

The Twelfth Session of the Intergovernmental Meeting
on Acid Deposition Monitoring Network in East Asia
23-24 November 2010, Niigata, Japan

MEDIUM TERM PLAN FOR EANET (2011-2015)

1. INTRODUCTION

The Fifth Session of the Intergovernmental Meeting of EANET (IG5) in 2003 agreed on the development of a 4-5 year medium term plan for EANET and this task was assigned to the Working Group on Future Development of EANET (WGFD). From 2004-2006, the Sessions of WGFD, Scientific Advisory Committee (SAC) and Intergovernmental Meeting (IG) deliberated on the elements to be included in the five year medium term plan. The document was finally adopted at the Eighth Session of the Intergovernmental Meeting (IG8) held in Hanoi, Vietnam in November 2006. The IG8 also decided to change the name of the document to the Strategy on EANET Development (2006-2010).

The Network Center (NC) and the Secretariat for EANET are implementing the activities of the current Strategy on EANET Development (2006-2010) which focuses on eight important categories of activities to be carried out during the five year period from 2006 to 2010. Based on previous experience the process to develop a new plan or strategy will take about two years. There was, therefore, a need for the WGFD to start the process of developing the next five-year medium term plan in 2009. The new five-year medium term plan would have to take into consideration the achievements of the current strategy and the problems encountered during its implementation, as well as new developments in East Asia.

2. CONSIDERATION ON THE MEDIUM TERM PLAN FOR EANET (2011-2015)

The NC and the Secretariat for EANET have jointly prepared a preliminary draft of the “Strategy on EANET Development (2011-2015)” and a time table for development of the Strategy and implementation plan for consideration and discussions at the Eighth Session of the Working Group on Future Development of EANET (WGFD8) held in Pattaya, Thailand in July 2009.

At the WGFD8, it was reminded that the title of the document might be “Medium Term Plan (2011-2015)” according to the TOR of the WGFD (2009-2010) and requested the Secretariat and the NC to revise the document accordingly, taking into consideration the other comments during the Session.

As many of the activities are scientific and technical in nature, the document was also presented at the Ninth Session of the Scientific Advisory Committee (SAC9) Meeting held on 14-16 October 2009 in Tsukuba, Japan for comments and inputs. It was also presented at the Eleventh Session of the Intergovernmental Meeting (IG11) held on 19-20 November 2009 in Bangkok, Thailand to

review, provide comments and guidance to the document. At the IG11, it was suggested that clear priority be set on various activities proposed in the Medium Term Plan (MTP).

At the Ninth Session of the WGFD held in April 2010 in Thailand, it was requested that some parts should be discussed by the Tenth Session of Scientific Advisory Committee (SAC10) such as: last sentence of the first paragraph of the Introduction (page 3), second bullet of the Objectives, activity No. 17 of Annex 1. SAC10 was expected to discuss those parts from scientific and technical viewpoints.

In accordance with the discussion at the SAC10, last sentence of the first paragraph of the Introduction (page 3) was revised.

The Draft MTP for EANET (2011-2015) will be presented at the Twelfth Session of the Intergovernmental Meeting (IG12) in November 2010 for consideration and final adoption.

3. ACTION REQUIRED

Based on the comments made by the WGFD8, SAC9, IG11, WGFD9 and SAC10, this document was revised. The IG12 is invited to discuss, review the “MTP for EANET (2011-2015) (Revised Draft)” for its adoption.

Medium Term Plan for EANET (2011-2015)

1. Introduction

The Acid Deposition Monitoring Network in East Asia (EANET) is an intergovernmental regional network established for promoting cooperation among countries in East Asia to address acid deposition problems. Due to the transboundary nature of the acid deposition problems and its inter-linkages with air pollution issues, participating countries of EANET have since 1998 cooperated in conducting monitoring, scientific researches, training and capacity building activities.

The development of a medium-term plan for EANET was one of the major decisions of the Fifth Session of Intergovernmental Meeting (IG5). The Working Group on Future Development of EANET (WGFD) was requested to prepare a plan to be implemented within a period of five years (2006-2010) which would 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.

The title of the “Five-Year Medium Term Plan (MTP) for EANET (2006-2010)” was changed to “Strategy on EANET Development (2006-2010)” based on the decision of the Eighth Session of the Intergovernmental Meeting (IG8), as it was considered that a medium term plan should have assured financial resources.

The Tenth Session of the Intergovernmental Meeting (IG10) mandated the WGFD to start the process of development of the next medium term plan for EANET (2011-2015). In line with this mandate, this Draft MTP for EANET (2011-2015) is being developed by the WGFD for deliberations at the Sessions of the WGFD and the SAC and for final adoption by the IG.

1.1 Achievements of the EANET Strategy (2006-2010)

Over the years, significant achievements were fulfilled and recognized during the implementation of the Strategy on EANET Development (2006-2010). The Secretariat and the Network Center (NC) made their best efforts to carry out and implement all the activities within the manpower and funding resources available, according to the priorities as decided by the IG.

The status of implementation of the activities of the EANET Strategy (2006-2010) was reported in the document “Mid-Term Report on the Implementation of the Strategy on EANET Development (EANET/IG 11/7)”. The implementation of the Strategy activities since 2006, and the regular activities of the Secretariat and the NC since the start of EANET, has brought EANET closer towards achieving its objectives. Major results and outputs of the present Strategy include, among others the following:

- Report on activities to improve data completeness;
- Set of Standard Operating Procedures (SOPs);
- New monitoring sites in EANET;

- Annual Data Reports;
- Updated Technical Manuals, Strategy Papers and Guidelines for EANET monitoring;
- First and Second Periodic Reports on the State of Acid Deposition in East Asia;
- Research Projects;
- Second Report for Policy Makers (RPM2);
- Bi-annual issues/publications of the EANET Newsletter;
- WGFD Report on the Instrument to Provide a Sound Basis for Contribution to EANET;
- Capacity building workshops for policy makers, technical trainings and national workshops on public awareness in the participating countries; and
- CDs, videos and brochures on acid deposition and other public awareness materials.

2. Future Development of EANET

2.1 Strategic Direction

The MTP for EANET (2011-2015) shall continue to focus on enhancement of the monitoring network, supported by the participating countries, through the implementation of strategic activities to improve geographical coverage, ensure site representativeness, and strengthen monitoring procedures, particularly sampling and analysis, to achieve more comprehensive and precise data.

It is important to plan for the future to enable continuation of benefits to the participating countries and to further contribute to national, regional and global efforts to improve air quality. In this respect, the Draft MTP for EANET (2011-2015) would consist of a continuation of the long-term activities in the present strategy and include new projects that would take into consideration the changing situation and address emerging issues in East Asia.

After ten years of operation, a vast amount of valuable data has been accumulated at the NC. The Draft MTP for EANET (2011-2015) includes provisions for continuous assessments and reporting on the status of acidification to policy makers annually and implementation of appropriate studies to evaluate impacts of acid deposition and other priority chemical species on soil, vegetation and inland aquatic environment in an effort to identify susceptible areas in the region, and improve the understanding of these mechanism.

In view of the vast diversity of the East Asian region, continuation of efforts to improve the current methodologies for measurement of air concentrations are important, particularly for measurements of ozone and aerosols. Accurate assessment of effects requires both measurements and models to determine the exposure and damage estimates. In this respect, the Draft MTP for EANET (2011-2015) will address research to improve air concentration monitoring methodologies, deposition estimations, building capacity in development of emission inventories and will also promote efforts to develop and use appropriate models to assess and analyze the trend of acid deposition and other relevant air pollutants at all scales.

The increasing role of oxidants and aerosols in influencing air quality in the region is further recognized and thus more emphasis will be placed on strengthening ozone and aerosol measurements in the network, and assessments of exposure of humans, crops, forests and other ecosystems to ozone.

2.2 Objectives

The objectives developed for the Strategy on EANET Development (2006-2010) are generally still valid and therefore most of them are retained in the Draft MTP for EANET (2011-2015). The objectives of the new MTP for EANET (2011-2015) are:

- Improvement of current acid deposition monitoring in terms of data quality, completeness of monitoring items, distribution of monitoring sites and data management;
- Extended assessment of the state of acid deposition including other relevant air pollutants in East Asia based on the analysis of EANET monitoring data;
- Development of scientific researches on the atmospheric environment in East Asia;
- Common understanding on environmental, social and economic issues of atmospheric pollution in East Asia through the establishment of an epistemic community and promotion of public awareness;
- Increasing transparency of EANET;
- Strengthening policy relevance of EANET activities;
- Providing policy advice and information based upon sound science and assessment;
- Enhance coordination in the dissemination of knowledge and information, training and public awareness activities;
- Strengthening technology support and capacity in line with country needs; and
- Enhancement of cooperative efforts among participating countries and with outside organizations.

To achieve the above objectives, twenty-two (22) activities covering all the EANET activities are identified for implementation in the 5-year period, 2011-2015 by the Secretariat, the NC, SAC and other relevant bodies of EANET under the following seven (7) categories:

- i. *Acid deposition monitoring;*
- ii. *Improvement of compilation, verification, evaluation, storage & provision of data;*
- iii. *Enhancement of data analysis and assessment;*
- iv. *Implementation of technical support and capacity building activities;*
- v. *Promotion of research activities related to acid deposition problems;*
- vi. *Promotion of public awareness; and*
- vii. *Further development of EANET.*

Some of the activities are extension of existing activities of the Secretariat and the NC while others are new activities which are crucial for further development of EANET.

3. Activities and their expected outputs

The 22 activities, with their set targets, expected outputs and implementation periods, to achieve the MTP for EANET (2011-2015) objectives are shown in the table on Activities, Targets and Outputs of the MTP for EANET (2011-2015) attached as Annex 1. The activities are as follows:

i. Acid deposition monitoring

- (1) Continuation of monitoring of all EANET priority chemical species, improvement in monitoring methodologies and better instrument maintenance;
- (2) Collaboration with participating countries to increase the number of regional monitoring sites;
- (3) Continuation of activities to improve the current methods used to measure air concentrations and estimate dry deposition;
- (4) Development/review of guidelines, technical manuals and documents, as necessary;
- (5) Development/update of strategy papers for guidance on future direction of EANET monitoring, as necessary; and
- (6) Implementation of quality assurance and quality control (QA/QC) activities.

ii. Improvement of compilation, verification, evaluation, storage & provision of data

- (7) Routine compilation, verification, evaluation, storage and provision of data and maintenance of the database; and
- (8) Upgrading of the data management system in the NC to enable easy access by approved users.

iii. Enhancement of data analysis and assessment

- (9) Conduct continuous assessment of the state of acid deposition using trend analysis, numerical models;
- (10) Evaluation of the monitoring data to assess impact on ecosystems; and
- (11) Preparation of periodic assessment reports on the state of acid deposition in East Asia.

iv. Implementation of technical support and capacity building activities

- (12) Promotion of capacity building for personnel of the participating countries including training courses, capacity building workshops, fellowships, etc.;
- (13) Promotion of technical support to participating countries by provision of advice, technical information and equipments to countries; and
- (14) Provision of new and updated information and communication technologies.

v. Promotion of research activities related to acid deposition problems

- (15) Promotion of research studies particularly on the applicability of various methodologies for measurement of air concentrations in East Asia;
- (16) Promotion of studies on the effects of acid deposition and other priority chemical species on the ecosystem, human health, and other social aspects from the viewpoint of the socio-economics;

- (17) Promotion of studies on models to assess and analyze the trend of national and regional acid deposition and other related air pollutants in East Asia by evaluation of existing models and providing a suitable one, and promotion of atmospheric simulation model through workshops, training courses, etc.; and
- (18) Promotion of emission inventories through workshops, training course, pilot studies, preparation of reference materials, etc.

vi. Promotion of public awareness

- (19) Promotion of public awareness on acid deposition and other priority chemical species, including their effects, control and mitigation measures, the activities of EANET, to various levels of the community which include policy makers, scientists, youth, school children and others. Promotion of public awareness to multi-layer stakeholders through the joint project for supporting the environmental education activities on acid deposition; and
- (20) Sharing a common understanding on atmospheric environmental issues among the scientific community and policy makers by exchanging information through a network of experts.

vii. Further development of EANET

- (21) Consideration on the extension of the scope of the instrument and institutional arrangement of EANET taking into account recent developments and future requirements, including a possibility of establishing additional bodies, e.g. network centers if necessary; and
- (22) Development of the next Medium Term Plan for EANET.

4. Implementation of the Medium Term Plan (MTP) for EANET (2011-2015)

EANET heavily relies on cooperation from participating countries to meet its objectives and responsibilities. The financial contributions and support from the countries are necessary in order to accomplish all the activities set forth in the Draft MTP. While the efforts and contributions of the participating countries on the monitoring activities at the national level are remarkable and enormous, communicating the results of EANET to policy makers and public in the countries are continuously expected. EANET has so far operated on voluntary contributions of financial and human resource from participating countries. In this respect, the contributions made by the members of the task forces and expert groups of EANET and other individuals and groups are acknowledged and very much appreciated.

4.1 Funding

Under the present arrangement, the participating countries make voluntary financial contributions to the budget of the Secretariat and the core budget of the NC. The additional budget of the NC is derived from contributions from the government, local municipalities, non-profit organizations, private companies, donor agencies, research funds and fellowship funds within Japan. In addition, some of the organizations also contribute to the human resources of the NC by seceding their staff to work for several months or years in the NC.

The funding of the activities of the Draft MTP for EANET (2011-2015) shall be obtained from the Secretariat budget and the NC core and additional budget. The revised definitions of the core and additional budget adopted at the Ninth Session of the Intergovernmental Meeting (IG9) shall be referred to decide on which activities shall be funded by the core or additional budget of the NC:

- The *core budget*: The cost of all activities indispensable for promoting the Network activities in the participating countries under the framework of EANET and which are approved by IG.
- The *additional budget*: The cost for strengthening the Network by providing technical assistance to the participating countries and by promoting further research activities and which are approved by IG.

The cost necessary for participating countries to establish and manage new monitoring sites should, in principle, be borne by the countries using their national funds. Participating countries must be committed to provide support to their monitoring program and provide high quality measurement data for the success of the network. However, recognizing that some countries lack financial resources to establish new sites, to acquire the necessary sampling equipment and to conduct chemical analyses, the Secretariat and the NC will make efforts to secure external funds to assist those countries.

In the long-term, it is preferable to secure funding for the core budget activities through an effective mechanism rather than rely on voluntary contributions as these activities are crucial for the continuous operation of the network. The funding of the activities of the MTP for EANET (2011-2015) using the additional budget of the NC cannot be assured as it is dependent on contributions from organizations within Japan, the availability of research funds, and whether additional funds are provided by international/regional organizations and donors. The amount of funds may also vary from year to year depending on economic factors.

The Secretariat and the NC shall continue to make efforts to explore financial support from all available sources. Actions have been initiated to strengthen collaboration with the following potential funding agencies:

- United Nations Environment Programme (UNEP);
- Asian Development Bank (ADB);
- United Nations Economic and Social Commission for Asia and the Pacific (UN ESCAP);
- United Nations Development Programme (UNDP);
- Japan International Cooperation Agency (JICA);
- Korean International Cooperation Agency (KOICA);
- Swedish International Development Agency (SIDA);
- United Nations Economic Commission for Europe (UNECE); and
- Other relevant international, regional agencies.

Other actions taken by the Secretariat and the NC to overcome the problem of inadequate financial resources shall include:

- Encouraging voluntary contribution from participating countries to the additional budget of the NC, whether in cash or in-kind;
- Diversification of financial sources;
- Clarification of categories/activities/projects to be supported;
- Strengthening partnerships with international and regional donor agencies and other environmental initiatives; and
- Using support from research foundations and funds from regional scale projects.

To increase the manpower resource and reduce personnel expenditure at the NC, participating countries are encouraged to second their experts to the NC. Prospective young researchers supported by fellowship funds can spend several months to years at the Asia Center for Air Pollution Research (ACAP) which is new organizational name of the NC, to carry out research relevant to the objectives of this MTP for EANET (2011-2015).

4.2 Implementation Plan

In principle, the Secretariat and the NC will be responsible for coordinating the implementation of the activities of the MTP for EANET (2011-2015) although many of the scientific activities will involve the SAC and its Task Forces. The progress of implementation of the activities will be reported during the sessions of the WGFD, SAC and for further adoption of the IG. The implementation plan is attached as Annex 2.

4.3 Evaluation, review and reporting

The MTP for EANET (2011-2015) will be reviewed twice by the IG during the implementation period. There will be a mid-term review in 2013 and a final review at the end of 2015. Detailed reports on the activities shall be presented for the reviews identifying the achievements, problems encountered during the implementation of the activities and necessary corrective actions to overcome the problems. Revisions to the MTP may be proposed for consideration of the IG, if necessary. A financial statement shall accompany the projects that involve substantial funding.

An evaluation format shall be developed by the Secretariat and the NC in 2011 and it shall be applied for each activity. Indicators will also be developed to track the progress of the activities and achievements of EANET. IG will monitor the progress against the objectives and expected accomplishments contained in the MTP.

Annex 1

Activities, Targets and Expected Outputs of the Medium Term Plan (MTP) for EANET (2011-2015)

i. Acid deposition monitoring

No.	Activities to be undertaken	Targets	Expected Outputs		Implementation period
(1)	Continuation of monitoring of all EANET priority chemical species, improvement in monitoring methodologies and better instrument maintenance	To achieve more complete and precise data from all sites	[1]	More comprehensive monitoring of the priority chemical species at EANET sites according to the recommended procedures	2011-2015
			[2]	Updated regional and national SOPs	2011-2014
(2)	Collaboration with participating countries to increase the number of regional monitoring sites	To increase substantially the number of regional monitoring sites for better coverage of the East Asian region	[3]	New EANET sites established by participating countries at appropriate locations	2011-2015
(3)	Continuation of activities to improve the current methods used to measure air concentrations and estimate dry deposition	To develop an accurate method to measure air concentrations and estimate deposition of priority chemical species in East Asia	[4]	Improved method to measure air concentrations and estimate dry deposition developed by the Task Force on Monitoring for Dry Deposition	2011-2015
(4)	Development/review of guidelines, technical manuals and documents, as necessary	To provide guidance on EANET monitoring including types of instrumentation	[5]	New/revised guidelines, technical manuals and documents developed by the respective task forces under SAC	2011-2015
(5)	Development/update of strategy papers for guidance on future direction of EANET monitoring, as necessary	To provide guidance on the future direction of EANET monitoring	[6]	Strategy papers prepared by the respective task forces under SAC	2011-2015
(6)	Implementation of quality assurance and quality control (QA/QC) activities	To enable all sites to adopt a standard set of quality control and quality assurance measures	[7]	Annual inter-laboratory comparison surveys to identify analytical problems	2011-2015
			[8]	A QA/QC manual for EANET monitoring	2011-2012

ii. Compilation, verification, evaluation, storage and provision of data

No.	Activities to be undertaken	Targets	Expected Outputs		Implementation period
(7)	Routine compilation, verification, evaluation, storage and provision of data and maintenance of database	To ensure that all EANET data are routinely compiled, verified and stored	[9]	A complete, updated dataset available within the next year	2011-2015
		To share the EANET dataset among participating countries	[10]	Annual publication of EANET Data Report	2011-2015
(8)	Upgrading of the data management system in NC to enable easy access by approved users	To upgrade the EANET database management system to international standard		[11] An improved data management system at NC	2011-2013

iii. Enhancement of data analysis and assessment

No.	Activities to be undertaken	Targets	Expected Outputs		Implementation period
(9)	Conduct continuous assessment of the state of acid deposition using trend analysis, indicators, numerical models etc.	To provide updated information on the state of acid deposition in East Asia to policy makers	[12]	Assessments of the EANET data by the Task Force on Research Coordination and SAC including assessment of current status, trends, and use of model outputs.	2011-2015
(10)	Evaluation of the monitoring data to assess impact on ecosystems	To identify areas which have potential for damage by acid deposition and other priority chemical species	[13]	A report identifying areas or regions in East Asia susceptible to damage by acid deposition and other priority chemical species will be prepared by the Task Force on Soil and Vegetation	2011-2014
(11)	Preparation of periodic assessment reports on the state of acid deposition in East Asia	To provide useful scientific input to policy makers, scientists and the general public	[14]	Periodic Reports on the State of Acid Deposition in East Asia	2011-2012 2014-2015

iv. Implementation of technical support and capacity building activities

No.	Activities to be undertaken	Targets	Expected Outputs		Implementation period
(12)	Promotion of capacity building for personnel of the participating countries including training courses, capacity building workshops, fellowships, etc.	To enhance capacity of personnel involved in EANET activities	[15]	Annual STM meetings to strengthen technical capacity in participating countries	2011-2015
			[16]	Technical support for EANET meetings including meetings of the task forces and expert groups	2011-2015
			[17]	Textbooks and other guidance materials	2011-2015
			[18]	Trained personnel on EANET monitoring	2011-2015
			[19]	Workshops for policy makers to enhance knowledge on EANET activities	2011-2015
(13)	Promotion of technical support to participating countries by provision of advice, technical information and equipments to countries	To assist participating countries to conduct EANET monitoring	[20]	Experts for advice and other technical support provided by NC to participating countries focusing on QA/QC	2011-2015
			[21]	Equipment and other assistance provided to participating countries especially using external funds from donor agencies	2011-2015
(14)	Provision of new and updated information and communication technologies	To provide access to the knowledge base and to enable EANET to operate in a manner that is comparable with other networks and programmes	[22]	Access to state-of-the-art information and communication technologies	2011-2015

v. Promotion of research activities related to acid deposition problems

No.	Activities to be undertaken	Targets	Expected Outputs		Implementation period
(15)	Promotion of research studies particularly on the applicability of various methodologies for measurement of air concentrations in East Asia	To encourage research studies on acid deposition including improvement of methodologies for measurement of air concentrations in East Asia	[23]	Biennial publication of EANET Science Bulletin	2012, 2014
			[24]	Research opportunities for young scientists through the EANET Research Fellowship Program	2011-2015
			[25]	An evaluation of the performance of the various methodologies for monitoring air concentrations. A report with recommendation on the most appropriate methodologies will be submitted by the Task Force on Monitoring Instrumentation to SAC	2011-2015
(16)	Promotion of studies on the effects of acid deposition and other priority chemical species on the ecosystem, human health and other social aspects from the viewpoint of the socio-economics	To determine the impacts of acid deposition and other priority chemical species in East Asia and further understand the inter-linkages between pollutants and effects	[26]	Scientific papers and reports on impacts of acid deposition and other priority chemical species on the ecosystem, human health, and other social aspects from the viewpoint of the socio-economics in East Asia, including results from simulation models. A recommendation on future direction of EANET monitoring will be submitted by SAC to IG	2011-2015
(17)	Promotion of studies on models to assess and analyze the trend of national and regional acid deposition and other related air pollutants in East Asia by evaluation of existing models and providing a suitable one, and promotion of atmospheric simulation model through workshops, training courses etc.	To identify high concentration areas and enhance the capability of usage of modeling for interested countries	[27]	Mapping of concentrations and deposition of priority chemical species, and elucidation of transport, chemical transformation, and deposition processes in East Asia. Trained and knowledgeable scientists on atmospheric chemical transport modeling in interested EANET countries.	2011-2015

(18)	Promotion of emission inventories through workshops, training courses, pilot studies, preparation of reference materials etc.	To provide the harmonized methodology on the development of emission inventory and strengthen capacity of interested countries in emission inventories	[28]	Reference document(s) for emission inventory	2012-2013
			[29]	Trained and knowledgeable personnel on emission inventories in EANET countries	2012-2013

vi. Promotion of public awareness

No.	Activities to be undertaken	Targets	Expected Outputs		Implementation period
(19)	Promotion of public awareness on acid deposition and other priority chemical species, including their effects, control and mitigation measures, and activities of EANET, to various levels of the community which include policy makers, scientists, youth, school children and others. Promotion of public awareness to multi-layer stakeholders through the joint project for supporting the environmental education activities on acid deposition.	To enhance understanding and knowledge on air pollution to achieve better air quality in East Asia	[30]	Public awareness activities including workshops for participating countries and to multi-layer stakeholders.	2011-2015
			[31]	Regular updating of the EANET webpage	2011-2015
			[32]	Public awareness and environmental education materials disseminated through publications and the EANET webpage	2011-2015
			[33]	Periodic issues of the EANET Newsletter	2011-2015
			[34]	Report for Policy Makers	2012-2013
			[35]	Regional and national workshops held in the participating countries to promote good practices and best available technologies for prevention and control of air pollution and other workshops for the youth and school children	2011-2015
			[36]	A special High Level Segment at an EANET session to disseminate information to policy makers	2015
(20)	Sharing a common understanding on atmospheric environment issues among the scientific community and policy makers by exchanging information through a network of experts	To support formation of an epistemic community in East Asia	[37]	Creation of a network of experts concerned with atmospheric environment issues within East Asia	2011-2015

vii. Further development of EANET

No.	Activities to be undertaken	Targets	Expected Outputs		Implementation period
(21)	Consideration on the extension of the scope of the instrument and institutional arrangement of EANET taking into account recent developments and future requirements, including a possibility of establishing additional bodies, e.g. network centers if necessary	To improve the existing activities and structure of EANET to enable future development and continuation of benefits to participating countries.	[38]	Report with recommendations on extension of the scope of the instrument and institutional arrangement of EANET to be submitted to IG	2011-2015
(22)	Development of the next Medium Term Plan for EANET.	To plan a strategy for future development of EANET	[39]	Medium Term Plan for EANET (2016-2020)	2014-2015

Annex 2

Timetable for the Development of the Medium Term Plan (MTP) for EANET (2011-2015)

Before 2011

Year	Month	Event/Activity	Deliverables
2009	July	WGFD8	Review of first draft of the Strategy by WGFD
2009	October	SAC9	Discussion on revised first draft (MTP) from scientific and technical viewpoints
2009	November	Eleventh Session of the Intergovernmental Meeting (IG11)	Review of second draft of the MTP
2010	April	Ninth Session of the Working Group on Future Development (WGFD9)	Review of third draft of the MTP by WGFD
2010	October	Tenth Session of the Scientific Advisory Committee (SAC10)	Discussion on the fourth draft of the MTP from scientific and technical viewpoints
2010	November	Twelfth Session of the Intergovernmental Meeting (IG12)	Adoption of the final draft of the MTP by IG

Implementation Plan for the Medium Term Plan (MTP) for EANET (2011-2015)

Year	Month	Event/Activity	Deliverables
2011	January	Distribution of the MTP document to WGFD, NFPs, SAC members etc.	Start implementation of the activities according to the plan
2011	July/August	Tenth Session of the Working Group on Future Development of EANET (WGFD10)	Discussion on the activities on future development of EANET and others as decided by the IG
2011	October	Eleventh Session of the Scientific Advisory Committee (SAC11)	Discussion on the progress of implementation of the scientific activities
2011	November	Thirteenth Session of the Intergovernmental Meeting (IG13)	Updates on the activities will be given in the Report on the Progress of EANET by the Secretariat and NC for adoption
2012	July/August	Eleventh Session of the Working Group on Future Development of EANET (WGFD11)	Discussion on future activities of EANET and other related documents for adoption by the IG
2012	October	Twelfth Session of the Scientific Advisory Committee (SAC12)	Discussion on the progress of implementation of the scientific activities
2012	November	Fourteenth Session of the Intergovernmental Meeting (IG14)	Updates on the activities will be given in the Report on the Progress of EANET by the Secretariat and NC

Year	Month	Event/Activity	Deliverables
2013	July/August	Twelfth Session of Working Group on Future Development of EANET (WGFD12)	Review of first draft of the Mid-Term Report on Implementation of the MTP and discussion of the reports to be approved and endorsed by the IG
2013	October	Thirteenth Session of the Scientific Advisory Committee (SAC13)	Discussion on the draft Mid-Term Report on Implementation of the MTP
2013	November	Fifteenth Session of the Intergovernmental Meeting (IG15)	Adoption of revised draft of the Mid-Term Report of Implementation of the MTP
2014	July/August	Thirteenth Session of the Working Group on Future Development of EANET (WGFD13)	Discussion on the future activities of EANET and other reports for adoption of the IG10
2014	October	Fourteenth Session of the Scientific Advisory Committee (SAC14)	Discussion on the progress of implementation of the scientific activities
2014	November	Sixteenth Session of the Intergovernmental Meeting (IG16)	Updates on the activities will be given in the Report on the Progress of EANET by the Secretariat and NC
2015	July/August	Fourteenth Session of the Working Group on Future Development of EANET (WGFD14)	Review of first draft of the Report on Implementation of the MTP and other documents for future development of EANET
2015	October	Fifteenth Session of the Scientific Advisory Committee (SAC15)	Discussion on the draft of the Report on Implementation of the MTP from scientific and technical viewpoints
2015	November	Seventeenth Session of the Intergovernmental Meeting (IG17)	Review of the draft Report on Implementation of the MTP for possible adoption

Annex 3 (Reference)**Estimated Workload and Cost Necessary for the Secretariat**

No.	Activities	Expected Output	Human resources (Man-months)					Cost (in 1,000 USD)				
			2011	2012	2013	2014	2015	2011	2012	2013	2014	2015
1	Conduct of EANET meetings											
	Session of the Intergovernmental Meeting	Report of the Sessions	3	3	3	3	3	55	55	55	56	56
	Session of the Working Group on Future Development	Report of the Sessions	3	3	3	3	3	51	52	50	51	51
	Session of the Scientific Advisory Committee	Report of the Sessions	3	3	3	3	3	56	57	55	56	56
2	Conduct of Workshops											
	Youth activities and participation		0.5			0.5		5			5	
	National Workshops on Public Awareness	4 National workshops	2			2		8			8	
	Regional Workshop on Acid Deposition and Air Pollution	1 Regional workshops					2					18
3	Promotion of Public Awareness											
	Development of Newsletter and other awareness materials	10 EANET Newsletters	1	1	1	1	1	2	2	2	2	2
	High Level Segment	Enhancement of awareness of policy maker					1					20
	Development of Report for Policy Makers	1 Report for Policy Makers			2					18		
	Promotion of public awareness to multi-layer stakeholders through the joint project for supporting the environmental education activities on acid deposition.			3					30			

4	Capacity Building										
	Capacity Building Activities for participating countries	capacity building			2				25		
	Information and communication technologies on EANET		1	1		18		17.1			
5	Participation to Meetings										
	Attendance of EANET staff to meetings	Meetings attended	2	2	2	2	18.7	19.5	19.5	19	19
6	Exchange Program										
	Fellowship Programme at NC*					20	20	20	20	20	
	Exchange Program for Secretariat	Enhance technical knowledge of the Secretariat staff	0.5			3					
7	Personnel										
	Perform Secretariat functions		18	19	19	17.5	19	165.9	165.9	165.9	165.9
8	Others										
	Office supplies						1.536	1.9	1.6	1.9	2
	Communication with part. countries, etc.		1	1	1	1	1	8	8.57	8	8
	Rental of Office (per contract)						30	30	30	30	30
	Publication of Proceedings	Summaries and Proceedings of the Sessions	1	1	1	1	1	8.7	9	8.7	9
	<i>Sub Total</i>						450.836	450.870	450.800	456.8	456.9
	<i>Overhead (5%)</i>						22.542	22.544	22.540	22.84	22.845
	<i>Total</i>		<i>36</i>	<i>36</i>	<i>36</i>	<i>36</i>	<i>36</i>	<i>473.378</i>	<i>473.414</i>	<i>473.340</i>	<i>479.64</i>
											<i>479.745</i>

*The cost for fellowship programme will be sent to NC. Therefore, it is included in both tables.

Estimated Workload and Cost Necessary for the Network Center

No.	Activities	Expected Outputs	Workload (Man-months)					Cost (in 1,000 USD)					Core/ Additional
			2011	2012	2013	2014	2015	2011	2012	2013	2014	2015	
i) Acid deposition monitoring													
1	Continuation of monitoring of all EANET priority chemical species, improvement in monitoring methodologies and better instrument maintenance	[1] More comprehensive monitoring of the priority chemical species at EANET sites according to the recommended procedures	1	2	2	2	2	6	12	12	12	12	Core
		[2] Updated regional and national SOPs	1	1	1	1		6	6	6	6		Core
2	Collaboration with participating countries to increase the number of regional monitoring sites	[3] New EANET sites established by participating countries at appropriate locations	1	1	1	1	1	6	6	6	6	6	Core
3	Continuation of activities to improve the current methods used to measure air concentrations and estimate dry deposition	[4] Improved method to measure air concentrations and estimate dry deposition developed by the Task Force on Monitoring for Dry Deposition	1	2	2	2	2	6	12	12	12	12	Core
4	Development/review of guidelines, technical manuals and documents, as necessary	[5] New/revised guidelines, technical manuals and documents developed by the respective task forces under SAC	2	2	1	1	2	12	32	6	6	12	Core

No.	Activities	Expected Outputs	Workload (Man-months)					Cost (in 1,000 USD)					Core/ Additional
			2011	2012	2013	2014	2015	2011	2012	2013	2014	2015	
5	Development/update of strategy papers for guidance on future direction of EANET monitoring, as necessary	[6] Strategy papers prepared by the respective task forces under SAC		1	2	2	2		6	12	12	12	Core
6	Implementation of quality assurance and quality control (QA/QC) activities	[7] Annual inter-laboratory comparison surveys to identify analytical problems	4	4	4	4	4	42	44	44	44	44	Core
		[8] A QA/QC manual for EANET monitoring	2	2				10	12				Core
ii) Compilation, verification, evaluation, storage and provision of data													
7	Routine compilation, verification, evaluation, storage and provision of data and maintenance of the database	[9] A complete, updated dataset available within the next year	5	5	5	5	5	30	30	30	30	30	Core
		[10] Annual publication of EANET Data Report	1	1	1	1	1	12	12	12	12	12	Core
8	Upgrading of the data management system in NC to enable easy access by approved users and its regular maintenance	[11] An improved data management system at NC	1	1	1			20	20	20			Core
iii) Enhancement of data analysis and assessment													
9	Conduct continuous assessment of the state of acid deposition using trend analysis, indicators, numerical models etc.	[12] Assessments of the EANET data by the Task Force on Research Coordination and SAC including assessment of current status, trends, and use of model outputs.	2	2	2	2	2	11	12	12	12	12	Core

No.	Activities	Expected Outputs	Workload (Man-months)					Cost (in 1,000 USD)					Core/ Additional
			2011	2012	2013	2014	2015	2011	2012	2013	2014	2015	
10	Evaluation of the monitoring data to assess impact on ecosystems	[13] A report identifying areas or regions in East Asia susceptible to damage by acid deposition and other priority chemical species will be prepared by the Task Force on Soil and Vegetation		1	1	1			6	6	6		Core
11	Preparation of periodic assessment reports on the state of acid deposition in East Asia	[14] Periodic Reports on the State of Acid Deposition in East Asia	5	2		2	4	77	30		36	60	Core

iv) Implementation of technical support and capacity building activities

12	Promotion of capacity building for personnel of the participating countries including training courses, capacity building workshops, fellowships, etc.	[15] Annual STM meeting to strengthen technical capacity in participating countries	4	4	4	4	4	70	70	70	70	70	Core
		[16] Technical support for EANET meetings including the task forces and expert groups	8	9	9	9	9	74	101	101	101	101	Core
		[17] Textbooks and other guidance materials	1	1	1	1	1	15	6	10	6	10	Additional
		[18] Trained personnel on EANET monitoring	8	8	9	9	8	108	79	79	79	79	Additional
		[19] Workshops for policy makers to enhance knowledge on EANET activities	1	1	1	1	1	6	6	6	6	6	Additional

No.	Activities	Expected Outputs	Workload (Man-months)					Cost (in 1,000 USD)					Core/ Additional
			2011	2012	2013	2014	2015	2011	2012	2013	2014	2015	
13	Promotion of technical support to participating countries by provision of advice, technical information and equipments to countries	[20] Experts for advice and other technical support provided by NC to participating countries focusing on QA/QC	5	5	5	5	5	88	65	65	65	65	Additional
		[21] Equipment and other assistance provided to participating countries especially using external funds from donor agencies	2	2	2	2	2	37	37	37	37	37	Additional
14	Provision of new and updated information and communication technologies	[22] Access to state-of-the-art information and communications technologies											Secretariat budget only
v) Promotion of research activities related to acid deposition problems													
15	Promotion of research studies particularly on the applicability of various methodologies for measurement of air concentrations in East Asia	[23] Biennial publication of EANET Science Bulletin		1		1		11		11			Additional
		[24] Research opportunities for young scientists through the EANET Research Fellowship Program	2	2	2	2	2	30	30	30	30	30	Additional
		[25] An evaluation of the performance of the various methodologies for monitoring air concentrations. A report with recommendation on the most appropriate methodologies will be submitted by the Task Force on Monitoring Instrumentation to SAC	2	2	2	2	2	96	80	80	80	80	Additional

No.	Activities	Expected Outputs	Workload (Man-months)					Cost (in 1,000 USD)					Core/ Additional
			2011	2012	2013	2014	2015	2011	2012	2013	2014	2015	
16	Promotion of studies on the effects of acid deposition and other priority chemical species on the ecosystem, human health and socio economics	[26] Scientific papers and reports on impacts of acid deposition and other priority chemical species on the ecosystem, human health, and other social aspects from the viewpoint of the socio-economics in East Asia, including results from simulation models. A recommendation on future direction of EANET monitoring will be submitted by SAC to IG	2	2	2	2	2	86	86	86	86	86	Additional
17	Promotion of studies on models to assess and analyze the trend of national and regional acid deposition and other related air pollutants in East Asia by evaluation of existing models and providing a suitable one, and promotion of atmospheric simulation model through workshops, training courses, etc.	[27] Mapping of concentrations and deposition of priority chemical species, and elucidation of transport, chemical transformation, and deposition processes in East Asia. Trained and knowledgeable scientists on atmospheric chemical transport modeling in interested EANET countries.	12	12	12	12	12	98	98	98	98	98	Additional
18	Promotion of emission inventories through workshops, training courses, pilot studies, preparation of reference materials etc.	[28] Reference document(s) for emission inventory		2	3				12	30			Additional
		[29] Trained and knowledgeable personnel on emission inventories in EANET countries		1	2				6	42			Additional

No.	Activities	Expected Outputs	Workload (Man-months)					Cost (in 1,000 USD)					Core/ Additional
			2011	2012	2013	2014	2015	2011	2012	2013	2014	2015	
vi) Promotion of public awareness													
19	<p>Promotion of public awareness on acid deposition and other priority chemical species, including their effects, control and mitigation measures, and activities of EANET, to various levels of the community which include policy makers, scientists, youth, school children and others.</p> <p>Promotion of public awareness to multi-layer stakeholders through the joint project for supporting the environmental education activities on acid deposition.</p>	[30] Public awareness activities including an annual workshop for participating countries		3		3			40		40		Additional
		[31] Regular updating of the EANET webpage	1	1	1	1	1	9	10	10	10	10	Core
		[32] Public awareness and environmental education materials disseminated through publications and the EANET webpage	2	2	2	2	2	40	40	40	40	40	Additional
		[33] Periodic issues of the EANET Newsletter	1	1	1	1	1	5	5	5	5	5	Additional
		[34] Report for Policy Makers		2	2				12	12			Additional
		[35] Regional and national workshops held in the participating countries to promote good practices and best available technologies for prevention and control of air pollution and other workshops for the youth and school children	1			1	1	5			18	5	Additional
		[36] A special High Level Segment at an EANET session to disseminate information to policy makers					1					6	Additional

No.	Activities	Expected Outputs	Workload (Man-months)					Cost (in 1,000 USD)					Core/ Additional
			2011	2012	2013	2014	2015	2011	2012	2013	2014	2015	
20	Sharing a common understanding on atmospheric environment issues among the scientific community and policy makers by exchanging information through a network of experts	[37] Creation of a network of experts concerned with atmospheric environment issues within East Asia	1	1	1	1	1	6	6	6	6	6	Additional
vii) Further development of EANET													
21	Consideration on the extension of the scope of the instrument and institutional arrangement of EANET taking into account recent developments and future requirements, including a possibility of establishing additional bodies, if necessary	[38] Report with recommendations on extension of the scope of the instrument and institutional arrangement of EANET to be submitted to IG	1	1	1	1	1	5	6	6	6	6	Core
22	Development of the next Medium Term Plan for EANET	[39] Medium Term Plan for EANET (2016-2020)				1	1				6	6	Core
viii) Administrative works			18	18	18	18	18	117	108	108	108	108	Additional

Workload and Cost	Workload (Man-months)					Cost (in 1,000 USD)					
	Year	2011	2012	2013	2014	2015	2011	2012	2013	2014	2015
<i>Total (Core +Additional)</i>		<i>98.0</i>	<i>108.0</i>	<i>103.0</i>	<i>103.0</i>	<i>100.0</i>	<i>1,133.0</i>	<i>1,154.0</i>	<i>1,099.0</i>	<i>1,102.0</i>	<i>1,066.0</i>
<i>Core</i>		<i>40.0</i>	<i>42.0</i>	<i>38.0</i>	<i>40.0</i>	<i>41.0</i>	<i>396.0</i>	<i>427.0</i>	<i>365.0</i>	<i>387.0</i>	<i>405.0</i>
<i>Additional</i>		<i>58.0</i>	<i>66.0</i>	<i>65.0</i>	<i>63.0</i>	<i>59.0</i>	<i>737.0</i>	<i>727.0</i>	<i>734.0</i>	<i>715.0</i>	<i>661.0</i>