

The Fourth Session of the Working Group
on Future Development of EANET
4-6 June 2007, Pathumthani, Thailand

PRIORITY PROJECTS IDENTIFIED AND POTENTIAL FUNDING AGENCIES

Priority projects identified

1. Based on the suggestions at the Eighth Session of the Intergovernmental Meeting (IG8) regarding the preparation of project proposals for submission to potential donors, the Secretariat and Network Center have developed the following documents for the consideration of the Fourth Session of the Working Group on Future Development of EANET (WGFD4):
 - A preliminary list of priority projects that will be used as a basis for discussions by the Secretariat and Network Center with potential donor agencies. After WGFD4, this list will be circulated to the NFP for their endorsement prior to the discussions with donor agencies. This list is not exclusive as projects can be added or removed at any time depending on the decisions and recommendations of IG, WGFD, SAC, and the requirements of the Network Center. The draft list of proposed priority projects is shown in **Annex 1**.
 - Concept papers on two of the projects that are listed in Annex 1. The format used in the concept papers may, in the future, be adopted for presenting other projects at WGFD sessions for discussions and review, and for submission to the NFPs for their endorsement. The concept papers are shown in **Annex 2**.
 - A schedule for visits to the regional headquarters of the International Funding Agencies for the discussions. These visits will depend on the availability of funds. Preliminary contact will be made with these agencies through mail and other available means of communication. The proposed schedule is shown in **Annex 3**.
2. Based on the outcomes of discussions at WGFD4, endorsement of the projects by the NFPs, and following communication with the potential Funding Agencies, the Secretariat and Network Center will develop detailed project proposal on one or several project(s) for submission to the Ninth Session of the Intergovernmental Meeting (IG9) for its consideration. The assistance of external expert(s) may be sought for development of the proposal(s).

Potential funding agencies

3. The International Funding Agencies identified in the previous discussions of Working Group on Future Development (WGFD) and the Intergovernmental Meeting (IG) sessions are as follows:
 - Asian Development Bank (ADB)
 - United Nations Development Programme (UNDP)
 - Japan International Cooperation Agency (JICA)
 - Korean International Cooperation Agency (KOICA)
 - United Nations Economic Commission for Europe (UNECE)
 - Other bilateral aid agencies

4. In line with the priorities identified in the Strategy on EANET Development (2006-2010), the priority areas for projects to be submitted to the international Funding Agencies for their support may include:
 - Capacity building at national level through regional training courses, seminars and workshops. The JICA EANET Training Courses held in Japan and the JICA Third Country Training Courses in Thailand are good examples of such support.
 - Development of documents for policy makers towards national policy framework
 - Specific research activities such as development of emission inventories
 - Improvement of laboratories with appropriate equipment
 - Establishment of new and improvement of existing EANET monitoring stations

5. Besides financial assistance, other forms of support are also welcome. The latter could include, among others, the following:
 - Joint hosting of seminars/workshops
 - Sharing of resources, such as databanks, facilities
 - Secondment of scientists/researchers to the NC

Annex 1

I. Projects requesting external assistance for improving performance of EANET

Project Title	Emission survey to promote the preparation of emission inventories in EANET countries
Objectives	To obtain an array of reliable emission factors for major sources in East Asia
Activities	i) To collect emission factor data from available scientific documents ii) To analyze emission gases from actual sources to obtain representative emission factors
Expected Outcome	List of emission factors that are appropriate for the preparation of emission inventories in EANET countries
Implementation Period	2009 – 2012
Budget Required	USD 500,000 per year

Project Title	Development of new and improved training course materials on regional air quality management including ozone issues for the EANET website
Objectives	To produce more relevant information on regional air quality management issues for dissemination to EANET members
Activities	i) To develop new updated training course materials ii) To translate the materials to the languages of the participating countries
Expected Outcome	New course materials on regional air quality management including ozone issues on the EANET website
Implementation Period	2009 – 2010
Budget Required	USD 100,000 USD USD 100,000 as translation fee into 5 other languages (besides Japanese)

Project Title	Identification of areas or regions susceptible to soil acidification
Objectives	To identify areas in the EANET region that are susceptible to soil acidification due to acid deposition
Activities	i) To gather information on chemical properties related to acid neutralizing capacity (ANC) from literatures, including EANET Data Reports and relevant scientific papers ii) To collect representative soils in each EANET country and analyze the ANC iii) To produce a risk map of soil acidification taking into account soil types, their ANC, and acid deposition amounts
Expected Outcome	i) An evaluation of the ANC of soils in the EANET region based on soil types. ii) An assessment of ANC of representative soil types by intensive surveys.

	iii) A risk map of soil acidification based on the soil maps from EANET countries.
Implementation Period	2009 – 2010
Budget Required	USD 27,000 - to gather information on soil chemical properties USD 45,000 - to conduct soil analysis USD 18,000 - to produce risk map Total: USD 90,000 for services of the expert

II. Projects requesting support for public awareness and capacity building activities

Project Title	Capacity Building Workshop for the Policy Makers of the Participating Countries of EANET
Objectives	(1) To enhance the capacity of officials, those involved in the policy making process and experts in order to contribute to the process of discussion necessary for future development of EANET, by providing them with the relevant and necessary knowledge on acid deposition and other transboundary air pollution issues and other international agreement. (2) To strengthen regional cooperation by providing the policy makers with the good practices and knowledge on other international policies and regulations for regional air quality management.
Activities	i) The selected experienced trainers will prepare training materials (documents and presentation materials). Considering the importance of this workshop, an assistance of the Secretariat and NC as well as relevant experts in this field is expected for the preparation of the training materials. ii) The Secretariat, NC and relevant experts will join to carry out the course. iii) Proposed lecture will be identified regarding enhancement of the capacity of the participating countries on international agreement and cooperative network and regional air pollution aspects.

Expected Outcome	One workshop per year to enhance the capacity of the participating countries for future development of EANET
Implementation Period	2009 – 2010
Budget Required	USD 30,000 per year

Project Title	Workshop for discussion on promotion of modeling activities
Objectives	To clarify the future direction on modeling activities in EANET
Activities	i) To hold a workshop once a year for two years to promote the understanding and importance of modeling activities ii) To hold discussions for promotion of this activity

Expected Outcome	i) Improved awareness among EANET members on importance of modeling activities ii) Proposals on promotion of modeling activities
Implementation Period	2008 – 2009
Budget Required	USD 85,000

Project Title	Workshop for discussion on promotion of emission inventories
Objectives	To clarify the future direction on emission inventories in EANET
Activities	i) To hold a workshop once a year for two years to promote the understanding and importance of emission inventories ii) To hold discussions for promotion of this activity
Expected Outcome	i) Improved awareness among EANET members on importance of emission inventories ii) Proposals on promotion of emission inventories activities
Implementation Period	2008 – 2009
Budget Required	USD 85,000 per year

Project Title	Regional Workshop on air quality management issues including acid deposition and ozone issues
Objectives	To promote a common understanding of the acid deposition and ozone issues
Activities	To hold a regional workshop on air quality management including acid deposition and ozone issues in one of the participating countries of EANET
Expected Outcome	Sharing of knowledge and discussion on the proposal for new directions of regional air quality management among scientific community, national governments, civil society, academe, private sector and other international experts and agencies
Implementation Period	2009
Budget Required	USD 100,000

III. Projects requesting for support to upgrade existing stations and/or establish new monitoring stations

Project Title	Improvement of capability for EANET monitoring in the participating countries
Objectives	i) To establish surface ozone monitoring in countries in the EANET region ii) To establish new stations in some countries in the EANET region
Activities	i) To purchase and install 14 sets of ozone monitors and calibrating equipment in EANET countries (1 set each in 10 countries and 2 sets each in China and Russia) ii) To purchase and install the necessary equipment to commence EANET monitoring at new sites in 5 countries (Cambodia,

	China, Lao PDR, Mongolia and Myanmar)
Expected Outcome	<ul style="list-style-type: none"> i) Surface ozone measurements available at selected critical sites in the EANET monitoring network ii) Expansion of the network of monitoring sites in the EANET region iii) Commencement of EANET monitoring in new member countries
Implementation Period	2008 – 2010
Budget Required	Ozone equipment USD 40,000 x 14 = USD 560,000 Cambodia: AAS, Filter pack kit = USD 100,000 China: Filter pack kit = USD 50,000 Lao PDR: AAS, Filter pack kit = USD 100,000 Myanmar: IC, AAS, Filter pack kit = USD 200,000 Mongolia: AAS = USD 50,000 Total: USD 1,060,000

IV. Projects requesting collaboration with other regional/international initiatives

Project Title	Passive sampler monitoring campaign in the whole EANET region
Objectives	To prepare concentration maps for air pollutants in the EANET region
Activities	<ul style="list-style-type: none"> i) To implement a passive sampler monitoring campaign four times a year for O₃, SO₂, NO_x in a 1 degree x 1 degree resolution (about 3,000 sites) in the EANET region ii) To hold a workshop at the end of the campaign to discuss on future of the monitoring network established
Expected Outcome	<ul style="list-style-type: none"> i) Concentration maps for O₃, SO₂, NO_x ii) Proposals on establishment of new monitoring sites to monitor these parameters on a continuous basis
Implementation Period	2009
Budget Required	USD 600,000

Project Title	Aircraft observations of atmospheric constituents in the EANET region
Objectives	To clarify air pollutant concentrations over a larger area and in the vertical scale
Activities	<ul style="list-style-type: none"> i) To conduct aircraft observations in a specified region of interest within the EANET region in collaboration with other agencies/research groups conducting aircraft observation campaigns in the region ii) To analyze the data collected and store in an appropriate database
Expected Outcome	Air pollutant concentrations which can be used to verify data obtained from satellite measurements
Implementation Period	2012
Budget Required	USD 500,000 per year

Annex 2

Concept Paper No. 1

<p>Title of Project</p>	<p>Emission survey to promote the preparation of emission inventories in EANET countries</p>
<p>Purpose/Objectives</p>	<p>To obtain an array of reliable emission factors for major sources of air pollutants in EANET countries (comprising 13 countries in Northeast and Southeast Asia)</p>
<p>Background Information</p>	<p>Many Asian countries have experienced rapid economic growth during recent years and this trend is expected to continue. The economic growth is accompanied by increasing energy demand with coal as the dominant energy source. Emissions of air pollutants, in particular, sulphur dioxide, nitrogen oxides and particulate matter as a result of fossil fuel combustion from a variety of economic activities are expected to continue to increasing in the future. This development has led to local and regional air pollution problems that may affect Asian ecosystems and human health.</p> <p>Several regional air pollution models have been developed for the region as analytical tools to help decision-makers analyze future trends in emissions, estimate regional impacts of resulting pollution levels, and to evaluate costs and effectiveness of alternative mitigation options. Some models have the capability to assess deposition and ecosystem protection levels resulting from different energy pathways and different emission control strategies. They can be used by national governments, regional and international initiatives to plan future frameworks for environmental management in Northeast and Southeast Asia in order to minimize and control regional air pollution.</p> <p>Currently, a large percentage of the emission rates used to estimate emissions from industrial and non-industrial sources are based on measurements performed in areas outside the Northeast Asian and Southeast Asian region a number of years ago. There is an urgent need to update these emission factors or rates to reflect conditions in Asian countries, in particular, differences in weather, fuels characteristics, operations, industrial processes, and emission control equipment and practices.</p> <p>There is also an urgent need to improve emission inventories in the</p>

	<p>EANET region for elements that govern regional air pollution issues including acid deposition. As emission control scenarios become more realistic, the level of effort required to prepare emissions data for regional and hemispheric transport models is becoming increasingly large. The international research community requires readily accessible data on emissions of the primary pollutants and improved spatial resolution of emissions data to improve the accuracy of their model predictions.</p>
<p>Scope/Activities</p>	<p>This project proposes a survey to be carried out by experts from EANET countries to obtain reliable emission factors of large emission sources, both anthropogenic and natural, of the critical air pollutants.</p> <p>The information obtained can be used to improve emission inventories in countries which have existing ones and will serve to stimulate these activities in countries that have not started the preparation of their emission inventories.</p> <p>The project will focus principally on the development of improved emission factors to determine emissions from on-road transportation, agriculture, and fossil fuel combustion sectors. The main activities to be carried out by the expert group are:</p> <ul style="list-style-type: none"> i) To collect emission factor data from available scientific documents ii) To analyze emission gases from actual sources to obtain representative emission factors <p>Systems for sharing, publishing, reporting, utilizing and updating these factors may also be established within this project.</p> <p>At the end of the project, a workshop will be conducted in one of the EANET countries. The participants will be representatives from the environment agencies of the EANET countries. The workshop shall:</p> <ul style="list-style-type: none"> i) report on the methodologies used in the survey ii) present the results of the project, and iii) provide recommendations for application of the emission factors in the EANET countries. <p>A detailed report on the project will be submitted by the expert group to EANET.</p>
<p>Cost Estimate</p>	<p>USD 500,000 per year</p>

Timeframe/Schedule	2009 – 2012
Outputs	The project is expected to produce: i) A list of emission factors that are appropriate for the preparation of emission inventories in EANET countries ii) Capacity building for representatives of the EANET countries on methodologies for obtaining emission factors
Proposed Funding Source	Japan International Cooperation Agency (JICA)
Endorsement by NFPs	

Concept Paper No. 2

Title of Project	Capacity Building Workshop for the Policy Makers of the Participating Countries of EANET
Purpose	To enhance the capacity of officials, those involved in the policy making process and experts in order to contribute to the process of discussion necessary for future development of Acid Deposition Monitoring Network in East Asia (EANET), by providing them with the relevant and necessary knowledge on acid deposition and other transboundary air pollution issues and other international agreement. To strengthen regional cooperation by providing the policy makers with the good practices and knowledge on other international policies and regulations for regional air quality management.
Background	With the common efforts of the Secretariat, the Network Center and the participating countries, EANET has made a lot of progress. However, it was also recognized that most of EANET members are developing countries, and their personnel have insufficient experiences and capabilities to take part in relevant activities of

	<p>EANET. Such lack of capacity may also cause difficulties for the further development of EANET.</p> <p>Up to now, EANET has implemented a set of training activities for the capacity building among the participating countries for acid deposition monitoring including sampling procedures and laboratory analysis. However, the training activities for the other staff members who are not involved in the laboratory work but take part in the EANET meetings and policy making are still insufficient. This is one of the main challenges to be solved so as to develop EANET. Capacity building in this field is an urgent matter for this purpose.</p>
<p>Scope/Activities</p>	<p>The activities of the capacity building workshop are as follows:</p> <ol style="list-style-type: none"> (1) The selected experienced trainers will prepare training materials (documents and presentation materials). Considering the importance of this course, an assistance of the Secretariat and NC as well as relevant experts in this field is expected for the preparation of the training materials. (2) The Secretariat, NC and relevant experts will join to carry out the workshop. (3) Proposed lecture will be identified regarding enhancement of the capacity of the participating countries on international agreement and cooperative network and regional air pollution aspects.
<p>Cost Estimate</p>	<p>USD 30,000 per year</p>
<p>Timeframe</p>	<p>2009-2010</p>
<p>Output</p>	<p>One workshop per year to enhance the capacity of the participating countries for future development of EANET</p>
<p>Proposed Funding Source</p>	

Annex 3

Proposed Schedule of Visits to Potential Funding Agencies

Asian Development Bank (ADB)	June 2007
United Nations Development Programme (UNDP)	July 2007
Japan International Cooperation Agency (JICA)	July 2007
Korean International Cooperation Agency (KOICA)	July 2007
United Nations Economic Commission for Europe (UNECE)	August 2007
United Nations Environment Programme UNEP)	May 2007
Other bilateral aid agencies	(to be determined)