

The Sixth Senior Technical Managers' Meeting  
of the Acid Deposition Monitoring Network  
in East Asia  
27-29 July 2005, Hanoi, Viet Nam

**Five-Year Medium Term Plan for  
the Acid Deposition Monitoring Network in East Asia  
(2006-2010)**  
*(draft)*

## **Introduction**

1. During the regular phase of the Acid Deposition Monitoring Network in East Asia (EANET) the participating countries made considerable efforts and reached evident achievements in line with objectives of EANET. Some participating countries suggested having a medium term plan of EANET activities together with annual Work Program and Budget for EANET.
2. Based on the decision at the Fifth Session of the Intergovernmental meeting (IG5) held in Thailand, November 2003 a task on development of Medium Term Plan for EANET (MTP) was included into the scope of work of the Working Group for Further Development (WGFD) of EANET established by IG5. Upon the discussions at the First Session of WGFD (WGFD1) and the Sixth Session of the Intergovernmental Meeting (IG6) it was decided that MTP should be prepared for the activities to be undertaken for the coming 5 years (2006-2010). MTP will focus on the whole activities of EANET with clearly stated targets, activities to be undertaken and expected results at the end of the mentioned period.
3. The preparation of MTP should be conducted by WGFD together with the Network Center (NC) in a period of one year. The consideration of draft report on a 5 Year MTP for EANET was done at the Second Session of the WGFD in June 2005. The comments and guidance by the Scientific Advisory Committee (SAC) and the National Focal Points (NFPs) are expected and revised document has to be submitted to IG7 in 2005 for its consideration.

## **General Objectives**

4. The main goals and objectives to be achieved in 5 years could be identified in accordance with the targets of MTP approved by IG6 (EANET/IG6/6/2 rev.2):
  - improvement of current acid deposition monitoring in terms of the data quality, completeness of monitoring items, distribution of monitoring sites and data management;
  - extended assessment of the state of acid deposition in East Asia based on the analysis of the EANET monitoring data;
  - development of scientific researches on the atmospheric environment in East Asia;
  - common understanding on the issues of atmospheric environment in East Asia through the establishment of epistemic community and promotion of public awareness;
  - the sound basis for financial contribution and future development of EANET;
  - increasing transparency of EANET development;

- enhancement of cooperative efforts among participating countries and with outside organizations; and
- strengthening policy relevance of EANET activities.

## **Basic Policy**

5. Basic Policy of the MTP will support future development of EANET by the following ways:

➤ Strengthening of the basis of EANET

EANET will continue to promote the activities described in the Tentative Design (EANET/IG2/5/3) in order to strengthen the sound basis of EANET activities. Among others, the promotion of QA/QC activities including capacity building, and the improvement of monitoring methodologies are priorities in the MTP

Considering that the integrated and comprehensive assessment is extremely important to understand correctly the state of acid deposition in East Asia and to promote the cooperation among the participating countries, EANET will periodically draw up or publish assessment report on the state of acid deposition in East Asia with a review of the latest scientific studies.

➤ Promotion of scientific surveys and researches

EANET will promote scientific surveys and researches on a wide range of issues to properly assess the state of acid deposition in East Asia and to further understand the acid deposition issues. Especially the studies on ecological impacts such as development of indicators for ecological impacts and establishment of methodologies for detecting impacts in an earlier stage are ones of the most important tasks. EANET will also promote studies for the preparation of emission inventories and the development of simulation models with a view to achieving comprehensive air quality management in East Asia.

➤ Establishment of “Epistemic Community”

EANET will make efforts to establish an “Epistemic Community” of scientists, researchers and government officials including experts on social and economic fields to exchange information and share common understanding on a wide range of issues of the atmospheric environment in East Asia. Collaboration should be promoted with other international monitoring networks and programs in the world.

➤ Promotion of public awareness

Considering that the common understanding of the state of acid deposition problems by policy makers and the general public is indispensable to prevent or reduce adverse impacts caused on the environment and human health by acid deposition, EANET will make efforts to collect a wide range of information, provide appropriate and useful information to relevant people and implement other activities to promote public awareness.

➤ Establishment of a sound financial basis

Following the outcome of the feasibility study on an appropriate instrument, EANET will study for the establishment of a sound financial basis and the further development of EANET. The transparency and efficiency of EANET activities should be also promoted for this purpose.

## Major Activities

6. The activities to be undertaken are categorized in line with adopted document “Tentative Design of the Acid Deposition Monitoring Network in East Asia” (EANET/IG 2/5/3) and results of discussions during WGFD1 and IG6 (EANET/IG6/6 rev2) mentioned above:
  - (i) Promotion of acid deposition monitoring;
  - (ii) Compilation, evaluation, storage and provision of data;
  - (iii) Promotion of quality assurance and quality control (QA/QC) activities;
  - (iv) Implementation of technical support and capacity building;
  - (v) Producing periodic reports on the state of acid deposition in East Asia;
  - (vi) Promotion of research activities related to acid deposition problems;
  - (vii) Promotion of public awareness;
  - (viii) Other relevant activities including new direction of EANET and researches.
  
7. The tasks of MTP are correspondent mentioned categories. However, the highest priority within coming 5 years should be given to the improvement of monitoring activities and monitoring capabilities including QA/QC. The priorities of new knowledge and results to be obtained through necessary scientific researches and with help of new approaches should be identified later.
  
8. The contents of the MTP could be revised during the period 2006 to 2010 if IG will recognize and highlight such necessity.

### **Contents of Medium Term Plan**

9. This MTP is proposed to be undertaken for the coming 5 years (2006-2010) as decided by IG6. MTP is prepared with structure covering the whole activities of EANET including targets of task, actions to be done and expected results at the end of the implementation period.

**i. Promotion of acid deposition monitoring**

Tasks for strengthening the current monitoring activities and the monitoring capabilities:

- (1) Improvement of accuracy of monitoring data in the participating countries

Targets of task	Actions to be done	Expected results	Implementation period
To provide accurate data on acid deposition monitoring	Evaluation on appropriate application of sampling/ analytical equipment at the EANET monitoring sites Consideration on maintenance system for sampling and analytical equipment in cooperation with manufacturers	Report on application of sampling/analytical equipment at the EANET monitoring sites, including recommendation for improvement of equipment and proposal on cooperation with equipment makers for technical support and maintenance of equipment	2007-2008

- (2) Development and application of monitoring methods for dry deposition considering current country-specific monitoring methodology

To ensure the implementation of improved/ modern methods for dry deposition (especially in tropical regions)	Consideration on the work plan based on the revised Strategy paper for Future Direction of Dry Deposition Monitoring of EANET	Adoption of Work plan for implementation of Strategy Paper	2006
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- (3) Consideration on possible application of less expensive methods of monitoring including passive samplers

To provide more extensive data sets on acid deposition in EANET	Review of application of low-cost methodologies for dry deposition monitoring in EANET region and worldwide Consideration on application of less expensive methods of monitoring including passive samplers for dry deposition monitoring in participating countries (under the cooperation between SAC, NC and participating countries)	Contribution to Report on application of sampling/analytical equipment at the EANET monitoring sites (see (1)) including proposals on application of less-expensive methods of monitoring.	2007-2008
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## (4) Review and revision of the monitoring Manuals including operation manuals of monitoring equipment

Targets of task	Actions to be done	Expected results	Implementation period
To provide participating countries with revised guidelines for monitoring	Consideration on necessity of revision of the current Technical Manual on wet deposition monitoring with reference to new guidelines of international monitoring programs Consideration on necessity of revision of the current Technical Manual for monitoring on inland aquatic environment based on the latest scientific/technical information (under the cooperation among SAC, NC and scientists of EANET participating countries)	A decision on the revision of Technical Manuals: for Wet Deposition Monitoring of EANET, and for Monitoring on Inland Aquatic Environment	2007

## (5) Review of strategy papers for future directions of soil and vegetation monitoring

To clarify particular objectives, ways, and milestones for ecological monitoring	Revision of Strategy Paper for Future Direction of Soil and Vegetation Monitoring (by SAC and TF on Soil and Vegetation Monitoring)	A revised Strategy Paper for Future Direction of Soil and Vegetation Monitoring of EANET	2007-2008
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## (6) Efforts for implementation of all required monitoring items and data completeness

To receive a complete set of comparable data from all the monitoring sites	Preparation of a set of SOPs for sample collection and analysis, and data management Evaluation of data completeness including the implementation of all required parameters	A set of SOPs for operational monitoring Information Report and recommendation on improvement of data completeness	2006-2008
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## (7) Start of forest vegetation monitoring according to the new sub-manual

Targets of task	Actions to be done	Expected results	Implementation period
To obtain the first data set on forest vegetation monitoring surveyed according to the new sub-manual	Development/endorsement of the new sub-manual on forest vegetation monitoring Application of modified methods for the survey of tree decline in current monitoring sites Starting surveys of newly proposed items, such as estimate of deposition/concentration in forest and leaf chemical analysis, in current monitoring sites as well as new sites taking atmospheric deposition into account Necessary training of staffs	Improvement of quality and quantity of data/information on the survey of tree decline, especially in tropical region Data set on new monitoring items in the sites	2006-2010 (with more detail plan)

## (8) Implementation of the inland aquatic environment monitoring in all the participating countries

To establish monitoring sites to recognize impact on inland aquatic systems	Establishment of suitable inland aquatic monitoring sites taking into account of relationship with atmospheric acidic deposition and circumstances possibility	At least one site to be established in each participating country of EANET (upon the possibility) accompanied by monitoring sites of atmospheric deposition	2006-2010 (with more detail plan)
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## (9) Consideration on the increase of monitoring items

Identification of necessary parameters for regular monitoring as well as equipment for that purpose	Review of priority for measured parameters in line with EANET objectives Preparation of standard measurement program including recommendations on necessary equipment	Recommendation on monitoring parameters, measurements and equipment for EANET sites	2006-2007
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## (10) Consideration on appropriate distribution of monitoring sites

Definition of appropriate numbers and density of monitoring sites	Scientific research on appropriate distribution of monitoring sites based on EANET objectives and ways how to utilize monitoring data	Recommendation on expansion of EANET monitoring sites	2007-2008
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**ii. Compilation, evaluation, storage and provision of data**

(11) Compilation and storage of monitoring data

Targets of task	Actions to be done	Expected results	Implementation period
Maintain the EANET database of monitoring data for support to reporting and scientific studies on acid deposition in East Asia	Periodically update of the EANET database with new monitoring data from participating countries	Database of EANET monitoring data	2006-2010

(12) Evaluation of appropriateness of monitoring data

Establishment of data verification system	Discussion on appropriate methods and procedures for data verification	Procedures for verification of data on acid deposition in East Asia	2008
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(13) Promotion of access to monitoring data for data users

Provision of EANET data for application in research and information	Construction of the Website for data download and periodically update of the data Construction of the communication system among researchers using Website.	Website for data downloads system and communication system.	2006-2010
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(14) Consideration on strategy for future use of EANET data in line with the objectives of EANET

To provide proper application and dissemination of EANET data	Discussion on appropriate application of EANET data in line with the objectives of EANET Evaluation of application of EANET data for assessment studies, reports of different groups of users, for exchange with other international programs Preparation of proposal for improving the use of EANET data	Contribution to Strategy paper on the assessment in EANET (see (28))	2009-2010
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**iii. Promotion of quality assurance and quality control (QA/QC) activities**

(15) An establishment of national audit systems for monitoring sites and laboratories in the participating countries

Targets of task	Actions to be done	Expected results	Implementation period
Evaluation of performance of EANET sites and laboratories at the national level	To prepare the recommendation for audit of sites and laboratories by national centres and QA/QC managers, including specific indicators to evaluate monitoring performance and data completeness	Recommendation for audit of sites and laboratories	2007
	Start of national audit of EANET sites and laboratories in participating countries	Progress report on performance of EANET monitoring in participating countries (see (16))	2008-2010

(16) Evaluation of national QA/QC programs and their implementation

To develop national QA/QC programs of EANET	Survey on application of national QA/QC programs for EANET in participating countries	Progress report on performance of EANET monitoring in participating countries (see.15) including recommendation for QA/QC activities	2007
	To prepare recommendations for national centers and QA/QC managers		2008-2010

(17) Research on evaluation of inter-laboratory comparison project results to clarify and solve problems of laboratory analysis in the participating countries

To find out the measures for improvement of regular measurements	Study on the evaluation of results of interlaboratory comparison (ILC) projects performed in 1999-2004, including specific problems on laboratory analysis	Contribution to the Periodic Report on the State of Acid Deposition in East Asia	2006
	Evaluation of the result of inter-laboratory comparison tests on the regular phase of EANET	Report on the evaluation of inter-laboratory comparison tests in 2001-2005	2007-2008

**iv. Implementation of technical support and capacity building**

(18) Review of training programs of EANET in the regular phase

Targets of task	Actions to be done	Expected results	Implementation period
To revise the training programs on EANET monitoring	Consideration on revision of training programs based on the experience of NC and other collaborative organizations (e.g. JICA) as well as request/needs of participating countries	Report for consideration on training programs	2007
	To conduct questionnaires and planning for individual training in NC for 3 years	A plan of individual training in NC for 3 years	2008 (for 2008-2010)

(19) Promotion of systematic training and education, and cooperation in training activities implemented by the participating countries and other relevant organizations

Cooperation and assistance for implementation of national training activities Support of national training by other organization	To conduct questionnaires and survey for coordination on national training for 3 years	Report on results of questionnaires on implementation of training initiatives in participating countries and by other relevant organizations A set of training materials (textbooks, reviews of basic knowledge with exercises, special topic brochures)	2006-2010
	To develop materials for national training		

(20) Promotion of technical support for monitoring in the participating countries

Improvement of capability for EANET monitoring in participating countries	Technical cooperation between participating countries and NC Promotion of joint projects on technical cooperation among participating countries	Support of current EANET monitoring activities in participating countries	2006-2010
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(21) Promotion of technical assistance by other relevant organizations

Targets of task	Actions to be done	Expected results	Implementation period
Improvement of capability for EANET monitoring in participating countries	Promotion of relevant projects on technical support among participating countries by exploring cooperation with other relevant organizations and external funds	Providing necessary equipment for national EANET monitoring by means of projects supported by external resources	2006-2010

**v. Producing periodic reports on the state of acid deposition in East Asia**

(22) Preparation of periodic assessment reports on the state of acid deposition

To provide scientific assessment for the public, scientists and policy makers	To establish a standing committee for assessment report under the guidance of SAC	Completed first periodic report (end of 2006)	2006
	Evaluation of feedback of report users Discussion on inclusion of other issues related to acid deposition and long range transport into the assessment reports	Guidance for the periodic report on the state of acid deposition and related environmental issues	2007-2008
	Preparation of assessment report with periodicity of 4-5 years	Preparation of next periodic report	2009-2010

(23) Studies for support to the assessment on the state of acid deposition by means of trend analysis, assessment indicators, numerical modeling and so on.

To provide scientific instruments for assessment of monitoring data such as trend analysis, assessment indicators and numerical modeling	Research on identification and evaluation of trends in atmospheric pollution Review and development of assessment indicators for evaluation of impact on the environment based on monitoring data	Recommendation on monitoring data application for assessment reports such as trend analysis, assessment indicators, numerical modeling and data presentation design	2007-2008 (before start of preparation of next periodic report)
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**vi. Promotion of research activities related to acid deposition problems**

Research activities for assessing effects on atmospheric environment and on ecosystems:

## (24) Researches on atmospheric chemistry and deposition processes

Targets of task	Actions to be done	Expected results	Implementation period
Improved understanding of atmospheric chemistry and deposition processes in East Asia	Implementation of studies on atmospheric chemistry and deposition processes based on EANET monitoring data and other related information	Scientific evaluation of formation of acid deposition in the atmosphere of EANET region	2007 -2010
	Implementation of joint studies on dry deposition processes with Thailand	Evaluation of dry deposition fluxes in tropical areas of EANET region	2006 -2008

## (25) Comprehensive researches on characteristic features of acid deposition and air quality in East Asia and their changes

Understanding of acid deposition and air quality in East Asia and their changes	Research on acid deposition as well as on other air pollutants in EANET region from the viewpoints of geography, climate and characteristics of monitoring data	Scientific information on characteristic features of acid deposition and air quality in EANET region	2007 -2010
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## (26) Development of indicators for early detection of impact on vegetation for the use in the future monitoring

Providing indicators on appearing effects of acidification on forest ecosystems To implement existing methodologies for creating indicators on the cost-effective basis using remote sensing information and PC-base tools for image analysis	Implementation of studies on sensitivity of key biological species to air pollution for detection of forest ecosystem change	Scientific results on suitable indicators for evaluation of acid deposition impact on forest vegetation in EANET region	2006 -2010
	Implementation of studies on forest condition by the analysis of hemispherical photography series Application of data obtained by satellite in cooperation with other projects, if necessary	Evaluated trends of forest damage related to atmospheric pollution in the monitoring area Regional evaluations of forest decline with combined mapping information on atmospheric pollution in EANET region	2007 -2010

(27) Implementation of the catchment studies to clarify acidification mechanisms of ecosystems

Targets of task	Actions to be done	Expected results	Implementation period
To provide the scientific data on effects of acidification on terrestrial ecosystems	Implementation of joint project on catchment study Investigation of catchment study approach to develop the methodology for evaluation of acid deposition impact on ecosystems	Scientific results on the elemental budget in forested catchments including relationship between deposition amounts and stream water quality Guidelines/methodologies for the future catchment monitoring	2006 -2010

(28) Discussion on direction of the assessment of effects on ecosystems and consideration on preparation of the strategy paper on the assessment

Definition of necessary activities and milestones for development of methodologies and studies on assessment of effects of acid deposition and related issues on ecosystems	Review of archived scientific research on integrated assessment of different environmental medias inside/outside EANET region Development of general goals, ways and list of necessary activities as well as proposal for their implementation	Strategy paper and Proposal on research activities for 5-10 years	2009 -2010
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#### vii. Promotion of public awareness

(29) Promotion of public awareness for EANET among the general public and officials

To increase understanding and knowledge level of the general public, policy makers, private sectors and local governments on the acid deposition and its effects	Preparation of information and public awareness materials Use of the modern tools for dissemination of information (e.g., Websites, TV, brochures and comics)	Printed public awareness materials and updated e-Learning courses and Webpages	2006 -2010
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(30) Efforts to help high-level policy makers to understand the importance of acid deposition problems in East Asia and EANET activities.

Targets of task	Actions to be done	Expected results	Implementation period
To make high-level policy makers to understand the importance of acid deposition problems in East Asia and EANET activities.	Dissemination of policy relevant information at high level meetings	Dissemination of information at special session in High Level Meeting on Health and Environment in ASEAN supported by the Secretariat	2006
		Dissemination of information at CSD, ECO Asia, Atmospheric Brown Cloud (ABC), AMME, North-East Asian Sub-regional Programme on Environmental Cooperation (NEASPEC), Greater Mekong Sub-region (GMS), UNFCCC and so on	2006 -2010
	Preparation of new materials for this purpose	New Report for Policy Makers	2008-2009

### viii. Other relevant activities including new direction of EANET monitoring and researches

Promotion of developing emission inventories:

(31) Discussion on necessity and approaches for emission inventories

To initiate activities for implementation of emission inventories in EANET To define the necessary measures for organizing these activities	Study and discussion on necessity of emission inventory for assessment studies in EANET	Report on necessity of emission inventory for assessment studies in EANET	2007
	Discussion on general approach to implementation of inventory activities in EANET including the development of correspondent infrastructure and capacity building Preparation of strategic documents and action plan for implementation of these activities taking of necessary measures to organize the central compilation and storage of inventory data	Strategy Paper of future direction of emission inventory of EANET Action plan for implementation Establishment for the procedures of central compilation, evaluation, storage and provision of inventory data	2007 -2009

(32) Establishment of the Task Force on Emission Inventories (TF EI) to prepare guidelines as the first task

Targets of task	Actions to be done	Expected results	Implementation period
To initiate studies on clarification of the goals, scientific basis and approaches for development of emission inventories	Preparation and discussion of TOR for TF EI at SAC Review of available/existing information on inventories Review of of international and national experiences on necessary measures for implementation of inventories	Establishment of TF IM Report on available/existing information Report on international and national experiences on necessary measures for implementation of inventories	2007 2007 2007-2008
To provide necessary guidelines for implementation	Compilation of guidelines for emission inventories of acidified substances	Guidelines for emission inventories of acidified substances	2008-2009

Promotion of modeling activities:

(33) Discussion on necessity and approaches for modeling activities

To initiate activities on atmospheric and environmental modeling in EANET relevant acid deposition and harmful effects	Feasibility study and discussion on modeling of atmospheric pollution transport/chemistry/deposition together with their effects on soil and inland aquatic environment for model-based analysis of monitoring data and environmental assessment studies in EANET	Feasibility study report on modeling activities for analysis of monitoring data and assessment studies in EANET	2007
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(34) Establishment of the Task Force on Modeling Activities (TF MA) for consideration on modeling activities of EANET

To initiate studies on clarification of the goals, scientific basis and approaches for introducing modeling into EANET activities	Preparation and discussion of TOR for TF MA at SAC Review of available/existing information on modeling of atmospheric transport and deposition Review of existing intercomparison studies on modeling Investigation of the necessary measures for organizing these activities including the development of correspondent infrastructure and capacities based on review of international and national experiences	Established TF MA Compilation report on available/ existing information and initiatives Review of international and national experiences on necessary measures for implementation of modeling studies Recommendation on implementation of transport/chemistry/deposition modeling for EANET	2007-2008
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Targets of task	Actions to be done	Expected results	Implementation period
To define the necessary measures for organizing these activities and to provide recommendations for implementation	Discussion on general approach to implementation of modeling activities in EANET including the development of correspondent infrastructure and capacity building Consideration on necessary measures to organize modeling activities in EANET	Proposal on plan for implementation of modeling activities for EANET Designed project of modeling activities in EANET	2008 -2009

## (35) Promotion of inter-comparison and validation of existing models on acid deposition in East Asia

Targets of task	Actions to be done	Expected results	Implementation period
To evaluate appropriateness of modeling approaches to EANET region and objectives of network To provide necessary recommendations for implementation of modeling for EANET	Promotion of cooperation with MICS-Asia studies taking into account the objectives of EANET Supporting the intercomparison and validation studies of atmospheric transport/chemistry/deposition modeling with EANET monitoring data	Recommendation on improvement of regional atmospheric transport/chemistry/deposition models Support of initiatives of participating countries on atmospheric modeling and its application	2007-2010

## (36) Development of a global transport model for dealing with intercontinental (hemispheric) atmospheric pollution

To evaluate importance of long-range intercontinental transport to/from EANET region	Promotion of cooperation with other international initiatives on developing a global transport model (GTM) for dealing with intercontinental (hemispheric) atmospheric pollution	Results of joint studies among some participating countries on development of GTM as well as collaboration with other international initiatives	2007-2010
To contribute into joint efforts for investigation of global changes	Evaluation of requirements for global transport model in line of EANET objectives and peculiarities of EANET region	Recommendation on development of GTM Contribution to UN ECE Task Force on Hemispheric Transport of Air pollution	2006-2009



Expansion of atmospheric monitoring for other pollutants:

(37) Establishment of the framework for reviewing substances

Targets of task	Actions to be done	Expected results	Implementation period
To discuss on necessity of monitoring of other priority substances	Establishment of procedures how to do review studies Discussion on utilization of achievements of and coordination with other international/regional initiatives	Transparent framework for review of substances to be monitored	2006-2007

(38) Investigation of monitoring requirements for other priority substances such as monitoring equipment, sampling and analytical methods

To clarify the aims, monitoring approaches and necessary activities to organize the monitoring of other priority substances	Review of relevant documents on environmental/human effects of priority substances Identification of monitoring methodologies Conducting pilot case studies at some EANET sites under the cooperation between SAC, NC and participating countries as well as with other international/regional initiatives Preparation of measures for organizing relevant monitoring	Reports on environmental/human effects of priority substances and their monitoring requirements with compilation of good practices, available information and results of case studies in EANET region Action plans for monitoring other priority substances	2008-2009
			2010

Promotion of formation of an “Epistemic Community” for the understanding of the atmospheric environment in East Asia and collaboration with other international monitoring networks and programs.

(39) Creating conditions for mutual cooperation of EANET scientists for researches and publication of results

To enhance effectiveness of scientific research and to promote the understanding on the atmospheric environment in East Asia	Promotion of EANET data disclosure Promotion of joint projects and cooperative studies including in-kind/initiative contributions of scientists from EANET countries Efforts for exploring fellowship and grant programs for research of scientists from participating countries Publication on EANET activities in international journals and issues	Increased scientific evaluation and studies More comprehensive materials and contributions for periodic reports and information for policy makers and the general public	2006-2010
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(40) Improvement of communication and sharing of common understanding on a wide range of issues of the atmospheric environment in East Asia among the scientists, researchers and government officials of the participating countries

Targets of task	Actions to be done	Expected results	Implementation period
To support formation of the Epistemic Community by EANET scientists	Promotion of exchange of scientific results among EANET countries Dissemination of related scientific achievements Publication of Newsletter Involvement of EANET scientists into regional/international research programs under the cooperation with other monitoring initiatives Preparation of a Regional Workshop on Acid Deposition organized by the Secretariat and NC	Creating of network of experts concerning a wide range of issues of the atmospheric environment within EANET Periodic issues of Newsletter  Regional Workshop on Acid Deposition in one of the participating countries of EANET for scientific community, national governments, civil society, academe, private sector and other international experts and agencies	2006-2010  2006

(41) Discussion on collaboration and coordination with international monitoring networks and programs and preparation of strategy for cooperation

To define goals and principles for collaboration and coordination, taking account of the possible mutual benefits	Review of existing international/regional initiatives on environmental monitoring and protection with identification of common interests and possibilities for cooperation To determine the necessary actions for collaboration and coordination To investigate the common interests with climate change/global environmental research activities	Strategy paper for collaboration and coordination with international/ regional initiatives	2008-2009
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Efforts for improvements of institutional arrangement within EANET:

(42) Further improvement of the guidelines for transparency and efficiency of EANET, if necessary

Targets of task	Actions to be done	Expected results	Implementation period
To strengthen EANET activities To promote efficiency and transparency of EANET	To promote the improvement of guidelines for particular issues of EANET activities under the request of IG To take measures for transparency of activities of EANET institutional bodies and relevant cooperation Revision of procedures for EANET bodies, meetings and other topics if necessary Development of targets and performance indicators for evaluation of the performance	Necessary guidelines for particular issues of EANET activities more transparent and efficient activities of EANET bodies Proposed targets and indicators for evaluation of the performance of EANET	2006-2007

(43) Studies on the establishment of a sound financial basis and the further development of EANET following the outcome of the feasibility study on an appropriate instrument

To support a process of development of regional legal instrument	Sharing a common understanding on objectives, scope and principles of desirable regional legal instrument Provide relevant information for protection of atmosphere and environment from air pollution	Development of scientific reference materials for creating consensus on the necessary (desirable) regional legal instrument	2006-2007
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(44) Further discussion on the possibility of institutional expansion e.g. establishment of sub-center of NC could be considered, if necessary.

Improvement of basic structures of EANET to promote active participation	Discussion on revision of basic documents of EANET in accordance with development of network Evaluation of necessity of institutional expansion in accordance with further development of network Discussion on appropriate EANET bodies for new directions of EANET activities	Report on appropriate design of EANET	2009-2010
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### **Support for Implementation of Medium Term Plan**

10. Since activities in new directions including activities on emission inventory and modeling in MTP5 will require considerable increase of works and man-power, the necessary arrangement of human and budgetary resources for them should be considered by WGFD and IG. The summary table of outputs is presented in ANNEX with reference to target year and responsibilities.
11. This arrangement may include the increase of man-power and budget of NC from 2007 to be allotted specially for implementation of activities in new directions. NC will estimate the necessary resources (staffs and budget) based on adopted MTP5. As a different option, another special group, fellowship, or sub-center could be additionally mobilized upon the proposal of any participating country, as well as possible in-kind contribution by the country concerned.

**ANNEX 1**

I. Tasks to be implemented for improvement of current EANET activities

	Outputs	Task	Years of implementation					Implementation by				
			2006	2007	2008	2009	2010	NC	Secr	SAC	IG	Fellow
<b>Report</b>												
1	Report on application of sampling/analytical equipment at the EANET monitoring sites, including recommendation for improvement of equipment, proposal on cooperation with equipment makers for technical support and maintenance of equipment and proposals on application of less-expensive methods of monitoring.	1,3		X	X							
2	Information Report and recommendation on improvement of data completeness	6	X	X	X							
3	Progress report on performance of EANET monitoring in participating countries including recommendation for QA/QC activities	15,16			X	X	X					
4	Report on the evaluation of inter-laboratory comparison tests in 2001-2005	17		X	X							
5	Report for consideration on training programs	18		X				X				
6	Report on results of questionnaires on implementation of training initiatives in participating countries and by other relevant organizations	19	X	X	X	X	X	X				
7	Completed first periodic report	22,17	X					X		X		
8	Preparation of next periodic report	22				X	X	X		X		
9	Report on appropriate design of EANET	44				X	X	X	X	X	X	
<b>Strategy Paper</b>												
10	Strategy paper and Proposal on research activities for 5-10 years	28,14				X	X	X		X		
11	Strategy paper for collaboration and coordination with international/ regional initiatives	41			X	X		X	X	X		
<b>Plans</b>												
12	Work plan for for implementation of Strategy Paper on dry deposition	2	X							X		
13	A plan of individual training in NC for 3 years	18			X			X		X		

## ANNEX 1

<i>Guidelines and guidances</i>												
14	Guidelines/methodologies for the future catchment monitoring	27	X	X	X	X	X			X		
15	Necessary guidelines for particular issues of EANET activities	42	X	X				X	X		X	
16	Guidance for the periodic report on the state of acid deposition and related environmental issues	22		X	X					X		
17	A set of SOPs for operational monitoring	6	X	X	X							
<i>Other documents</i>												
18	A decision on the revision of Technical Manuals: for Wet Deposition Monitoring of EANET, and for Monitoring on Inland Aquatic Environment	4		X						X		
19	A revised Strategy Paper for Future Direction of Soil and Vegetation Monitoring of EANET	5		X	X					X		
20	Improvement of quality and quantity of data/information on the survey of tree decline, especially in tropical region	7	X	X	X	X	X					
21	Data set on new monitoring items in the sites	7	X	X	X	X	X					
22	At least one site of inland aquatic monitoring to be established in each participating country of EANET region accompanied by monitoring sites of atmospheric deposition	8	X	X	X	X	X					
23	Recommendation on monitoring parameters, measurements and equipment for EANET sites	9	X	X								
24	Recommendation on expansion of EANET monitoring sites	10		X	X						X	X
25	Database of EANET monitoring data	11	X	X	X	X	X					
26	Procedures for verification of data on acid deposition in East Asia	12			X							
27	Website for data downloads system and communication system	13	X	X	X	X	X					
28	Recommendation for audit of sites and laboratories	15		X								
29	Recommendation on monitoring data application for assessment reports such as trend analysis, assessment indicators, numerical modeling and data presentation design	23		X	X							

## ANNEX 1

## II. Tasks to be implemented in line with new directions of EANET activities

	Outputs	Task	Years of implementation					Implementation by				
			2006	2007	2008	2009	2010	NC(*)	Secr	SAC	IG	Fellow
1	Report on necessity of emission inventory for assessment studies in EANET	31		X				X				
2	Report on available/existing information (inventories)	32		X				X				
3	Report on international and national experiences on necessary measures for implementation of inventories	32		X	X			X				
4	Feasibility study report on modeling for analysis of monitoring data and assessment studies in EANET	33		X	X			X		X		
5	Reports on environmental/human effects of priority substances and their monitoring requirements with compilation of good practices, available information and results of case studies in EANET region	38			X	X		X		X		X
6	Compilation report on available/ existing information and initiatives(modeling)	34		X	X			X				
7	Strategy Paper of future direction of emission inventory of EANET	31		X	X	X		X		X		
8	Action plan for implementation (inventories)	31		X	X	X		X		X		
9	Proposal on plan for implementation of modeling activities for EANET	34			X	X		X		X		
10	Action plans for monitoring other priority substances	38					X	X		X		
11	Guidelines for emission inventories of acidified substances	32			X	X		X		X		
12	Establishment for the procedures of central compilation, evaluation, storage and provision of inventory data	31		X	X	X		X		X		
13	Review of international and national experiences on necessary measures for implementation of modeling studies	34		X	X			X				
14	Recommendation on implementation of atmospheric transport modeling for EANET	34		X	X			X		X		
15	Designed project of modeling activities in EANET	34			X	X		X		X		
16	Recommendation on improvement of regional atmospheric transport models for EANET region	35		X	X	X	X	X				
17	Transparent framework for review of substances to be monitored	37	X	X				X	X	X		

(\*) NC (by new staff) or new institution

## **Comments on the draft 5 Year Medium Term Plan for EANET**

1. The Network Center sent the outline of the 5 Year Medium Term Plan for EANET (MTP) in April 2005 to start a discussion on the principles of document among National Focal Points, SAC members, National Centers and other relevant organizations. Received comments from four countries and several SAC members were used during preparation of draft MTP for discussion at the Second Session of the Working Group for Further Development of EANET (WGFD2). This draft was also sent to NFPs, SAC members and other resource persons for detail comments and suggestions.
2. During the discussions at WGFD2 the number of comments and suggestions were provided for elaboration of MTP5. However, the further discussions and clarification are needed based on draft content of MTP5 because many suggestions were put in too general forms. The list of comments was prepared as put below including ones received before WGFD2.

3. Major comments and suggestions:

### On structure of MTP5:

- A clear priority setting of activities should be identified, in particular for the new direction of EANET monitoring and researches in the 5-Year Medium Term Plan, taking into account available resources.
- Adverse impacts of air pollutants on human health should be considered as one of the priority activities.
- The EANET activities should be clearly distinguished from other bilateral activities.

### On tasks of MTP5:

- The consideration on expansion of EANET activities for other transboundary air pollutants should be actively promoted.
- The importance of awareness raising activities as emphasized especially for policy makers should be reflected in MTP.
- Active discussions on modeling activities for future EANET activities should be stipulated because different opinions are evident: some countries emphasized their importance, while some others raised the question to do so.
- To develop first of all a regional transport/deposition model of relatively high spatial resolution is much more important for EANET than global models which can be of the secondary importance.
- More attention is needed to reviewing the current understanding of quality control and quality assurance developments as well as more discussions thereafter.
- The elaboration of tasks on quality assurance and quality control (QA/QC) activities should be considered.



**ANNEX 2**

- It is important to involve outside experts of EANET and to collaborate with relevant organizations such as WMO. Various existing research and studies should be carefully reviewed in addition to the data generated by EANET.
- The duplication of activities and some inconsistencies should be avoided as appeared in the presentation by NC at WGFD2 and draft document (EANET/WGFD 2/6).
- The necessity to prepare an operational manual for assessment of dry depositions on the bases of air pollution monitoring data would be reasonable to include in MTP. Such a manual should give a strict recommendation how to evaluate dry deposition using values of airborne concentrations measured at the stations.

On format and possibility of evaluation:

- Expected outputs after the end of period of the 5-Year Medium Term Plan (2006-2010) should be clearly described.
  - Indicators to evaluate success and failure of the activities should be developed.
4. The participating countries and their representatives at STM6 are requested to provide further comments as appropriate. Based on them the Secretariat and NC will revise the document taking into account their views and comments expressed at STM6 and thereafter as well as listed above.
  5. The revised document will be further discussed at the Fifth Session of the Scientific Advisory Committee (SAC5) with circulation thereafter among the participating countries before finalization of the report and submission to IG7.