² WHO. 2004. Report on the WHO/UNEP/ADB High-Level Meeting on Health and Environment in ASEAN and East Asian Countries. Available: http://www.wpro.who.int/NR/rdonlyres/B4F13E59-1008-451A-ABB6-6F2B951F8BA8/0/High_Level_Meeting.pdf.

¹³ Emissions from regional air pollutants such as sulfur oxides, nitrogen oxides, ammonia, tropospheric ozone, heavy metals, black carbon, and persistent organic pollutants give rise both to local impacts and also regional effects after long-range transport. It is encouraging to know that efforts are under way, coordinated by UNEP, to develop regional approaches and agreements to prevent or reduce transboundary air pollution.

¹⁴ The TA will target the following priority countries: Bhutan, Bangladesh, Cambodia, Nepal, Pakistan, Sri Lanka, and Viet Nam. Local AQM networks in PRC, Indonesia, and Philippines are expected to take part in the TA's capacity building and coordination activities.

¹⁵ A briefing paper and graphs compiled by CAI-Asia on air quality trends are available at www.cleanairnet.org/caiasia/1412/article-59689.html.

¹⁶ "Mainstreaming" means that AQM is reflected in policies and strategies of development agencies and, where appropriate, becomes part of country strategies and of the lending and nonlending pipeline.

B. Methodology and Key Activities

12. The TA will have two main outputs, which are linked: (i) AQM knowledge management systems institutionalized, and capacity and networking for AQM strengthened regionally, nationally, and locally;¹⁷ and (ii) more AQM activities in DMCs and development agencies, and strengthened implementation of AQM programs and projects. Knowledge collected and organized under the first output as well as the capacity generated through the local networks will be mobilized to develop and implement additional AQM activities in the second output. This approach supports the 2005–2007 strategy of CAI-Asia, which also emphasizes the need to focus more on implementing AQM policies and projects.¹⁸

13. The key activities include (i) drafting project concept papers and proposals for ADB and other potential financing institutions and developing a pipeline of AQM projects; (ii) developing or updating AQM strategies in partnership with CAI-Asia local networks; (iii) facilitating policy dialogue on AQM; (iv) establishing the Environment Knowledge Hub (eKH) in cooperation with the United Nations Environment Programme (UNEP); (v) benchmarking AQM capability in selected Asian cities; and (vi) mainstreaming AQM in ADB and other development agencies' operations (e.g., country strategies, lending and nonlending operations). The activities planned for each output are listed in Appendix 1.

C. Cost and Financing

14. The budget for the project is \$655,000. Detailed cost estimates and financing plan are in Appendix 2. The TA will be financed on a grant basis by the Government of Finland and administered by ADB.

D. Implementation Arrangements

15. The TA will start in December 2005 and run for 18 months. The TA will be executed by ADB through the Regional and Sustainable Development Department (RSDD). ADB will coordinate closely with CAI-Asia in implementing the TA.¹⁹ A team, headed by the Environment and Social Safeguard Division of RSDD, will coordinate with the restructured energy, environment, governance, health, regional cooperation, and transport committees in ADB,²⁰ the regional departments; and resident missions in DMCs where the TA will implement AQM projects.

16. The TA will focus on selected cities and countries in Asia faced with air pollution problems and willing to (i) share air quality data and related information with the eKH; (ii) adopt a multisector approach, working with different sectors to develop, update, or implement AQM strategies; and (iii) invest their own resources to set up or strengthen an AQM system.

¹⁷ CAI-Asia has been helping UNEP develop the Environment Knowledge Hub (eKH). The eKH is proposed to be a virtual focal point, a storehouse of information about the environment in Asia and the Pacific region. UNEP is collaborating with other partners on its five major components: air, biodiversity, energy, land, and water. The CAI-Asia secretariat, hosted by ADB, has been tapped as the main partner for the air component. AQM knowledge management will be institutionalized nationally and locally through the local CAI-Asia networks.

¹⁸ The CAI-Asia strategy for 2005–2007 (<http://www.cleaniarnet.org/strategy>) focuses CAI-Asia's efforts on (i) strengthening the implementation of AQM programs, (ii) promoting preventive approaches to manage air pollution, and (iii) strengthening local ownership for and involvement in AQM.

¹⁹ A founding member of CAI-Asia, ADB hosts the CAI-Asia secretariat in its headquarters in Manila, Philippines. The individual consultants engaged to implement the TA will form part of the CAI-Asia secretariat in ADB.

²⁰ These restructured committees are part of the recently established communities of practice, which aim to improve sectoral and thematic coordination across departments.

17. To ensure coordination and synergy with AQM activities of other major multilateral and bilateral organizations and to promote the sustainability of individual project activities and outputs, partnerships will be developed with international organizations such as UNEP, United Nations Centre for Regional Development (UNCRD), and World Bank.²¹

18. To promote participation by all local stakeholders, especially local governments, and to enhance ownership of the policies and project concepts developed, ADB will cooperate with the local multisector networks established by CAI-Asia. The local networks involve all sectors, including local governments. They perform important roles in (i) information management, (ii) capacity building, (iii) regional policies and standards, (iv) pilot projects, (v) formulation of national AQM strategy, and (vi) national and regional workshops on AQM. These networks have been established in PRC, Indonesia, Nepal, Philippines, and Sri Lanka; networks are being established in Pakistan and Viet Nam.²² In 2006, CAI-Asia plans to establish more local networks in Bangladesh, Cambodia, India, Malaysia, Mongolia, and Thailand.

19. The TA results will be disseminated through the CAI-Asia website, which has about 1,300 visitors per day, and the CAI-Asia listserv, an e-mail discussion forum on AQM with more than 700 subscribers. The TA results will be communicated to the countries covered by the TA during regular meetings of CAI-Asia, such as those of the executive council, the general assembly, and the workshops on better air quality. The interim results of project activities will be presented at the workshop on better air quality 2006 in Yogyakarta, Indonesia.

20. The TA requires international consultant inputs in institutional development and AQM for 12 person-months, and domestic consultant inputs for a total of 80 person-months in local network development, AQM and co-benefits, sustainable urban transport, knowledge management, and stationary sources. An outline of the terms of reference is in Appendix 3. The consultants will form part of the CAI-Asia secretariat hosted by ADB. The consultants will be engaged by ADB as individuals in accordance with the *Guidelines on the Use of Consultants by Asian Development Bank and Its Borrowers* and other arrangements satisfactory to ADB for the engagement of domestic consultants.

IV. THE PRESIDENT'S DECISION

21. The President, acting under the authority delegated by the Board, has approved ADB administering technical assistance not exceeding the equivalent of \$655,000 to be financed on a grant basis by the Government of Finland for Rolling Out Air Quality Management in Asia, and hereby reports this action to the Board.

²¹ Examples of these are the envisaged cooperation with UNEP on the establishment of the eKH, which will help institutionalize the knowledge management activities on AQM, and cooperation with UNCRD on developing national policy frameworks for sustainable urban transport.

²² For more information on CAI-Asia local networks, please visit <http://www.cleanairnet.org/localnetworks>.

DESIGN AND MONITORING FRAMEWORK

Design Summary	Performance Targets/Indicators	Data Sources/Reporting Mechanisms	Assumptions and Risks
<p>Impact Air pollution levels have stabilized in major Asian cities, with some improving air quality for selected parameters</p>	<ul style="list-style-type: none"> Improvements of up to 10% in air quality trends for SO₂, TSP, PM₁₀ compared to 2005. Stabilization of current levels of NO_x and O₃ at 2005 levels. 	<ul style="list-style-type: none"> CAI-Asia, UNEP, eKH 	<p>Assumption</p> <ul style="list-style-type: none"> AQM sufficiently prioritized by local and national governments <p>Risk</p> <ul style="list-style-type: none"> Lack of coordination among development agencies in supporting urban AQM in Asia
<p>Outcome Better integration of AQM into the strategies, policies, programs, and projects of DMCs and of development agencies such as ADB</p>	<ul style="list-style-type: none"> AQM capability of Asian cities improved (as defined in CAI-Asia's benchmarking study) Status and importance of AQM increased in policy documents of DMCs and development agencies on the environment, transport, energy, and urban development More AQM activities supported by ADB, as well as other bilateral and multilateral agencies than in 2000–2004 	<ul style="list-style-type: none"> CAI-Asia benchmarking study of urban AQM capabilities, phase 2 Policy documents and survey by the CAI-Asia secretariat, with inputs from local CAI-Asia networks CAI-Asia compendium of AQM programs and projects in Asia and CSPs and CSPUs for and beyond 2006 	<p>Assumptions</p> <ul style="list-style-type: none"> Development agencies other than ADB take an active interest in AQM Local and national governments prioritize AQM Improved enforcement of AQM regulations
<p>Outputs 1. AQM knowledge management system institutionalized^a and capacity and networking for AQM strengthened regionally, nationally, and locally</p>	<ul style="list-style-type: none"> An effective AQM information system (AMIS) established in cooperation with UNEP and other programs, such as the RAPIDC Program CAI-Asia website users increased by 	<ul style="list-style-type: none"> CAI-Asia website and AMIS documents User statistics 	<p>Risks</p> <ul style="list-style-type: none"> Development agencies are confronted with conflicting priorities, whereby environmental priorities are reduced Development agencies are not able or willing to make required staff resources available to support AQM

Design Summary	Performance Targets/Indicators	Data Sources/Reporting Mechanisms	Assumptions and Risks
<p>2. More AQM activities and investment projects in DMCs and strengthened implementation of AQM programs and projects</p>	<p>at least 25% and feedback from users remains positive</p> <ul style="list-style-type: none"> • AQM decision makers and ADB staff receive regular information on AQM in the form of country fact sheets and newsletters and have increased awareness on AQM • 6–8 CAI-Asia local networks have been strengthened and have taken on an active role in coordinating AQM. • CATNet-Asia strengthened and functioning as regional coordinator on AQM training • Regional coordination on AQM enhanced through • Priority on urban AQM reflected in policy and strategy documents of development agencies, primarily ADB, and DMCs • New themes such as transboundary air pollution and co-benefit approach reflected in policy and strategy documents • 12 concept papers and pre-feasibility studies or project proposals for ADB consideration, formulated and endorsed by the main stakeholders • Improved use of scientific decision support systems for AQM in at least three cities 	<ul style="list-style-type: none"> • 11 Country fact sheets and 4-6 CAI-Asia newsletters • Signed MOU and Business Plans • CATNet-Asia documents • Meeting records and reports • Policy and strategy documents • Policy and strategy documents • Concept papers or proposals and endorsement letters from stakeholders • CAI-Asia benchmarking study 	<ul style="list-style-type: none"> • Asian cities and countries cannot absorb increased AQM assistance • AQM stakeholders are not well organized, which hampers decision making and policy and program implementation • The Government is unwilling to borrow funds for “soft” AQM projects that show no direct and tangible financial return • Interagency institutional capacity is weak and incentives are lacking to implement complex, multisector projects that contribute only marginally to the core institutional mandates of the concerned agencies

Activities with Milestones	Inputs
<ol style="list-style-type: none"> 1. AQM knowledge management system institutionalized and capacity and networking for AQM strengthened regionally, nationally, and locally <ol style="list-style-type: none"> 1.1 Establish the eKH in coordination with UNEP and other programs, such as the RAPIDC Program 1.2 Design and implement phase 2 of the AQM capability benchmarking study to assess progress in establishing AQM capabilities in Asian cities 1.3 Restructure the CAI-Asia website to improve access and usability and strengthen links with the ADB knowledge management system 1.4 Develop and disseminate a mainstreaming note on AQM in development agencies, with emphasis on ADB 1.5 Develop, produce, and distribute a quarterly or semiannual CAI-Asia newsletter 1.6 Strengthen coordination of CATNet-Asia to improve the quantity and quality of AQM training in Asia 1.7 Implement two capacity-building workshops for CAI-Asia local networks 1.8 Conduct AQM briefings for regional departments in ADB with an AQM portfolio and at least three “brown bag” seminars 1.9 Develop an AQM briefing package for other development agencies 1.10 Conduct a follow-up evaluation survey on CAI-Asia to establish AQM priorities 2. More AQM activities in DMCs and strengthened implementation of AQM programs and projects <ol style="list-style-type: none"> 2.1 Include air quality in ADB transport and urban development strategies 2.2 Prepare a co-benefit mainstreaming note that promotes a combined approach to climate change mitigation and urban AQM 2.3 Conduct policy dialogue with key decision makers in 5–7 countries, and make results available to relevant parties 2.4 Use policy dialogue results and other information sources to contribute to at least four ADB CSPs 2.5 Prepare at least 12 project concept papers and/or proposals for ADB consideration 2.6 Promote the development and or updating of AQM strategies in partnership between local CAI-Asia networks and development agency members of CAI-Asia 2.7 Promote the introduction of AQM in cities that have no or only partial AQM systems 	<p>ADB:</p> <ul style="list-style-type: none"> ○ Consultants \$450,000 ○ Training, seminars \$90,000 ○ Surveys and studies \$15,000 ○ Support costs \$55,000 ○ Contingencies \$45,000 <p>Beneficiaries:</p> <ul style="list-style-type: none"> ○ In-kind through information and staff inputs

ADB = Asian Development Bank, AMIS = AQM information system, AQM = air quality management, CAI-Asia = Clean Air Initiative for Asian Cities, CATNet-Asia = Clean Air Training Network for Asia, CSP = country strategy and program, CSPU = country strategy and program update, DMC = developing member country, eKH = Environment Knowledge Hub, MOU = memorandum of understanding, NO_x = nitrogen oxides, O₃ = ozone, PM₁₀ = particulate matter less than 10 micrometers in diameter, RAPIDC = regional air pollution in developing countries, SO₂ = sulfur dioxide, TA = technical assistance, TSP = total suspended particulate, UNEP = United Nations Environment Programme.

^a “Institutionalized” means that a long-term solution has been developed to determine who will be responsible for regional information collection on AQM in Asia.

COST ESTIMATES AND FINANCING PLAN
(\$'000)

Item	Total Cost
A. Government of Finland Financing^a	
1. Consultants	
a. International Consultants	
i. Remuneration and Per Diem	260.00
ii. International Travel	15.00
b. Domestic Consultants	
i. Remuneration and Per Diem	140.00
ii. International Travel	15.00
2. Training, Seminars, and Conferences	
a. Facilitators / Resource Persons	20.00
b. Training Program	55.00
3. Surveys and Studies	15.00
4. Miscellaneous Administration and Support Costs	37.00
5. Contingencies	98.00
Total	655.00

^a Administered by the Asian Development Bank (ADB).
Source: ADB estimates.

OUTLINE TERMS OF REFERENCE FOR CONSULTANTS

1. The change in scope will require 12 person-months of international and 80 person-months of domestic consultants' services.

A. International Consultants

1. Institutional Development and Air Quality Management Specialist (12 person-months)

2. The consultant is expected to take note of the results of past and current air quality management (AQM) activities of the Asian Development Bank (ADB) and will have the following responsibilities:

- (i) Coordinate the development of at least 12 concept papers and/or proposals on AQM, including 6 for ADB.
- (ii) Design an AQM policy dialogue with key decision makers and make results available to development agencies, to be used as inputs into at least four country strategies and programs.
- (iii) Conduct dialogues with multilateral and bilateral development organizations as well as international nongovernment organizations on their possible contribution to AQM in Asia and to CAI-Asia.
- (iv) As a member of the CAI-Asia secretariat hosted by ADB, represent CAI-Asia in various international and regional workshops, meetings, and seminars. In selected cases and after consultation with the project officer, the consultant may also represent ADB.
- (v) Guide the CAI-Asia secretariat in implementing the 2005–2007 CAI-Asia strategy and 2005–2006 business plan, and in providing regular progress and financial reports to the CAI-Asia executive council.
- (vi) Develop and disseminate the note on accelerating the integration of AQM issues into loans and technical assistance grants of development agencies, with emphasis on ADB.
- (vii) Implement the modified institutional structure of the Clean Air Training Network for Asia (CATNet-Asia) as set forth in the 2005–2007 CATNet-Asia strategy to improve the quantity and quality of AQM training in Asia.
- (viii) Develop the program and organize the September 2006 workshop on better AQM in Yogyakarta and liaise with co-organizers.
- (ix) Conduct AQM briefings for regional departments and at least three “brown bag” seminars in ADB together with the domestic consultants.
- (x) Develop an AQM briefing package for development agencies together with the domestic consultants.

B. Domestic Consultants

2. Local Network Development Specialist (16 person-months)

3. The consultant is expected to take note of the results of ADB's past and current activities to promote AQM, and will have the following responsibilities:

- (i) Develop or update AQM strategies in partnership with CAI-Asia local networks and development agency members of CAI-Asia.

- (ii) Introduce AQM in cities that have no or partial AQM systems.
- (iii) Contribute to the design of the policy dialogue with key decision makers on AQM.
- (iv) Contribute to the content of the program of two workshops to strengthen the capacity of CAI-Asia local networks, based on a needs assessment.
- (v) Help develop the program for the September 2006 workshop on better air quality in Yogyakarta and liaise with development agencies, AQM initiatives and programs, and private firms that will organize side events.
- (vi) Develop, produce, and collect material for, and distribute copies of, a periodic CAI-Asia newsletter with information on local network activities, updates on CAI-Asia activities, among others.
- (vii) Implement and design improvements to the 2005–2007 CAI-Asia local network strategy to enhance the capacity of local air quality networks to push for AQM policy improvements and implementation of AQM programs.

3. Knowledge Management Specialist (16 person-months)

4. The consultant will have the following responsibilities:

- (i) Design the air quality component of the Environment Knowledge Hub (eKH) in coordination the United Nations Environment Programme (UNEP) and Regional Air Pollution in Developing Countries Program.
- (ii) Continuously increase the quantity and quality of information on the CAI-Asia website with regional, country, and city information on air quality, climate change, transboundary air pollution, stationary sources of pollution, and sustainable urban transport, among others.
- (iii) Restructure the CAI-Asia website to improve access and usability and strengthen the link with the ADB knowledge management system and UNEP's eKH.
- (iv) Develop a database for the September 2006 workshop on better air quality to be held in Yogyakarta, and lead in database management during the workshop.
- (v) Enhance the website's community-building features.

4. Air Quality Management and Co-Benefit Specialist (16 person-months)

5. The consultant will have the following responsibilities:

- (i) Prepare a co-benefit mainstreaming note that promotes a combined approach to climate change mitigation and urban AQM.
- (ii) Design and implement phase 2 of the AQM capability benchmarking study to assess progress in establishing AQM capabilities in Asian cities.
- (iii) Contribute to the program design of the policy dialogues with decision makers on AQM.
- (iv) Give presentations during the briefings with regional departments in ADB.
- (v) Prepare or update AQM profiles for selected cities in the CAI-Asia network.
- (vi) Provide content for the pages on the CAI-Asia website related to AQM, climate change mitigation, and co-benefits.
- (vii) Provide suggestions to the program of the September 2006 workshop on better air quality, especially on AQM and co-benefits of climate change mitigation and urban AQM.

5. Sustainable Urban Transport Specialist (16 person-months)

6. The consultant will have the following responsibilities:

- (i) Contribute to the design of phase 2 of the AQM capability benchmarking study to assess progress in establishing AQM capabilities in Asian cities.
- (ii) Write profiles of selected Asian cities and countries, with emphasis on sustainable urban transport policies and their impact on AQM.
- (iii) Provide suggestions to the program of the September 2006 workshop on better air quality, especially on the topics of sustainable urban transport.
- (iv) Provide content for the pages of the CAI-Asia website related to sustainable urban transport and AQM.
- (v) Develop and deliver presentations on sustainable urban transport and AQM.
- (vi) Contribute to the program design of the policy dialogues with decision makers on AQM.

6. Stationary Source Specialist (16 person-months)

7. The consultant will have the following responsibilities:

- (i) Prepare a paper with general information about stationary sources of pollution in Asia, policies in place to control such sources of air pollution, and gaps in the existing policies.
- (ii) Develop the topic tree for the CAI-Asia website's section on stationary sources of pollution.
- (iii) Provide content for the pages of the CAI-Asia website related to stationary sources of pollution.
- (iv) Provide advice to CAI-Asia on the areas of intervention to reduce emissions from stationary sources of pollution.
- (v) Provide suggestions to the program of the September 2006 workshop on better air quality, especially on stationary sources of pollution.
- (vi) Develop and deliver presentations on stationary sources of pollution.
- (vii) Write profiles of selected Asian cities and countries with emphasis on stationary sources of pollution.