

The Fifteenth Session of the Scientific Advisory Committee
on the Acid Deposition Monitoring Network in East Asia
29 September – 1 October 2015, Da Nang, Vietnam

Medium Term Plan for the EANET (2016-2020) (Draft)

I. Introduction

1. Based on the discussion at the Fifth Session of the Intergovernmental Meeting (IG5) on the EANET in 2003, it was decided to develop Medium Term Plans for the EANET in order to plan activities and budget in advance at the Sixth Session of the Intergovernmental Meeting (IG6) on the EANET in 2004. In accordance with the decision at the IG6 in 2004, the EANET developed the first 5-year medium term plan “Strategy on the EANET Development (2006-2010)” in 2006 after three years of discussion. It includes 30 activities including modeling and emission inventories with the Targets, Expected results and outputs, and Implementation period. Workload and Cost for Implementing the Strategy on the EANET Development (2006-2010) were also included as a reference document. And the activities during 2006-2010 were reviewed and evaluated twice and final report was endorsed at the Thirteenth Session of the Intergovernmental Meeting (IG13) on the EANET in 2011.
2. The second 5-year medium term plan, the Medium Term Plan (MTP) for the EANET (2011-2015) was discussed during 2009-2010 based on the review on the Implementation of the Strategy on the EANET Development (2006-2010). It was adopted at the Twelfth Session of the Intergovernmental Meeting (IG12) on the EANET in 2010. The 22 activities included in the MTP (2011-2015) have being implemented since January 2011 with Targets, Expected results and outputs.

II. MTP for the EANET (2016-2020)

3. The MTP for the EANET (2016-2020) is being developed as the third medium term plan for the EANET based on the results of the review of the activities during the present Medium Term Plan (2011-2015) and the outcomes of the Feasibility Study on the Expansion of the Scope of the EANET conducted by the NC.
4. The draft MTP for the EANET (2016-2020), presented in the attachment, was developed based on the discussion at the Fourteenth Session of the Scientific Advisory Committee (SAC14), the Thirteenth Session of the Working Group on Future Development (WGFD13) of the EANET, the Sixteenth Session of the Intergovernmental Meeting (IG16) on the EANET and WGFD14.

III. Action Required

5. The SAC15 is invited to discuss, make comments and provide guidance from scientific and technical viewpoints, for consideration and approval at the IG17 in November 2015 so that the activities in the MTP (2016-2020) can be implemented from 1 January 2016.
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Medium Term Plan for the EANET (2016-2020) (Draft)

Executive Summary:

The Acid Deposition Monitoring Network in East Asia (EANET) was established in January 2001 through a decision (Decision 2/IG2) of the Second Session of the Intergovernmental Meeting (IG2) on the EANET after a consultative and stepwise process, which began in 1998. EANET aims to create a common understanding on the state of acid deposition problems, to provide useful inputs to policy makers at various levels, and to contribute to cooperation on the issues related to acid deposition among the participating countries. The objectives the EANET are: i) to create a common understanding of the state of acid deposition problems in East Asia; ii) to provide useful inputs for decision-making at local, national and regional levels aimed at preventing or reducing adverse impacts on the environment caused by acid deposition; and iii) to contribute to cooperation on the issues related to acid deposition among the participating countries.

During 2016 to 2020 period, EANET aims to support participating countries in achieving the objectives through: i) monitoring of acid deposition; ii) strengthening current monitoring through research and capacity building, south-south collaboration, cooperative efforts among participating countries and with outside organizations and increasing number of monitoring sites; iii) promoting information exchange on clean air technologies and emission inventories and research activities; iv) developing policy relevant reports and publications based on the monitoring data; v) promoting public awareness through knowledge dissemination and outreach; vi) providing a forum for cooperation on the issues related to acid deposition among the participating countries.

ACRONYMS AND ABBREVIATIONS

ACAP	Asia Center for Air Pollution Research
AD	Acid deposition
ADB	Asian Development Bank
AP	Air pollution
CAT	Clean air technology
CAA	Clean Air Asia
CLRTAP	Convention on Long-range Transboundary Air Pollution
EANET	Acid Deposition Monitoring Network in East Asia
EG	Expert Group
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit
IG	Intergovernmental Meeting (on the EANET)
IGES	Institute of Global Environmental Strategies
JA	Joint Announcement on the Implementation of the Acid Deposition Monitoring Network in East Asia (EANET)
JICA	Japan International Cooperation Agency
KOICA	Korean International Cooperation Agency
MTP	Medium Term Plan
NC	Network Center for the EANET
PC(s)	Participating country (countries)
PM	Particulate matter
QA/QC	Quality assurance and quality control
RPM	Report for Policy Makers
SAC	Scientific Advisory Committee
SIDA	Swedish International Development Agency
STM	Senior Technical Managers' Meeting
TD	Tentative Design of the Acid Deposition Monitoring Network in East Asia (EANET)
TF	Task Force
TFRC	Task Force on Research Coordination
UN	United Nations
UNECE	United Nations Economic Commission for Europe
UNEA	United Nations Environment Assembly
UNEP	United Nations Environment Programme
WGFD	Working Group on Future Development of the EANET

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1 Overview

Duration and Budget Summary

Table 1: Duration and cost

Start date: (1 January 2016)	Planned completion date: End of December 2020	Total duration in months: 5 years (60 months)
Mid-term Review date: November 2018	Terminal Evaluation date: November 2021	

Budget Summary¹ of the MTP for the EANET (2016-2020)

Table 2: Budget Plan in 2016-2020

TYPE OF FUNDING	SOURCE OF FUNDING	2016*	2017*	2018*	2019*	2020*	US\$ Total
CASH BUDGET	Secretariat budget from the participating countries	615,607	657,823	667,979	619,817	661,062	3,222,288
	NC Core budget from the participating countries	423,000	408,000	391,000	401,000	447,000	2,070,000
	NC Additional budget from voluntary financial contribution, external funds, etc.	496,000	518,000	563,000	576,000	573,000	2,726,000
	Office rental of NC	150,000	150,000	150,000	150,000	150,000	750,000
	NC Total	1,069,000	1,076,000	1,104,000	1,127,000	1,170,000	5,546,000
	TOTAL CASH BUDGET	1,684,607	1,733,823	1,771,979	1,746,817	1,831,062	8,768,288
Other CONTRIBUTION	In-kind support to the Secretariat to dispatch senior staff	---	---	---	---	---	---
	In-kind support to the NC to dispatch technical staff	---	---	---	---	---	---
	Other in-kind supports from the participating countries	---	---	---	---	---	---
	TOTAL CONTRIBUTION						
	Personnel	---	---	---	---	---	---
	Others	---	---	---	---	---	---

Note: The estimated budget described in the MTP for the EANET (2016-2020) is 5 years' necessary cost in order to implement the activities in the MTP. The EANET budget in each year will be decided as the Work Program and Budget of the EANET at the Session of the IG in the previous year.

¹-A detailed budget shall be provided as Annex 2.

2 Justification

2-1. Introduction

In responding to increased threat of acid deposition caused by air pollution, the Acid Deposition Monitoring Network in East Asia (EANET) was established through a stepwise approach:

- 1993-1997: Experts level consultations to conduct technical and scientific review of the acid deposition issue.
- March 1998: The First Session of the Intergovernmental Meeting (IG1) on the EANET was held in Yokohama, Japan, to establish the EANET on a preparatory basis. The IG1 developed the Design of the EANET (Tentative Version) (EANET/IG 1/5 rev.) and decided to start the Preparatory-phase activities from April 1998.
- 1998-2000: Preparatory-phase activities were carried out including establishment of monitoring stations and compilation of the data.

Since 2001, EANET activities are being implemented on a regular basis based on the Joint Announcement on the Implementation of the Acid Deposition Monitoring Network in East Asia (EANET) (EANET/IG 2/5/2 rev.) issued by the IG2 and the Tentative Design of the Acid Deposition Monitoring Network in East Asia (EANET) (EANET/IG 2/5/3) referred to in the Joint Announcement. Implementation of the EANET was further enhanced by the Instrument for Strengthening the Acid Deposition Monitoring Network in East Asia adopted by the Twelfth Session of the Intergovernmental Meeting (IG12) on the EANET in 2010 and signed by all the participating countries of the EANET.

The objectives the EANET are:

1. To create a common understanding of the state of acid deposition problems in East Asia;
2. To provide useful inputs for decision-making at local, national and regional levels aimed at preventing or reducing adverse impacts on the environment caused by acid deposition; and
3. To contribute to cooperation on the issues related to acid deposition among the participating countries

2-2. Development of the Medium Term Plan for the EANET

In order to further promote transparent and efficient activities and to achieve the objectives, the EANET develops 5-year Medium Term Plans (MTP) and annual work programme. The first MTP entitled “Strategy on the EANET Development (2006-2010)” was adopted by the Eighth Session of the Intergovernmental Meeting (IG8) on the EANET. Evaluation of the first MTP indicated that more than 91% of the expected outputs had been achieved. The second MTP was adopted by the IG12 for 2011-2015 period.

During the period of the second MTP for the EANET (2011-2015), the activities during January 2011 to June 2013 were reviewed in 2013. With regard to the evaluation of achievement of 10 objectives of the second MTP, most of them were evaluated as “Good”, however since some of them were evaluated as “Moderate” or “Need more attention”, there is still room for further improvement and development of the EANET.

(1) Evaluated as “Good”

- Improvement of current acid deposition monitoring in terms of data quality, completeness of monitoring items, distribution of monitoring sites and data management
- Assessment of the state of acid deposition including other relevant air pollutants in East Asia
- Increasing transparency of the EANET
- Enhancing coordination in the dissemination of knowledge and information, training and public awareness activities
- Strengthening technology support and capacity in line with country needs
- Enhancing of cooperative efforts among participating countries and with outside organizations

(2) Evaluated as “Moderate”

- Development of scientific researches on the atmospheric environment in East Asia
- Providing policy advice and information based upon sound science and assessment

(3) Evaluated as “Need more attention”

- Common understanding on environmental, social and economic issues of atmospheric pollution through establishment of an epistemic community and promotion of public awareness
- Strengthening policy relevance of the EANET activities

2-3. Future development of the EANET

In accordance with the discussion at the Fifteenth Session of the Intergovernmental Meeting (IG15) on the EANET in December 2013, the Network Center (NC) developed Prefeasibility and Feasibility Studies on the Expansion of the Scope of the EANET in 2014 and 2015 respectively for the consideration on future development of the EANET at the Sessions of the EANET. The “Report of the Prefeasibility Study on the Expansion of the Scope of the EANET (EANET/IG 16/8/2)/(EANET/WGFD 13/7)” was discussed at the Fourteenth Session of the Scientific Advisory Committee (SAC14), the Thirteenth Session of the Working Group on Future Development of the EANET (WGFD13) and the Sixteenth Session of the Intergovernmental Meeting (IG16).

Drawing upon the “Report of the Prefeasibility Study on the Expansion of the Scope of the EANET” the WGFD14 of the EANET, held in June 2015, agreed that the following extended activities will be incorporated into the MTP (2016-2020) in addition to the ongoing activities for the consideration of the Seventeenth Session of the Intergovernmental Meeting (IG17) on the EANET in November 2015:

Strengthening current monitoring activities

- 1) Promotion of the monitoring of ozone and PM_{2.5} including research cooperation and communication on the results as appropriate;
- 2) Capacity building activities especially for ozone and PM_{2.5} monitoring;
- 3) Increasing number of EANET monitoring sites; and
- 4) Strengthening understanding and capacity for monitoring of meteorological parameters and reporting on these as appropriate

Promotion of activities other than monitoring

- 1) Promotion of information exchange
 - Information exchange on clean air technologies and regional impact assessment through workshops, seminars, etc.
- 2) Promotion of research and technical cooperation on emission inventory to support the capacity building
 - Research on technical guidelines on emission inventory to support the capacity building; and
 - Capacity building for emission inventories.
- 3) Promotion of research activities
 - Research activities on regional impact assessment to plants and ecosystems; and
 - Research activities on measurement methodology for elemental carbon (EC) and organic carbon (OC).

The WGFD14 also suggested that the MTP should have flexibility to have mid-term review and revision if deemed necessary.

At the global level, inaugural UN Environment Assembly (UNEA) held in June last year, air pollution was one of the highlight and a resolution on air pollution was adopted. The resolution appreciated EANET's contribution on sharing information and encouraged governments to set standards and policies across multiple sectors to reduce emissions and manage the negative impacts of air pollution on health, the economy, and overall sustainable development.

In line with the UNEA Resolution, UNEP launched a regional level knowledge sharing partnership in June 2014. The Asia Pacific Clean Air Partnership (APCAP) will be the "glue" that brings together the many existing initiatives to promote scaled up action to combat air pollution. The APCAP also provides a platform for further dissemination of the work undertaken by EANET and a mechanism to provide countries with complementary policy and other support on air pollution elements that are outside of the scope of the EANET.

3. Objectives, Activities and Budget

3-1. Objectives

The EANET aims to create a common understanding on the state of acid deposition problems, to provide useful inputs to policy makers at various levels, and to contribute to cooperation on the issues related to acid deposition among the participating countries. The objectives of the EANET will be achieved through 7 specific objectives of the MTP during the 2016 – 2020:

Objectives of the EANET	Objectives of the MTP for the EANET (2016-2020)
To create a common understanding of the state of acid deposition problems in East Asia	<p>Objective 1: Monitoring of Acid Deposition- Conduct monitoring of acid deposition including related chemical substances; review for data quality and completeness; and data management.</p> <p>Objective 2: Strengthening Current Monitoring- Strengthening current monitoring activities through research, capacity building and increasing number of monitoring sites to generate additional data</p>
To provide useful inputs for decision-making at the local, national, and regional levels aimed at preventing, or reducing adverse impacts on the environment caused by acid deposition	<p>Objective 3: Promotion of Activities Other than Monitoring- promotion of information exchange on clean air technologies, emission inventories, and research activities.</p> <p>Objective 4: Providing Policy Relevant Information- Develop policy relevant reports and publications based on analysis of the monitoring data collected.</p> <p>Objective 5: Promotion of Public Awareness- Promote public awareness through knowledge dissemination and outreach based on the monitoring data collected and analyzed and the policy relevant reports developed.</p>
To contribute to cooperation on the issues related to acid deposition among the participating countries	<p>Objective 6: Enhancement of Intergovernmental Cooperation- Provide a forum for cooperation on the issues related acid deposition among the participating countries and support future development of the EANET.</p> <p>Objective 7: Enhancement of cooperation and Collaboration- Enhancement of south-south collaboration and cooperative efforts among participating countries and with outside organizations on the EANET objectives.</p>

3.2. Activities

In order to achieve the objectives of the MTP for the EANET (2016-2020), activities are identified for implementation in the 5-year period, 2016-2020 by the Secretariat, the NC, the SAC, other relevant bodies of the EANET and all participating countries under each of the objectives. While the Secretariat and the NC will work together in achieving all the 7 objectives, the NC will take the lead in the implementation of the objectives 1 to 3, and the Secretariat will take the lead in implementing the objectives 6 and 7. Both the

Secretariat and the NC will take lead role in implementing the objectives 4 and 5. Expected outputs, measurable indicators, and implementation period for each of the activities of the MTP are presented in the Annex 1.

Objective 1: Monitoring of Acid Deposition- Conduct acid deposition monitoring including related chemical substances; review for data quality and completeness; and data management.

- (1) Continuation of monitoring of all EANET priority chemical species, improvement in monitoring methodologies and better instrument maintenance;
- (2) Continuation of activities to improve the current methods used to measure air concentrations and estimate dry deposition;
- (3) Development/revision of guidelines, technical manuals and documents, as necessary;
- (4) Development/update of strategy papers for guidance on future direction of EANET monitoring, as necessary;
- (5) Implementation of quality assurance and quality control (QA/QC) activities;
- (6) Routine compilation, verification, evaluation, storage and provision of data and maintenance of the database;
- (7) Regular updating of the EANET website;
- (8) Upgrading of the data management system in the NC to enable easy access by approved users;
- (9) Promotion of capacity building for personnel of the participating countries including training courses, capacity building workshops, etc.; and
- (10) Promotion of technical support to participating countries by provision of advice, technical information and equipment to countries.

Objective 2: Strengthening Current Monitoring- Strengthening current monitoring activities through research, capacity building and increasing number of monitoring sites to generate additional data.

- (11) Promotion of the monitoring of ozone and PM_{2.5} including research cooperation and communication on the results as appropriate;
- (12) Capacity building activities especially for ozone and PM_{2.5} monitoring;
- (13) Increasing number of EANET monitoring sites to generate additional data; and
- (14) Strengthening understanding and capacity for monitoring of meteorological parameters and reporting on these as appropriate.

Objective 3: Promotion of Activities Other than Monitoring- promotion of information exchange on clean air technologies, emission inventories, and research activities.

- (15) Promotion of information exchange
 - Information exchange on clean air technologies and regional impact assessment through
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workshops, seminars, etc.

- (16) Promotion of research and technical cooperation on emission inventory to support the capacity building
 - Research on technical guidelines on emission inventory to support the capacity building; and
 - Capacity building for emission inventories.
- (17) Promotion of research activities
 - Research activities on regional impact assessment to plants and ecosystems; and
 - Research activities on measurement methodology for elemental carbon (EC) and organic carbon (OC).
- (18) Promotion of studies on the applicable measurement methodology for concentration of air pollutants (other than EC and OC) in East Asia.
- (19) Fellowship research program
- (20) Promotion of studies on the effects of acid deposition and other priority chemical species on plants, ecosystems, human health and other social aspects, including the viewpoint of the socio-economics;
- (21) Promotion of studies on models to assess the trend of national and regional acid deposition and other related air pollutants in East Asia, and promotion of atmospheric simulation models through workshops, training courses, etc., and
- (22) Publication of the EANET science bulletin.

Objective 4: Providing Policy Relevant Information- Develop policy relevant reports and publications based on analysis of the monitoring data collected.

- (23) Conduct periodic assessment of the state of acid deposition using trend analysis, numerical models; and
- (24) Preparation of periodic assessment reports on the state of acid deposition in East Asia including impact on plants and ecosystems.

Objective 5: Promotion of Public awareness- Promote public awareness through knowledge dissemination and outreach based on the monitoring data collected and analyzed and the policy relevant reports developed.

- (25) Promotion of public awareness on acid deposition and other priority chemical species and, other activities of the EANET, to stakeholders.

Objective 6: Enhancement of Intergovernmental Cooperation- Provide a forum for cooperation on the issues related acid deposition among the participating countries and support future development of the EANET.

- (26) Arrangements for the EANET Sessions agreed to by the IG;
 - (27) Consideration on future development of the EANET;
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- (28) Review of the arrangements of the EANET Secretariat and the NC(s);
- (29) Revision of Guidelines on Administrative and Financial Management for the Secretariat and NC taking account of the new decisions of the IG;
- (30) Review of the MTP (2011-2015), Revision of the MTP (2016-2020) if necessary, and development of the next MTP for the EANET (2021-2025); and
- (31) Linking work of EANET to broader policy audiences through Asia Pacific Clean Air Partnership (APCAP) and processes like United Nations Environment Assembly (UNEA).

Objective 7: Enhancement of Cooperation and Collaboration-Enhancement of south-south collaboration and cooperative efforts among participating countries, other relevant networks and with outside organizations on the EANET objectives.

- (32) Promotion of communication, collaboration and cooperation with other relevant international organizations, initiatives and programs;
- (33) Sharing a common understanding on atmospheric environmental issues among the scientific community such as the Asia Pacific Clean Air Partnership Science Panel; and
- (34) Providing information and policy recommendations to policy makers based on sound science and assessment.

3.3. Budget

The estimated budget for the proposed set of activities over the period of 5 years of the MTP (2016-2020) would amount to USD 8.02 million, out of which proposed spending on the Secretariat activities will be USD 3.22 million and Network Center activities will be 4.80 million. Details of estimates are provided in the Annex 2.

The EANET operates with voluntary contributions of financial and human resources from participating countries, the efforts and contributions of the participating countries on the monitoring activities at the national level are remarkable and enormous and communicating the results of the EANET to policy makers and public in the countries is continuously expected. In this respect, the contributions made by the members of the task forces and expert groups of the EANET and other individuals and groups are acknowledged and very much appreciated.

3.3.1. Secretariat budget

Under the present arrangement, the participating countries make voluntary financial contributions to the budget of the Secretariat in accordance with the Revised Guidelines on the Administrative and Financial Management for the Secretariat and the Network Center which is also in line with the Procedures for Financial Contributions to the EANET Fund to support the Activities of the Acid Deposition Monitoring

Network in East Asia. Estimated budget of the Secretariat over the period of 5 years of the MTP (2016 – 2020) is USD 3.22 million.

3.3.2. NC budget

Presently, as described in the Revised Guidelines, all of the NC budgets necessary to implement its EANET activities are classified into following two categories.

- **Core budget:** The budget for all activities indispensable for promoting the Network activities in the participating countries under the framework of the EANET and which are approved by the IG.

In accordance with the “Revised Guidelines on the Administrative and Financial Management of the Secretariat and the Network Center” (EANET/IG 14/14)”, the core activities using the core budget for their implementing include the following activities:

- Compilation, evaluation and storage of data etc.;
 - Preparation of data report;
 - Dissemination of data and relevant information;
 - Strengthening technical capacity in the participating countries (STM meeting);
 - Implementation and coordination of QA/QC activities;
 - Implementation of training activities (Development of annual training program) ;
 - Technical support for EANET meetings; and
 - Administrative works (Discussion of the MTP, Future development, etc.).
- **Additional budget:** The cost for strengthening the EANET by promoting further research activities and which are approved by the IG.

In accordance with the “Revised Guidelines” above, the interface activities that include the following activities using additional budget for their implementation:

- Strengthening technical capacity in the participating countries (including emission inventory and modeling and information exchange);
- Implementation of training activities (except the training activities included under the core budget);
- Research activities;
- Raising public awareness; and
- Administrative works (except the administrative activities included under the core budget).

NC Core budget

Under the present arrangement, the participating countries make voluntary financial contributions to the core budget of the NC direct to the NC and in accordance with the Revised Guidelines. As summarized in Table 2, estimated Core budget of the NC over the period of 5 years of the MTP (2016 – 2020) is USD 2,070,000.

NC additional budget

The additional budget of the NC is derived from voluntary financial contributions from the participating countries, local municipalities, non-profit organizations, private companies, donor agencies, research funds and fellowship funds. In addition, some of the organizations also contribute to the human resources of the NC by seconding their staff to work for several months or years in the NC. The amount of funds may also vary from year to year depending on economic factors. For sound financial basis, financial contribution to the NC additional budget from the participating countries other than Japan is also desirable, and in addition to the contribution from the local municipalities, non-profit organizations, private companies, research funds and fellowship funds and other donor agencies. 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 NC, to carry out research relevant to the objectives of this MTP for the EANET (2016-2020). As summarized in Table 2, estimated Additional budget of the NC over the period of 5 years of the MTP (2016-2020) is USD 2,726,000.

3.3.3. Participating countries

The cost necessary for participating countries to operate and manage the existing monitoring sites and to establish and manage new monitoring sites should, in principle, be borne by the countries using their national funds. Participating countries shall 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, in order to acquire the necessary sampling equipment and to conduct chemical analyses, the Secretariat and the NC will make efforts to secure additional funds to assist those countries.

3.3.4. Future strategies to obtain additional funds

The Secretariat, the NC and the participating countries shall continue to make efforts to explore financial support from all available sources.

Actions taken by the Secretariat, the NC and the participating countries to overcome the problem of inadequate financial resources shall include:

- Diversification of financial sources;
 - Clarification of categories/activities/projects to be supported;
 - Strengthening partnerships with international and regional donor agencies and other environmental initiatives;
 - Additional voluntary financial contributions and in-kind contributions by the participating countries;
 - Using support from research foundations and funds from regional scale projects.
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In order to secure budget from external grants, the NC established an informal small group for creating research proposals of high priority themes to apply potential external funding sources.

3.3.5. Cost-effectiveness

As mentioned, the cost of the implementation of the MTP for the EANET (2016-2020) for the Secretariat and the NC core activities will be derived from voluntary financial contribution from the participating countries, and the cost of the implementation of the MTP for the EANET (2016-2020) for the NC additional budget activities (interface activities) will be also derived from (voluntary) contributions from the participating countries, local municipalities, non-profit organizations, private companies, donor agencies, research funds and fellowship funds. Cost effectiveness as the EANET is one of the very important issues for the implementation of the MTP for the EANET (2016-2020). A proposal on potential cost saving measures will be presented at the IG17 for decision.

And, described also in 3.3.3. “Participating countries”, in accordance with the Item 14 of the Instrument, it is decided that the administrative and operational cost of the national monitoring activities within each participating country will be borne by each country. The cost effectiveness of the participating countries is also very important issue. In this context, it is important for the participating countries to evaluate the cost of environmental investments such as increasing number of the monitoring sites, the benefits of them and demerits not to invest.

4. Monitoring & Evaluation

4.1. Monitoring Plan

The Secretariat and the NC will prepare annual progress reports and financial reports on the implementation of the EANET activities. The progress will be reported and reviewed at the Sessions of the SAC and the IG as appropriate. The “Monitoring plan for the MTP for the EANET (2016-2020)” is attached as Annex 3.

4.2. Evaluation Plan

The MTP for the EANET (2016-2020) will be reviewed twice by the IG in 2018 and 2021. There will be a mid-term review, “Mid-Term Report on the Implementation of the MTP for the EANET (2016-2020)” in 2018 and a final review, “Final Report on the Implementation of the MTP for the EANET (2016-2020)” in the first half of 2021. 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 of the MTP for the EANET (2016-2020) may be proposed for consideration of the IG, if necessary. The evaluation will be conducted against the objectives and expected accomplishments using measurable indicators provided in the MTP.

Annex 1

Activities, Expected Outputs, Indicators and Implementation Period of the MTP for the EANET (2016-2020)

Objective 1: Monitoring of Acid Deposition- Conduct acid deposition monitoring including related chemical substances; review for data quality and completeness; and data management.

No.	Activities	Expected outputs		Indicators (as appropriate)	Implementati on period	Lead	Partners
		Milestones as appropriate					
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	Number of monitoring sites of the priority chemical species especially ozone and/or PM.	2016-2020	NC	Participating countries
		[2]	Updated SOP of each lab	Number of labs that developed SOP			
2	Continuation of activities to improve the current methods used to measure air concentrations and estimate dry deposition	[3]	Improved method to measure air concentrations and estimate dry deposition developed by the Task Force on Monitoring for Dry Deposition	Number of monitoring sites in which dry deposition flux can be estimated.	2016-2020	NC	SAC Participating countries
3	Development/revision of (technical) guidelines, technical manuals and documents, as necessary	[4]	New/ revised guidelines, technical manuals and documents developed by the respective task forces and/or expert groups under SAC M1: Establishing task force and/or expert group at IG when development/ revision of guideline is necessary	Number of guidelines, technical manuals etc.	2016-2020	NC	SAC (Participating countries)
4	Development/update of strategy papers for guidance on future	[5]	Updated strategy papers prepared by the respective task forces under SAC	Number of strategy papers for guidance	2016-2020	NC	SAC (Participating

	direction of EANET monitoring, as necessary		M2: Adoption of developed/ revised strategy papers at SAC				countries)
5	Implementation of quality assurance and quality control (QA/QC) activities	[6]	Annual inter-laboratory comparison surveys to identify analytical problems	Number of participating labs and number (percentage) of labs that all of the data are within the data quality objectives (DQOs)	2016-2020	NC	Participating countries
		[7]	QA/QC Guideline for EANET monitoring M3: Adoption of the QA/QC Guideline at SAC		2016	NC	Participating countries
6	Routine compilation, verification, evaluation, storage and provision of data and maintenance of database	[8]	A complete, updated dataset available within the next year		2016-2020	NC	SAC (Participating countries)
		[9]	Annual publication of EANET Data Report M4: Adoption of Data Report at SAC		2016-2020	NC	SAC (Participating countries)
7	Regular updating of the EANET website	[10]	Regularly updated EANET website	Number of regular updating of the website	2016-2020	NC	Sec., Participating countries
8	Upgrading of the data management system in NC to enable easy access by approved users	[11]	An improved data management system at NC	Number of applications to obtain EANET data	2016-2020	NC	Participating countries
9	Promotion of capacity building for personnel of the participating countries including training courses, capacity building workshops, etc.	[12]	Textbooks and other guidance materials	Number of developed materials	2016-2020	NC	Participating countries
		[13]	Trained personnel on EANET monitoring (except ozone and PM _{2.5} monitoring)	Number of trained personnel	2016-2020	NC	Participating countries
10	Promotion of technical support to participating countries by provision of advice, technical information and equipment to countries	[14]	Experts for advice and other technical support provided by NC to participating countries focusing on QA/QC	Number of technical missions of the NC each year	2016-2020	NC	Participating countries
		[15]	Equipment and other assistance	Number of participating	2016-2020	NC	Participating

			provided to participating countries especially using external funds from donor agencies	countries supported technically by the NC			countries
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Objective 2: Strengthening Current Monitoring- Strengthening current monitoring activities through research, capacity building and increasing number of monitoring sites to generate additional data

No.	Activities	Expected outputs		Indicators (as appropriate)	Implementati on period	Lead	Partners
		Milestones as appropriate					
11	Promotion of the monitoring of ozone and PM _{2.5} including research cooperation and communication on the results as appropriate	[16]	Distribution of PM _{2.5} Monitoring sites in the EANET region and qualified ozone monitoring data to implement regional assessment	Number of monitoring sites for ozone and/or PM _{2.5} monitoring	2016-2020	NC	Participating countries
12	Capacity building activities especially for ozone and PM _{2.5} monitoring	[17]	Trained personnel on EANET monitoring for ozone and PM _{2.5} monitoring	Number of trained personnel on EANET monitoring for ozone and PM _{2.5} monitoring	2016-2020	NC	Participating countries
13	Increasing number of EANET monitoring sites to generate additional data	[18]	Increased number of EANET monitoring sites	Number of EANET monitoring sites	2016-2020	NC	Participating countries
14	Strengthening understanding and capacity for monitoring of meteorological parameters and reporting on these as appropriate	[19]	Improved method to measure meteorological parameters in the Technical Manual for Air Concentration Monitoring in East Asia (2013)	Number of monitoring sites in which dry deposition flux can be estimated	2016-2020	NC	Participating countries

Objective 3: Promotion of Activities Other than Monitoring- promotion of information exchange on clean air technologies, emission inventories, and research activities.

No.	Activities		Expected outputs		Indicators (as appropriate)	Implementati on period	Lead	Partners
			Milestones as appropriate					
15	Promotion of information exchange - Information exchange on clean air technologies and regional impact assessment through workshops, seminars, etc.		[20]	Materials submitted to the workshop, seminar, etc.	Number of participants of the workshop, seminar, etc.	2017-2020	NC	Participating countries
16	Promotion of research and technical cooperation on emission inventory to support the capacity building	Research on technical guidelines on emission inventory to support the capacity building	[21]	Emission inventory guideline, manual or user-friendly program (software), etc.		2016-2020	NC	Participating countries
		Capacity building for emission inventories.	[22]	Knowledgeable personnel on emission inventories in EANET countries	Number of trained personnel	2016-2017	NC	Participating countries
17	Promotion of research activities	Research activities on regional impact assessment to plants and ecosystems	[23]	International journal papers including the papers in EANET Science Bulletin	Number of scientific papers submitted to relevant journals and science bulletin, etc.	2016-2020	NC	Participating countries
		Research activities on measurement methodology for elemental carbon (EC) and organic carbon (OC)	[24]	International journal papers including the papers in EANET Science Bulletin	Number of scientific papers submitted to relevant journals and science bulletin, etc.	2016-2020	NC	Participating countries

18	Promotion of studies on the applicable measurement methodology for concentration of air pollutants (other than EC and OC) in East Asia	[25]	International journal papers including the papers in EANET Science Bulletin	Number of scientific papers submitted to relevant journals and science bulletin, etc.	2016-2020	NC	Participating countries
19	EANET fellowship research program	[26]	Research opportunities for young scientists through the EANET fellowship research	Number of application and number of researchers who implemented EANET fellowship research	2016-2020	NC	Sec., Participating countries
20	Promotion of studies on the effects of acid deposition and other priority chemical species on plants, ecosystems, human health and other social aspects, including the viewpoint of the socio-economics	[27]	Scientific papers and reports on impacts of acid deposition and other priority chemical species in scientific and socio-economic aspects	Number of scientific papers submitted to relevant journals and science bulletin, etc.	2016-2020	NC	Participating countries
21	Promotion of studies on models to assess the trend of national and regional acid deposition and other related air pollutants in East Asia, and promotion of atmospheric simulation model through workshops, training courses etc.	[28]	Mapping of air concentrations and deposition and elucidation of transport, chemical transformation, and deposition processes in East Asia. Trained and knowledgeable scientists on atmospheric chemical transport modeling	Number of scientific papers submitted to relevant journals and science bulletin, etc.	2016-2020	NC	Participating countries
22	Publication of the EANET Science Bulletin	[29]	Published EANET Science Bulletin	Number of scientific papers submitted to the science bulletin.	2016, 2019	NC	Participating countries

Objective 4: Providing Policy Relevant Information- Develop policy relevant reports and publications based on analysis of the monitoring data collected.

No.	Activities	Expected outputs		Indicators (as appropriate)	Implementati on period	Lead	Partners
		Milestones as appropriate					
23	Conduct periodic assessment of the state of acid deposition using trend analysis, numerical models	[30]	Assessments of the EANET data by the Task Forces and SAC including assessment of current status, trends, and use of model outputs.		2016-2020	NC	Participating countries
24	Preparation of periodic assessment reports on the state of acid deposition in East Asia including impact on plants and ecosystems	[31]	Periodic Reports on the State of Acid Deposition in East Asia (PRSAD)		2016-2017 (PRSAD3)	NC	SAC (Participating countries)
			M5: Adoption of PRSAD3 at SAC and establishing Drafting Committee for PRSAD4		2019-2020 (PRSAD4)		

Objective 5: Promotion of Public Awareness- Promote public awareness through knowledge dissemination and outreach based on the monitoring data collected and analyzed and the policy relevant reports developed.

No.	Activities	Expected outputs		Indicators (as appropriate)	Implementati on period	Lead	Partners
		Milestones as appropriate					
25	Promotion of public awareness on acid deposition and other priority chemical species, and other activities of EANET, to stakeholders	[32]	Public awareness activities including workshops for participating countries and to stakeholders.	Number of implemented public awareness workshop and number of attended public including students	2016-2020	Sec.	NC, Participating countries
		[33]	Public awareness and environmental education materials disseminated through publications and the EANET website		2016-2020	NC	Sec., Participating countries
		[34]	Periodic issues of the EANET Newsletter		2016-2020	Sec.	NC, Participating countries
		[35]	Regional and/or national workshops on prevention of air pollution	Number of implemented public awareness workshop	2016-2020	Sec.	NC, Participating countries

Objective 6: Enhancement of Intergovernmental Cooperation—Provide a forum for cooperation on the issues related acid deposition among the participating countries and support future development of the EANET.

No.	Activities	Expected outputs		Indicators (as appropriate)	Implementation period	Lead	Partners
		Milestones as appropriate					
26	Arrangements for the EANET Sessions agreed to by the IG	[36]	1 session per year for the IG and SAC; and some TF/EG meetings held	Number of the EANET Sessions held	2016-2020	Sec. and NC for TF/EG	NC, Participating countries
		[37]	1 session per year for the STM meetings held	Number of the EANET Sessions held	2016-2020	NC	Sec., Participating countries
27	Consideration on future development of the EANET	[38]	Recommendation on future development of the EANET as appropriate		2019-2020	Sec.	NC, Participating countries
28	Further arrangements and review of the arrangements of the EANET Secretariat and the NC(s)	[39]	Improved performance and transparency of the EANET Secretariat and the NC(s)		2016-2018	Sec. and NC	Participating countries
29	Revision of Guidelines on Administrative and Financial Management for the Secretariat and NC taking account of the new decisions of the IG	[40]	Improved Guidelines on Administrative and Financial management for the Secretariat and NC		2017, 2019	Sec. and NC	IG (Participating countries)
30	Review of the MTP (2011-2015), revision of the MTP (2016-2020) if necessary, and development of the next MTP for the EANET (2021-2025)	[41]	Final report on the review of the implementation of the MTP for the EANET (2011-2015)		2016	Sec. and NC	IG (Participating countries)
		[42]	Report on the mid-term review on the implementation of the MTP for the EANET (2016-2020) and Revised MTP for the EANET (2016-2020) as appropriate		2016-2019	Sec. and NC	IG (Participating countries)

		[43]	MTP for the EANET (2021-2025)		2019-2020	Sec. and NC	IG (Participating countries)
31	Linking work of EANET to broader policy audiences through APCAP and processes like UNEA	[44]	Recognition of EANET by UNEA and other global process		2016-2020	Sec.	Participating countries

Objective 7: Enhancement of Cooperation and Collaboration—Enhancement of south-south collaboration and cooperative efforts among participating countries, other relevant networks and with outside organizations on the EANET objectives

No.	Activities	Expected outputs		Indicators (as appropriate)	Implementation period	Lead	Partners
		Milestones as appropriate					
32	Promotion of communication, collaboration and cooperation with other relevant international organizations, initiatives and programs	[45]	The EANET and the EANET activities are promoted and known to relevant international forums	Number of relevant international meetings, seminars, workshops and exchange program participated by the Secretariat and the NC	2016-2020	Sec.	NC, Participating countries
33	Sharing a common understanding on atmospheric environment issues among the scientific community such as the Asia Pacific Clean Air Partnership Science Panel	[46]	Information sharing with scientific communities		2016-2020	NC	Sec, Scientific community in East Asia
34	Providing information and policy recommendations to policy makers based on sound science and assessment	[47]	Report for Policy Makers		2017	Sec.	NC, IG (Participating countries)
		[48]	Science and policy dialogue		2016-2018	Sec.	NC, Participating countries
		[49]	A special High Level Segment at an EANET session to disseminate information to policy makers		2020	Sec.	IG (Participating countries)

Annex 2

Table 1-1 Estimated Workload and Cost Necessary for the Secretariat

Objective 1: Monitoring of Acid Deposition- Conduct acid deposition monitoring including related chemical substances; review for data quality and completeness; and data management.

No.	Activities	Expected outputs	Workload (Man-months)					Cost (in 1,000 USD)					Core/ Additional
			2016	2017	2018	2019	2020	2016	2017	2018	2019	2020	
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	NC only					NC only					(NC)
		[2] Updated SOP of each lab	NC only					NC only					(NC)
2	Continuation of activities to improve the current methods used to measure air concentrations and estimate dry deposition	[3] Improved method to measure air concentrations and estimate dry deposition developed by the Task Force on Monitoring for Dry Deposition	NC only					NC only					(NC)
3	Development/revision of (technical) guidelines, technical manuals and documents, as necessary	[4] New/ revised guidelines, technical manuals and documents developed by the respective task forces and/or expert groups under SAC	NC only					NC only					(NC)

4	Development/update of strategy papers for guidance on future direction of EANET monitoring, as necessary	[5] Updated strategy papers prepared by the respective task forces under SAC	NC only					NC only					(NC)
5	Implementation of quality assurance and quality control (QA/QC) activities	[6] Annual inter-laboratory comparison surveys to identify analytical problems	NC only					NC only					(NC)
		[7] QA/QC Guideline for EANET monitoring	NC only					NC only					(NC)
6	Routine compilation, verification, evaluation, storage and provision of data and maintenance of database	[8] A complete, updated dataset available within the next year	NC only					NC only					(NC)
		[9] Annual publication of EANET Data Report	NC only					NC only					(NC)
7	Regular updating of the EANET website	[10] Regularly updated EANET website	0.4	0.4	0.4	0.4	0.4	2.936	2.936	2.936	2.936	2.936	
8	Upgrading of the data management system in NC to enable easy access by approved users	[11] An improved data management system at NC	NC only					NC only					(NC)
9	Promotion of capacity building for personnel of the participating countries including training courses, capacity building workshops, etc.	[12] Textbooks and other guidance materials	NC only					NC only					(NC)
		[13] Trained personnel on EANET monitoring (except ozone and PM2.5 monitoring)	NC only					NC only					(NC)
10	Promotion of technical support to participating countries by provision of advice, technical information and equipment	[14] Experts for advice and other technical support provided by NC to participating countries focusing on QA/QC	NC only					NC only					(NC)

	to countries	[15] Equipment and other assistance provided to participating countries especially using external funds from donor agencies	NC only	NC only	(NC)
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Objective 2: Strengthening Current Monitoring- Strengthening current monitoring activities through research, capacity building and increasing number of monitoring sites to generate additional data

No.	Activities	Expected outputs	Workload (Man-months)					Cost (in 1,000 USD)					Core/ Additional
			2016	2017	2018	2019	2020	2016	2017	2018	2019	2020	
11	Promotion of the monitoring of ozone and PM _{2.5} including research cooperation and communication on the results as appropriate	[16] Distribution of PM _{2.5} Monitoring sites in the EANET region and qualified ozone monitoring data to implement regional assessment	NC only					NC only					(NC)
12	Capacity building activities especially for ozone and PM _{2.5} monitoring	[17] Trained personnel on EANET monitoring for ozone and PM _{2.5} monitoring	NC only					NC only					(NC)
13	Increasing number of EANET monitoring sites to generate additional data	[18] Increased number of EANET monitoring sites	NC only					NC only					(NC)
14	Strengthening understanding and capacity for monitoring of meteorological parameters and reporting on these as	[19] Improved method to measure meteorological parameters in the Technical Manual for Air Concentration	NC only					NC only					(NC)

	appropriate	Monitoring in East Asia (2013)				
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Objective 3: Promotion of Activities Other than Monitoring- promotion of information exchange on clean air technologies, emission inventories, and research activities.

No.	Activities		Expected outputs	Workload (Man-months)					Cost (in 1,000 USD)					Core/ Additional
				2016	2017	2018	2019	2020	2016	2017	2018	2019	2020	
15	Promotion of information exchange - Information exchange on clean air technologies and regional impact assessment through workshops, seminars, etc.		[20] Materials submitted to the workshop, seminar, etc.	NC only					NC only					(NC)
16	Promotion of research and technical cooperation on emission inventory to support the capacity building	Research on technical guidelines on emission inventory to support the capacity building	[21] Emission inventory guideline, manual or user-friendly program (software), etc.	NC only					NC only					(NC)
		Capacity building for emission inventories	[22] Knowledgeable personnel on emission inventories in EANET countries	NC only					NC only					(NC)
17	Promotion of research activities	Research activities on regional impact	[23] International journal papers including the papers	NC only					NC only					(NC)

		chemical transport modeling..			
22	Publication of the EANET Science Bulletin	[29] Published EANET Science Bulletin	NC only	NC only	(NC)

Objective 4: Providing Policy Relevant Information- Develop policy relevant reports and publications based on analysis of the monitoring data collected.

No.	Activities	Expected outputs	Workload (Man-months)					Cost (in 1,000 USD)					Core/ Additional
			2016	2017	2018	2019	2020	2016	2017	2018	2019	2020	
23	Conduct periodic assessment of the state of acid deposition using trend analysis, numerical models	[30] Assessments of the EANET data by the Task Forces and SAC including assessment of current status, trends, and use of model outputs	NC only					NC only					(NC)
24	Preparation of periodic assessment reports on the state of acid deposition in East Asia including impact on plants and ecosystems	[31] Periodic Reports on the State of Acid Deposition in East Asia (PRSAD)	NC only					NC only					(NC)

Objective 5: Promotion of Public Awareness- Promote public awareness through knowledge dissemination and outreach based on the monitoring data collected and analyzed and the policy relevant reports developed.

No.	Activities	Expected outputs	Workload (Man-months)					Cost (in 1,000 USD)					Core/ Additional	
			2016	2017	2018	2019	2020	2016	2017	2018	2019	2020		
25	Promotion of public awareness on acid deposition and other priority chemical species, and other activities of EANET, to stakeholders	[32] Public awareness activities including workshops for participating countries and to stakeholders.					1						41.34	
		[33] Public awareness and environmental education materials disseminated through publications and the EANET website	2	2	2	2	2	16.68	16.68	16.68	16.68	16.68		
		[34] Periodic issues of the EANET Newsletter	1	1	1	1	1	9.34	9.34	9.34	9.34	9.34		
		[35] Regional and/or national workshops for prevention of air pollution	3	3		2	2	46.35	46.35		38.06	38.06		

Objective 6: Enhancement of Intergovernmental Cooperation—Provide a forum for cooperation on the issues related acid deposition among the participating countries and support future development of the EANET.

No.	Activities	Expected outputs	Workload (Man-months)					Cost (in 1,000 USD)					Core/ Additional
			2016	2017	2018	2019	2020	2016	2017	2018	2019	2020	
26	Arrangements for the EANET Sessions agreed to by the IG	[36] 1 session per year for the IG and SAC; and some TF/EG meetings held	10	10	10	10	10	303.29	303.29	303.29	303.29	303.29	
		[37] 1 session per year for the STM meetings held	1	1	1	1	1	9.34	9.34	9.34	9.34	9.34	
27	Consideration on future development of the EANET	[38] Recommendation on future development of the EANET as appropriate				1	1				7.34	7.34	
28	Further arrangements and review of the arrangements of the EANET Secretariat and the NC(s)	[39] Improved performance and transparency of the EANET Secretariat and the NC(s)		2	2				14.68	14.68			
29	Revision of Guidelines on Administrative and Financial Management for the Secretariat and NC taking account of the new decisions of the IG	[40] Improved Guidelines on Administrative and Financial management for the Secretariat and NC		1		1			7.34		7.34		
30	Review of the MTP (2011-2015), revision of the MTP (2016-2020) if necessary, and development of the next MTP for the EANET (2021-2025)	[41] Final report on the review of the implementation of the MTP for the EANET (2011-2015)	2					24.68					
		[42] Report on the mid-term review on the			2	1				24.68	7.34		

		implementation of the MTP for the EANET (2016-2020) and Revised MTP for the EANET (2016-2020) as appropriate											
		[43] MTP for the EANET (2021-2025)				2	2				14.68	14.68	
31	Linking work of EANET to broader policy audiences through APCAP and processes like UNEA	[44] Recognition of EANET by UNEA and other global process	0.2	0.2	0.2	0.2	0.2	1	1	1	1	1	

Objective 7: Enhancement of Cooperation and Collaboration-Enhancement of south-south collaboration and cooperative efforts among participating countries, other relevant networks and with outside organizations on the EANET objectives

No.	Activities	Expected outputs	Workload (Man-months)					Cost (in 1,000 USD)					Core/ Additional
			2016	2017	2018	2019	2020	2016	2017	2018	2019	2020	
32	Promotion of communication, collaboration and cooperation with other relevant international organizations, initiatives and programs	[45] The EANET and the EANET activities are promoted and known to relevant international forums	0.6	0.6	0.6	0.6	0.6	8.404	8.404	8.404	8.404	8.404	
33	Sharing a common understanding on atmospheric environment issues among the scientific community such as the Asia Pacific Clean Air Partnership Science Panel	[46] Information sharing with scientific communities	0.5	0.5	0.5	0.5	0.5	3.67	3.67	3.67	3.67	3.67	

34	Providing information and policy recommendations to policy makers based on sound science and assessment	[47] Report for Policy Makers		3					40.02				
		[48] Science and policy dialogue			3				78.02				
		[49] A special High Level Segment at an EANET session to disseminate information to policy makers (in conjunction with IG)					1					9.84	

Others: Administrative works

No.	Activities	Expected outputs	Workload (Man-months)					Cost (in 1,000 USD)					Core/ Additional
			2016	2017	2018	2019	2020	2016	2017	2018	2019	2020	
35	Administrative works		13	13	13	13	13	95.42	95.42	95.42	95.42	95.42	

Table 1-2 Summary Table of Total Workload and Cost of the Secretariat in 2016-2020

Workload and Cost	Workload (Man-months)					Cost (in 1,000 USD)				
	Year	2016	2017	2018	2019	2020	2016	2017	2018	2019
Total	34	38.2	36.2	36.2	36.2	544.79	582.15	591.13	548.51	585.01
Total plus Program Support Cost (PSC)						615.61	657.82	667.98	619.82	661.06
Average of Total including PSC			36.2					644.46		

Table 2-1 Estimated Workload and Cost Necessary for the Network Center

Objective 1: Monitoring of Acid Deposition- Conduct acid deposition monitoring including related chemical substances; review for data quality and completeness; and data management.

No.	Activities	Expected outputs	Workload (Man-months)					Cost (in 1,000 USD)					Core/ Additional
			2016	2017	2018	2019	2020	2016	2017	2018	2019	2020	
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	2	2	2	2	2	10	10	10	10	10	Core
		[2] Updated SOP of each lab	1	1	1	1	1	5	5	5	5	5	Core
2	Continuation of activities to improve the current methods used to measure air concentrations and estimate dry deposition	[3] Improved method to measure air concentrations and estimate dry deposition developed by the Task Force on Monitoring for Dry Deposition	1	1	1	1	1	10	10	10	10	10	Core
3	Development/revision of (technical) guidelines, technical manuals and documents, as necessary	[4] New/revised guidelines, technical manuals and documents developed by the respective task forces and/or expert groups under SAC	1	1	1	1	1	5	5	5	5	5	Core

4	Development/update of strategy papers for guidance on future direction of EANET monitoring, as necessary	[5] Updated strategy papers prepared by the respective task forces under SAC	1	1	1	1	1	5	5	5	5	5	Core
5	Implementation of quality assurance and quality control (QA/QC) activities	[6] Annual inter-laboratory comparison surveys to identify analytical problems	4	4	4	4	4	40	40	40	40	40	Core
		[7] QA/QC Guideline for EANET monitoring	2					10					Core
6	Routine compilation, verification, evaluation, storage and provision of data and maintenance of database	[8] A complete, updated dataset available within the next year	5	5	5	5	5	25	25	25	25	25	Core
		[9] Annual publication of EANET Data Report	1	1	1	1	1	10	10	10	10	10	Core
7	Regular updating of the EANET website	[10] Regularly updated EANET website	1	1	1	1	1	10	10	10	10	10	Core
8	Upgrading of the data management system in NC to enable easy access by approved users	[11] An improved data management system at NC	1	2	2	1	1	5	30	30	10	10	Core
9	Promotion of capacity building for personnel of the participating countries including training courses, capacity building workshops, etc.	[12] Textbooks and other guidance materials	1	1	1	1	1	5	5	5	5	5	Additional
		[13] Trained personnel on EANET monitoring (except ozone and PM2.5 monitoring)	3	3	4	4	4	30	30	40	40	40	Additional
10	Promotion of technical support to participating countries by provision of advice, technical information and equipment	[14] Experts for advice and other technical support provided by NC to participating countries focusing on QA/QC	4	4	4	4	4	40	40	40	40	40	Additional

	to countries	[15] Equipment and other assistance provided to participating countries especially using external funds from donor agencies	1.5	1.5	1.5	1.5	1.5	30	30	30	30	30	Additional
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Objective 2: Strengthening Current Monitoring- Strengthening current monitoring activities through research, capacity building and increasing number of monitoring sites to generate additional data

No.	Activities	Expected outputs	Workload (Man-months)					Cost (in 1,000 USD)					Core/ Additional
			2016	2017	2018	2019	2020	2016	2017	2018	2019	2020	
11	Promotion of the monitoring of ozone and PM _{2.5} including research cooperation and communication on the results as appropriate	[16] Distribution of PM _{2.5} Monitoring sites in the EANET region and qualified ozone monitoring data to implement regional assessment	4	4	4	4	4	30	35	35	35	35	Core
12	Capacity building activities especially for ozone and PM _{2.5} monitoring	[17] Trained personnel on EANET monitoring for ozone and PM _{2.5} monitoring	2	2	2	2	2	30	30	30	30	30	Additional
13	Increasing number of EANET monitoring sites to generate additional data	[18] Increased number of EANET monitoring sites	1	1	1	1	1	5	5	5	5	5	Core
14	Strengthening understanding and capacity for monitoring of meteorological parameters and reporting on these as	[19] Improved method to measure meteorological parameters in the Technical Manual for Air Concentration	1	1	1	1	1	5	5	5	5	5	Core

	appropriate	Monitoring in East Asia (2013)	1	1	1	1	1	7	7	7	7	7	Additional
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Objective 3: Promotion of Activities Other than Monitoring- promotion of information exchange on clean air technologies, emission inventories, and research activities.

No.	Activities	Expected outputs	Workload (Man-months)					Cost (in 1,000 USD)					Core/ Additional	
			2016	2017	2018	2019	2020	2016	2017	2018	2019	2020		
15	Promotion of information exchange – Information exchange on clean air technologies and regional impact assessment through workshops, seminars, etc.	[20] Materials submitted to the workshop, seminar, etc.		1	3	3	3		5	45	45	45	Additional	
16	Promotion of research and technical cooperation on emission inventory to support the capacity building	Research on technical guidelines on emission inventory to support the capacity building	[21] Emission inventory guideline, manual or user-friendly program (software), etc.	1	1	3	3	3	5	5	15	15	15	Additional
		Capacity building for emission inventories	[22] Knowledgeable personnel on emission inventories in EANET countries	1	2				5	35				Additional
17	Promotion of research activities	Research activities on regional impact assessment to plants and	[23] International journal papers including the papers in EANET Science Bulletin	2	2	2	2	2	25	25	25	25	25	Additional

		ecosystems													
		Research activities on measurement methodology for elemental carbon (EC) and organic carbon (OC)	[24] International journal papers including the papers in EANET Science Bulletin	1	1	2	2	2	15	15	25	25	25	Additional	
18	Promotion of studies on the applicable measurement methodology for concentration of air pollutants (other than EC and OC) in East Asia		[25] International journal papers including the papers in EANET Science Bulletin	2	2	2	2	2	25	25	25	25	25	Additional	
19	EANET fellowship research program		[26] Research opportunities for young scientists through the EANET fellowship research	2	2	2	2	2	28	28	28	28	28	Additional	
20	Promotion of studies on the effects of acid deposition and other priority chemical species on plants, ecosystems, human health and other social aspects, including the viewpoint of the socio-economics		[27] Scientific papers and reports on impacts of acid deposition and other priority chemical species in scientific and socio-economic aspects	3	3	4	4	4	30	30	40	40	40	Additional	
21	Promotion of studies on models to assess the trend of national and regional acid deposition and other related air pollutants in East Asia, and promotion of atmospheric simulation model through workshops, training courses etc.		[28] Mapping of air concentrations and deposition and elucidation of deposition processes in East Asia. Trained and knowledgeable scientists on atmospheric chemical transport	10	10	10	10	10	95	95	95	95	95	Additional	

		modeling.										
22	Publication of the EANET Science Bulletin	[29] Published EANET Science Bulletin	2			2		13			13	Additional

Objective 4: Providing Policy Relevant Information- Develop policy relevant reports and publications based on analysis of the monitoring data collected.

No.	Activities	Expected outputs	Workload (Man-months)					Cost (in 1,000 USD)					Core/ Additional
			2016	2017	2018	2019	2020	2016	2017	2018	2019	2020	
23	Conduct periodic assessment of the state of acid deposition using trend analysis, numerical models	[30] Assessments of the EANET data by the Task Forces and SAC including assessment of current status, trends, and use of model outputs	2	2	2	2	2	10	10	10	10	10	Core
24	Preparation of periodic assessment reports on the state of acid deposition in East Asia including impact on plants and ecosystems	[31] Periodic Reports on the State of Acid Deposition in East Asia (PR SAD)	5	2		1	4	70	25		5	56	Core

Objective 6: Enhancement of Intergovernmental Cooperation—Provide a forum for cooperation on the issues related acid deposition among the participating countries and support future development of the EANET.

No.	Activities	Expected outputs	Workload (Man-months)					Cost (in 1,000 USD)					Core/ Additional
			2016	2017	2018	2019	2020	2016	2017	2018	2019	2020	
26	Arrangements for the EANET Sessions agreed to by the IG	[36] 1 session per year for the IG and SAC; and some TF/EG meetings held	9	9	9	9	9	92	92	115	115	115	Core
		[37] 1 session per year for the STM meetings held	4	4	4	4	4	66	66	66	66	66	Core
27	Consideration on future development of the EANET	[38] Recommendation on future development of the EANET as appropriate				2	2				10	10	Core
28	Review of the arrangements of the EANET Secretariat and the NC(s)	[39] Improved performance and transparency of the EANET Secretariat and the NC(s)		1					5		.		(Sec.)
29	Revision of Guidelines on Administrative and Financial Management for the Secretariat and NC taking account of the new decisions of the IG	[40] Improved Guidelines on Administrative and Financial management for the Secretariat and NC		1		1			5		5		Core
30	Review of the MTP (2011-2015), revision of the MTP (2016-2020) if necessary, and development of the next MTP for the EANET (2021-2025)	[41] Final report on the review of the implementation of the MTP for the EANET (2011-2015)	2					10					Core
		[42] Report on the mid-term review on the			1	1				5	5		Core

		implementation of the MTP for the EANET (2016-2020) and Revised MTP for the EANET (2016-2020) as appropriate											
		[43] MTP for the EANET (2021-2025)				2	2				10	10	Core
31	Linking work of EANET to broader policy audiences through APCAP and processes like UNEA	[44] Recognition of EANET by UNEA and other global process	Secretariat only					Secretariat only					

Objective 7: Enhancement of Cooperation and Collaboration-Enhancement of south-south collaboration and cooperative efforts among participating countries, other relevant networks and with outside organizations on the EANET objectives

No.	Activities	Expected outputs	Workload (Man-months)					Cost (in 1,000 USD)					Core/ Additional
			2016	2017	2018	2019	2020	2016	2017	2018	2019	2020	
32	Promotion of communication, collaboration and cooperation with other relevant international organizations, initiatives and programs	[45] The EANET and the EANET activities are promoted and known to relevant international forums	Secretariat only.					Secretariat only.					(Sec.)
33	Sharing a common understanding on atmospheric environment issues among the scientific community such as the Asia Pacific Clean Air Partnership Science Panel	[46] Information sharing with scientific communities	1	1	1	1	1	5	5	5	5	5	Additional
34	Providing information and policy recommendations to policy makers based on	[47] Report for Policy Makers		2					10				Core

	sound science and assessment	[48] Science and policy dialogue	Secretariat only.					Secretariat only.					(Sec.)
		[49] A special High Level Segment at an EANET session to disseminate information to policy makers					1					5	Core

Others: Administrative works

No.	Activities	Expected outputs	Workload (Man-months)					Cost (in 1,000 USD)					Core/ Additional
			2016	2017	2018	2019	2020	2016	2017	2018	2019	2020	
35	Administrative works		18	18	18	18	18	90	90	90	90	90	Additional

Table 2-2 Summary Table of Total Workload and Cost of the NC in 2016-2020

Workload and Cost	Workload (Man-months)					Cost (in 1,000 USD)				
	2016	2017	2018	2019	2020	2016	2017	2018	2019	2020
Year										
Total (Core +Additional)	106.5	104.5	104.5	111.5	112.5	919.0	926.0	954.0	977.0	1,020.0
Core	48.0	46.0	41.0	46.0	48.0	423.0	408.0	391.0	401.0	447.0
Additional	58.5	58.5	63.5	65.5	64.5	496.0	518.0	563.0	576.0	573.0
Average of Total (Core +Additional)	107.9					959.20				
Average of Core	45.8					414.00				
Average of Additional	62.1					545.20				

Annex 3

Schedule of Monitoring on the Implementation

Year	Month	Event/Activity	Deliverables
2016	January	Distribution of the MTP document to NFPs, SAC members, etc.	Start implementation of the activities according to the plan
2016	October	Sixteenth Session of the Scientific Advisory Committee (SAC16)	Review of second draft of the Report on Implementation of the MTP for the EANET (2011-2015) from scientific and technical viewpoints. Discussion on the progress of implementation of the scientific activities
2016	November	Eighteenth Session of the Intergovernmental Meeting (IG18)	Review of draft Report on Implementation of the MTP for the EANET (2011-2015) for possible adoption. Updates on the activities will be given in the Report on the Progress of EANET by the Secretariat and NC for adoption as appropriate
2017	October	Seventeenth Session of the Scientific Advisory Committee (SAC17)	Discussion on the progress of implementation of the scientific activities
2017	November	Nineteenth Session of the Intergovernmental Meeting (IG19)	Updates on the activities will be given in the Report on the Progress of EANET by the Secretariat and NC
2018	October	Eighteenth Session of the Scientific Advisory Committee (SAC18)	Discussion on the second draft Mid-Term Report on Implementation of the MTP for the EANET (2016-2020)
2018	November	Twentieth Session of the Intergovernmental Meeting (IG20)	Adoption of revised draft of the Mid-Term Report of Implementation of the MTP for the EANET (2016-2020)
2019	October	Nineteenth Session of the Scientific Advisory Committee (SAC19)	Discussion on the progress of implementation of the scientific activities Discussion on the next MTP from scientific and technical viewpoints
2019	November	Twenty-first Session of the Intergovernmental Meeting (IG21)	Updates on the activities will be given in the Report on the Progress of EANET by the Secretariat and NC Discussion on the next MTP
2020	October	Twentieth Session of the Scientific Advisory Committee (SAC20)	Discussion on the next MTP from scientific and technical viewpoints
2020	November	Twenty-second Session of the Intergovernmental Meeting (IG22)	Discussion on the next MTP to be adopted by the IG

Note: Discussion on the revision of the MTP for the EANET (2016-2020) will be implemented as appropriate if the new activity (activities) is/are included in the EANET scope in accordance with the decision of the IG and/or revision of the Instrument for Strengthening the Acid Deposition Monitoring Network in East Asia (EANET) is made by the IG.