

The Eleventh Senior Technical Managers' Meeting
of the Acid Deposition Monitoring Network in East Asia
2-3 September 2010, Niigata, Japan

Report on the Progress of EANET since the Tenth Senior Technical Managers' Meeting (STM10)

I. INTRODUCTION

1. The Senior Technical Managers' Meeting (STM) of the Acid Deposition Monitoring Network in East Asia (EANET) has been organized annually by the Network Center (NC) since the start of EANET activities on the regular phase in 2001. This Meeting was attended by the Senior Technical Managers of all the participating countries, who are responsible for monitoring operations and technical issues of EANET activities in their countries. The number of topics discussed at the STM Meetings concerned the progress on scientific and technical matters related to EANET, national monitoring activities and data, results of the inter-laboratory comparison projects and other issues to be considered further at the Session of the Scientific Advisory Committee (SAC) for EANET.
2. This report presents a review of the progress of EANET activities since the Tenth Senior Technical Managers' Meeting (STM10) held in Pathumthani, Thailand on 26-28 August 2009 which was focusing on scientific and technical aspects.

II. ADMINISTRATIVES AND FINANCIAL MANAGEMENT ASPECTS OF EANET

II-1 Contracts and financial contribution

3. In accordance with the Revised Procedures and Guideline for Voluntary Contribution to EANET adopted at the Ninth Session of the Intergovernmental Meeting (IG9) in November 2007, the Secretariat sent letters of request to all National Focal Points regarding the estimated contributions of the participating countries both for the Secretariat budget and the Network Center (NC) core budget in 2010. Currently, ten participating countries are already contributing to the budget of the Secretariat, and seven participating countries are contributing to the NC core budget.
4. In March 2010, the Ministry of Environment of Japan, MOEJ and the UNEP RRC.AP signed agreements regarding the Japanese contribution for the budget of the Secretariat activities in 2009. In accordance with the contract, the contribution from Japan was made in March 2010.

5. In March 2010, MOE, Japan and the Japan Environmental Sanitation Center (JESC) also signed agreements regarding Japanese contribution for the budget for implementation of the Network Center (NC) core and additional budget activities for the second to the fourth quarter of 2009 and for the first quarter of 2010. In accordance with the contract, the contribution from Japan was made in April 2010.

II-2 Renaming of the NC

6. In accordance with the “DECISION 4/IG.2 (EANET/IG 2/9)”, ADORC (Acid Deposition and Oxidant Research Center) has been serving as the NC for EANET from the start of regular phase of EANET. JESC renamed the ADORC to ACAP (Asia Center for Air Pollution Research) on 30 June 2010, considering more than ten years have passed from the foundation and air pollution issues are becoming more important, though the organizational structure was not changed.

II-3 Staff Hiring

Coordinator, EANET Secretariat

7. According to the “Review of the Status of the EANET Secretariat” (EANET/IG 6/11) endorsed by the Sixth Session of the Intergovernmental Meeting (IG6) in 2004, the position of the professional staff of the Secretariat will be for a period of two years with a provision for a maximum period of two terms. The first term of the appointment of the present Coordinator was completed by October 2009. The Secretariat sent out the vacancy announcement for Coordinator position to all National Focal Points (NFPs) on 17 September 2009. The Secretariat received only one application, from Ms. Adelaida B. Roman (Philippines), the current Coordinator. Five countries which included: Indonesia, Malaysia, Mongolia, Philippines, and Thailand sent their comments and full support to the application of Ms. Roman. The Selection Committee reviewed the application and recommended Ms. Roman for the position of the Coordinator for a period of two years. With the concurrence of the NFPs, she was appointed as the Coordinator of the Secretariat for EANET.

Programme Officer, EANET Secretariat

8. The vacancy announcement for Programme Officer position at the Secretariat was circulated to all National Focal Points (NFPs) on 18 February 2010. The Secretariat sent the long list of applicants for information and the 3 short-listed candidates for comments of the NFPs on 20 April 2010 and 29 April 2010, respectively. The Selection Committee held its meeting on 17 May 2010 to interview the short-listed applicants and to select the final candidate. The Committee selected Ms. Dong Yao from China as

the final candidate. She worked in International Cooperation Department, Ministry of Environmental Protection, China. The affectivity of her appointment was 15 July 2010, with a duration of two years contract.

Deputy Director General in Charge of NC for EANET

9. In accordance with the “Guidelines for Recruiting the Deputy Director General of ADORC in charge of the NC of EANET (2008)”, JESC in cooperation with the Secretariat for EANET carried out the recruitment procedure of the next Deputy Director General (DDG) of ADORC in charge of the NC from September 2008. Due to unavailability of the selected candidate, another round of recruitment was undertaken starting on 4 May 2009. Following the above-mentioned procedure, the Selection Committee Meeting held on 17 July 2009 has recommended Dr. Jesada Luangjame from Thailand as the final candidate for this position. After considering the comments from the participating countries, he was selected as DDG of ADORC* in charge of the NC by JESC. In accordance with the contract with JESC, he started on his EANET tasks in ADORC from October 2009.

* Refer to para. 6.

II-4 Publication of Proceedings, Summaries of the Meetings and Newsletters, etc.

10. The EANET Newsletters, dated December 2009 and June 2010 were published by the Secretariat in collaboration with the NC.
11. After STM10, publications of proceedings and summaries of the following meetings were completed and distributed to the participating countries and participants of the Sessions:
 - Eleventh Session of the Intergovernmental Meeting (IG11)
 - Ninth Session of the Scientific Advisory Committee (SAC9)
 - Eighth Session of the Working Group on Future Development of EANET (WGFD8)
 - Ninth Session of the Working Group on Future Development of EANET (WGFD9)
 - Tenth Senior Technical Managers’ Meeting (STM10)
12. The Second Report for Policy Makers (RPM2) named “Clean Air For a Sustainable Future” was launched at the IG11 held on 19-20 in Bangkok, Thailand, and copies were distributed to the participating countries of EANET and related organizations in November 2009. It was also published in EANET website in December 2009.

13. The Factsheets titled “Country efforts and achievements in combating acid deposition” developed by all participating countries of EANET through collaboration and coordination with the NC and the Secretariat were published in November 2009.

III. EANET MEETINGS

III-1 Scientific Advisory Committee (SAC)

14. The SAC9 was held on 14-16 October 2009 in Tsukuba, Japan in order to discuss all of important technical and scientific issues of EANET including the review of progress of the Strategy on EANET Development (2006-2010). Major decisions/discussions during SAC9 include the following:

- 1) Review and adoption of the Data Report 2008 of EANET;
- 2) Review and adoption of the Report of the Inter-laboratory Comparison projects in 2008 and consideration of recommendations for improvement of QA/QC activities;
- 3) Consideration of updated National Monitoring Plans of the participating countries;
- 4) Consideration of the Reports from the Chairpersons of the Task Forces and Expert Groups of SAC:
 - Report from the Chairperson of the Task Force on Soil and Vegetation Monitoring
 - Report from the Chairperson of the Task Force on Monitoring Instrumentation
 - Report from the Chairperson of the Expert Group on Dry Deposition Flux Estimation
 - Report from the Chairperson of the Expert Group on Revision of Technical Manual on Wet Deposition Monitoring
 - Report from the Chairperson of the Expert Group on Revision of Technical Manual on Inland Aquatic Environment Monitoring
 - Report from the Chairperson of the Task Force on Research Coordination
 - Report from the Chairperson of the Task Force on Dry Deposition Monitoring

The Session agreed to submit the proposal on the establishment of the new Expert Group on Preparation of the Technical Manual for Air Concentration Monitoring to the IG11.

- 5) Establishment of the Drafting Committee (DC) of the Second Periodic Report on the State of Acid Deposition in East Asia (PRSAD2)

The Session agreed to establish the Drafting Committee (DC) of the Second Periodic Report on the State of Acid Deposition in East Asia (PRSAD2). The

members of the DC were also decided during the Session. The Session also agreed to dissolve the EG on Preparation of PRSAD2 upon establishment of the DC.

- 6) Consideration of the Report of the EANET Regional Scientific Workshop on Acid Deposition in East Asia 2009 for PRSAD2
 - 7) Consideration of the Draft Mid-Term Report on Implementation of the Strategy on EANET Development (2006-2010) from scientific and technical viewpoints
 - 8) Consideration of the Draft Medium Term Plan (MTP) for EANET (2011-2015) from scientific and technical viewpoints
 - 9) Consideration of research activities and other scientific activities on acid deposition including collaboration with regional/international initiatives; and
 - 10) Consideration of future activities of EANET
 - 11) Updates on the activities of other regional and international initiatives on acid deposition and transboundary air pollution
15. On 20 April 2010, the Secretariat sent an invitation letter to all NFPs of EANET participating countries to host the Tenth Session of the Scientific Advisory Committee Meeting (SAC10). Since the Secretariat did not receive any offer from the participating countries, it was decided that the SAC10 be held in Pattaya, Thailand on 13-15 October 2010.

III-2 Intergovernmental Meeting of EANET (IG)

16. The Intergovernmental Meeting (IG) of EANET held its Eleventh Session in Bangkok, Thailand on 19-20 November 2009. The Session made decisions and guidance on the implementation of EANET activities. The details are provided in the document EANET/STM 11/4/2.
17. The Session endorsed the proposal to establish an Expert Group on Preparation of the Technical Manual for Air Concentration Monitoring. The Chairperson is Dr. Duong Hong Son, Vietnam. The membership has not been decided yet.
18. The Session also endorsed the proposal to dissolve the Expert Group on Preparation of the Second Periodic Report on State of Acid Deposition in East Asia (PRSAD2) following the information on the Establishment of the Drafting Committee for the PRDSA2.

III-3 Working Group on Future Development of EANET (WGFD)

19. The Ninth Session of the WGFD (WGFD9) was held in Pattaya, Thailand on 7-8 April 2010. The Session discussed the National Procedures of the Participating Countries and Modalities of the Signature for the Instrument of EANET, Draft Explanatory Note for Obtaining the Signatures for the Instrument, Draft Report on the Review of

Performance of the Secretariat and the Network Center (2008-2009), Draft Medium Term Plan for EANET (2011-2015) and Draft Second Report on Future Development of EANET and the Draft Procedures and Guidelines for Voluntary Financial Contributions to EANET for 2011-2013.

III-4 Task Forces and Expert Groups established under SAC

20. The NC has continued its task as the Secretariat of the Task Forces and Expert Groups (TFs/EGs) since the Ninth Session of the Intergovernmental Meeting (IG9) held in November 2007. The NC contacted the Chairpersons of the TFs/EGs to discuss on dates, agenda of the second meeting and also membership of the TFs/EGs as appropriate. The latest Chairpersons and members of the TFs/EGs, and dates of their meetings are attached as Annex 1.

21. After STM10, the following TFs/EGs meetings were held to discuss the draft TOR, membership, important issues of each TF or EG in accordance with the TOR, future plan, etc.
 - Second Meeting of the Expert Group on Revision of Technical Manual on Wet Deposition Monitoring (1-2 October 2009, Niigata, Japan)
The session decided to submit the final draft of the revised technical manual to the SAC10 for endorsement.
 - Second Meeting of the Task Force on Research Coordination (13 October 2009, Tsukuba, Japan)
 - Second Meeting of the Task Force on Monitoring for Dry Deposition (14 October 2009, Tsukuba, Japan)
 - Third Meeting of the Expert Group on Dry Deposition Flux Estimation (24-25 June 2010, Niigata, Japan)
The session decided to submit the final draft of the technical manual to the SAC10 for endorsement.
 - Third Meeting of the Expert Group on Revision of Technical Manual on Inland Aquatic Environment Monitoring (12-13 July 2010, Niigata, Japan)
The session decided to submit the final draft of the revised technical manual to the SAC10 for endorsement.
 - Third Meeting of the Task Force on Monitoring for Dry Deposition (26-27 July 2010, Niigata, Japan)
The session decided to submit the final draft of the “Draft Strategy Paper on Future Direction of Monitoring for Dry Deposition of EANET (2011-2015)” to the SAC10 for consideration and endorsement.
 - Third Meeting of the Task Force on Soil and Vegetation Monitoring (28-29 July 2010, Niigata, Japan)

The session decided to submit the final draft of the “Draft Guideline for Catchment-scale Monitoring in East Asia” to the SAC10 for consideration and endorsement.

III-5 Drafting Committee (DC) for the PRSAD2

22. Based on the discussion at SAC9, the First Meeting of the Drafting Committee (DC1) for the PRSAD2 was held on 22-23 April, 2010 in Niigata, Japan. The meeting was attended by the DC members or their alternates from 13 participating countries. The DC1 decided the Table of Contents of Part I (Regional Report) and Part II (National Report), and designated the lead author(s) and contributing authors of each chapter. The DC1 also decide the implementation plan for the PRSAD2.
23. Based on the result of DC1, the First Lead Authors’ Meeting of the Drafting Committee (DC) for the PRSAD2 was held on 28-29 June, 2010 in Niigata, Japan. The meeting was attended by the Lead author members and contributors from participating countries. The meeting elaborated the Structure and contents of PRSAD2 including the lead author(s) and contributing authors of each chapter, Implementation plan for PRSAD2.

Regional Scientific Workshop on Acid Deposition in East Asia 2009

24. As the first step to develop the PRSAD2, the Regional Scientific Workshop on Acid Deposition in East Asia 2009 was held back-to-back with the SAC9 on 12-13 October 2009 in Tsukuba, Japan to discuss the “Analysis of the current state and long-term trends of wet and dry deposition”, “Modeling analysis of regional air pollution in East Asia”, “Results of studies on ecological and human health impacts of acid deposition and related air pollutants”, etc. The members of the SAC were also invited to attend this workshop.

IV. INTERNATIONAL COOPERATION - PARTICIPATION IN MEETINGS AND WORKSHOPS RELATED TO EANET

IV-1 Long-Range Transboundary Air Pollutants in Northeast Asia (LTP)

25. The NC has been participating in the International Joint Research of LTP between Korea, China, and Japan. The NC representatives attended the 12th Expert Meeting for Long-range Transboundary Air Pollutants in Northeast Asia, organized by the National Institute of Environmental Research (NIER), Republic of Korea, and held in Cheju, Republic of Korea on 10-12 November 2009. The reports on monitoring and modeling activities in each country were presented by the experts of three countries.

IV-2 Meeting of the Joint Forum on Atmospheric Environment in Asia and the Pacific

26. The Secretariat and the NC attended the “Meeting of the Joint Forum on Atmospheric Environment in Asia and the Pacific” which was held in Bangkok, Thailand on 10-11 March 2010. The meeting was organized by the United Nations Environment Programme (UNEP) and participated in by the representatives of EANET and Malé Declaration on Control and Prevention of Air Pollution and its Likely Transboundary Effects for South Asia participating countries and other regional networks/programmes such as Association of Southeast Asian Nations (ASEAN) Secretariat, Central Asian Environment Convention Secretariat, Pacific Regional Environment Programme (SPREP) Secretariat, and South Asia Cooperative Environment Programme (SACEP) Secretariat, Clean Air Initiative Asia (CAI-Asia), Institute for Global Environmental Strategies (IGES), Stockholm Environment Institute (SEI-York) and resource persons. The participants adopted the revised “Joint Plan for Joint Activities on Air Pollution in Asia and the Pacific”.

IV-3 Malé Declaration on Control and Prevention of Air Pollution and its Likely Transboundary Effects for South Asia

27. The Secretariat and the NC attended the First Meeting of the Task Force on Future Development of the Malé Declaration on Control and Prevention of Air Pollution and its Likely Transboundary Effects for South Asia held on 2-3 August 2010 in Pathumthani, Thailand. The meeting discussed the Draft Sustainable Financial Mechanism for Male’ Declaration (MD), Draft Feasibility Report on the Establishment of Regional Technical Centers, Draft Resolution at the Ministerial meeting and so on. The Secretariat and the NC presented the experiences of EANET on “Financial Arrangement of EANET” and the “Instrument for EANET” as well as “Experience of ACAP/ADORC as a Network Center for EANET”.

IV-4 Ministerial Regional Forum on Environment and Health in South-East and East Asian Countries

28. The Secretariat and the NC attended the 2nd Ministerial Regional Forum on Environment and Health in South-East and East Asian Countries held on 14-15 July 2010 in Jeju, Republic of Korea and disseminated information on progress of EANET through the EANET posters, etc. The Jeju Declaration was adopted and urge the member countries to consider establishing sustainable and effective mechanisms to finance the operation of the Forum. Malaysia proposed to be the host of the 3rd Ministerial Meeting in the next 3 years (2013). The forum is potentially effective to be able to solve the environment and health problems in East Asia.

IV-5 Model International Workshop on Atmospheric Modeling Research in East Asia

29. International Workshop on Atmospheric Modeling Research in East Asia was held on 18-19 March 2010 in Dalian, China. Based on the outcomes at the Model Inter-Comparison Study (MICS) workshops, the International Workshop on Atmospheric Modeling Research in East Asia focuses on (i) current modeling analysis results of air pollution and atmospheric deposition in East Asian region, (ii) discussion on future modeling researches in East Asian region, and research activities of MICS Asia Phase III, etc. were discussed. In order to discuss these agenda, the workshop invited modeling researchers in Asian countries as well as members of MICS-Asia.

IV-6 CLRTAP Meeting

30. The NC attended the 33rd Steering Body Meeting to the Cooperative Programme for Monitoring and Evaluation of the Long-range Transmission of Air Pollutants in Europe (EMEP) held by United Nations Economic Commission for Europe (UNECE) at the United Nations Office at Geneva, Switzerland on 7-9 September 2009. The NC introduced the recent progress and achievements of EANET. Continuous cooperation between EMEP and EANET was also discussed.
31. The NC attended the 27th Session on the Executive Body for the Convention on Long-range Transboundary Air Pollution (EB-CLRTAP) held on 14-18 December 2009 in Geneva, Switzerland and presented the recent activities of the EANET and exchanged information and views on transboundary air pollution issues.
32. The NC attended the Workshop of Task Force on Hemispheric Transport of Air Pollutants (TF HTAP) under the European Monitoring and Evaluation Programme (EMEP) held on 14-16 June 2010 in Brussels, Belgium and exchanged information on the hemispheric air pollution issues.
33. The NC attended the 26th Task Force Meeting of International Co-operative Programme on Assessment and Monitoring of Air Pollution Effects on Forests (ICP Forests), UNECE, which was held from 29 May to 1 June 2010 in Garmisch-Partenkirchen, Germany, and presented the recent progress of ecological monitoring in EANET..

V. COMMUNICATION WITH PARTICIPATING COUNTRIES AND OTHER RELEVANT AGENCIES

V-1 Communication with participating countries, etc.

34. The Secretariat received communications from some National Focal Points (NFPs) regarding a few changes on institutional bodies of EANET in their respective countries, e.g. NFPs, SAC members, etc. from time to time and circulated this information to all concerned.
35. The Secretariat and the NC maintained close communication with the participating countries in all related activities of EANET and relevant international organizations such as United Nations Economic Commission for Europe (UNECE), etc.
36. The NC also communicated with participating countries regarding scientific and technical issues to improve monitoring and assessment of acid deposition in the region.

VI. CENTRAL COMPILATION, EVALUATION, STORAGE AND DISSEMINATION OF DATA AND RELEVANT INFORMATION

37. The NC published the Data Report 2009 in November 2009 and distributed it to NFPs, National Centers, SAC members and other relevant organizations in January 2010. All of the participating countries have already submitted their 2009 monitoring data to the NC. The NC is in the process of checking and verifying the data.
38. In accordance with the Detailed Mechanism of Article 4 of the Procedures on Data and Information Disclosure for EANET, all the EANET monitoring data up to 2007 were disclosed outside of EANET in January 2010. The raw data of 2008 will be disclosed in January 2011.

VII. STRENGTHENING THE CAPACITY IN THE PARTICIPATING COUNTRIES

VII-1 Dispatch of technical missions

39. After STM10, the NC dispatched technical missions to Malaysia (August - September 2009), Russia (September 2009), Myanmar (November 2009), Philippines (January 2010), Cambodia (February 2010) and Lao PDR (March 2010) to exchange information, provide technical advice and assess the suitability of proposed EANET monitoring sites. The mission members also checked the condition of the instruments provided to countries. (Ref. Annex 2: Summary of Technical Missions of the NC since STM10)

VII-2 Implementation of the technical cooperation programs

40. With financial support from MOE, Japan, the NC under its technical cooperation program, provided assistance to Cambodia, China, Lao PDR, Mongolia, Myanmar and Vietnam in 2009 and 2010 for their monitoring activities.

VIII. IMPLEMENTATION AND COORDINATION OF QA/QC ACTIVITIES

VIII-1 EANET Inter-laboratory Comparison Projects

41. The NC published the Report of Interlaboratory Comparison Project 2008 comprising the 11th Inter-laboratory comparison project on wet deposition, the 4th Inter-laboratory comparison project on dry deposition (filter pack method), the 10th Inter-laboratory comparison project on soil and the 9th Inter-laboratory comparison project on inland aquatic environment, and distributed it to the participating laboratories in January 2010.
42. The NC distributed samples for the 12th Inter-laboratory comparison project on wet deposition, the 5th Inter-laboratory comparison project on dry deposition (filter pack method), the 11th Inter-laboratory comparison project on soil and the 10th Inter-laboratory comparison project on inland aquatic environment to the participating countries in October 2009. Most of the participating countries have submitted the results of the projects to the NC.
43. Several EANET laboratories in Japan, Philippines, Russia, Thailand and Viet Nam also participated in the international inter-comparison 2009 organized by the Convention on Long-range Transboundary Air Pollution (CLRTAP) International Cooperative Programme on Assessment and Monitoring of Acidification in Rivers and Lakes (ICP-Waters), etc.

IX. IMPLEMENTATION OF TRAINING ACTIVITIES

IX-1 Questionnaire Survey for Training Activities 2009

44. In July 2010, the NC implemented the annual questionnaire survey on training activities carried out by the participating countries. The information gathered on training requirements and suggestions on new training areas are useful for planning of the future training activities of EANET. The results including the requests on EANET training activities from the participating countries were summarized as Annex 3.

IX-2 Japan International Cooperation Agency Training Course on EANET

45. Japan International Cooperation Agency (JICA) training course, “The Acid Deposition Monitoring Network in East Asia 2009” was held from 27 September through 12 December 2009 in Kobe and some other places in Japan. Six trainees from five EANET participating countries, namely Cambodia, Lao PDR, Myanmar, Thailand and Vietnam attended this course. Several lectures were delivered by the NC staffs. During the visit of JICA trainees to Niigata, the NC presented lectures and demonstrated practices on acid deposition monitoring of EANET.
46. The NC maintained close communication with the organizers of the JICA training course on the curriculum by attending the meetings of the steering committee and briefing them on EANET activities regularly. The next training course will be carried out from 17 October to 18 December 2010 in Kobe, Japan. This year, trainees from some EANET participating countries, namely Cambodia, China, Lao PDR, Myanmar, Thailand and Vietnam will be able to apply this course. The General Information (GI) was already sent to the countries.

IX-3 JICA Third Country Training Course

47. The JICA Third Country Training Course to be held in 2011 is now being discussed among the relevant organizations in Japan and Thailand including the NC, Pollution Control Department (PCD) and Environmental Research and Training Center (ERTC).

IX-4 EANET Individual Training at the NC

48. One trainee each from China, Indonesia and Vietnam were selected to participate in the EANET individual training at the NC from 1 through 26 February 2010. They received training on wet deposition, dry deposition, soil/vegetation and inland aquatic environment monitoring, and data management. The next course is planned in late 2010.

X. RESEARCH ACTIVITIES

49. The research activities of EANET are important to evaluate the environmental impacts of acid deposition on the region’s diverse ecosystem, to improve the monitoring methodologies, and develop analytical methods suitable for East Asia. NC performed research activities with consideration of the regional characteristics.

X-1 EANET Research Fellowship Program

50. On 5 June 2009, the NC sent a letter to NFPs and SAC members inviting applicants for

the research fellowship in 2009. In response to the invitation letter, the NC received 7 applications from 3 countries namely Lao PDR, Mongolia and Thailand. Based on the procedures of the fellowship research program, the Selection Committee of the NC considered the proposed research plans submitted by the applicants and decided to invite one researcher from Thailand to conduct the research in the NC for two months. The research topic was “Effect of haze episodes on wet and dry depositions at EANET sites in Thailand”.

51. In July 2010, the NC sent a letter to NFPs and SAC members inviting applicants for the research fellowship in 2010. The deadline of the application was 12 August 2010.

X-2 Publication of the EANET Science Bulletin (Volume II)

52. In order to share research findings among the participating countries, the NC plan to publish the EANET Science Bulletin biennially. Therefore, NC sent invitation to the participating countries to submit relevant research reports of scientists. The deadline for submission was by the end of August 2010. The EANET Science Bulletin (Vol. II) will be submitted to SAC10 for endorsement.

X-3 EANET high priority research projects

53. The NC has started the implementation of the following three EANET high priority research projects with the leaders of the projects. Implementation plans of these projects were sent to the SAC members in June 2009. The third one was almost finished, but other two projects are still ongoing. The progress of the projects will be reported to the SAC meeting.
 - Aerosol Deposition Studies in Forests for Improvement of Estimation Method for Dry Deposition in Thailand
 - Feasibility Study on Low Cost Methodologies for Monitoring Air Concentrations with Thailand, China and Russia
 - Analysis of Existing Data for Improving the Understanding of the Status of Acidification in East Asia

X-4 Joint research project on catchment analysis with Thailand, Malaysia and Japan

54. Catchment analysis is one of the issues described in the Strategy Paper for Future Direction of Soil, Vegetation and related Ecosystems Monitoring of EANET (2009-2014). The NC has implemented the joint research project on catchment analysis in Thailand with the Royal Forest Department (RFD) and ERTC, in Malaysia with the Malaysian Meteorological Department (MMD), and in Japan with Niigata Prefecture and Niigata University. Part of the projects is supported financially by the Global

Environment Research Fund of the MOE, Japan. Monitoring on input (deposition) and output (stream water) fluxes in/from a small catchment area, and analyses on other biogeochemical aspects has been carried out continuously, and nutrient dynamics and acid deposition impacts in the area would be estimated. The experience obtained through three joint projects above will be informative for development of guidelines on catchment-scale monitoring. Moreover, the data is being utilized for development of catchment-scale biogeochemical model.

XI. BUILDING PUBLIC AWARENESS

XI-1 Joint project on environmental education activities

55. The NC has undertaken a joint project with Thailand to support their environmental study activities on acid deposition in schools. The results of the project by the school children from one school in Bangkok and two elementary schools in Niigata Prefecture, such as measurements of the concentration of nitrogen oxides, dust around their schools and the pH value of rainwater were reported at the Workshop on Public Awareness for Acid Deposition Problems, etc. The Environmental Conference of School Children 2010 was held in February 2010 with participation of school children from two elementary schools in Bangkok, Thailand and four elementary schools in Niigata, Japan.
56. The NC made a plan for a similar joint project with China to support the environmental study activities on acid deposition in schools of China in 2010 after the NC mission to Chongqing, China in June 2010 to discuss detailed plan. An elementary school in Chongqing, China and elementary schools in Niigata Prefecture, Japan will participate in the joint project.

XI-2 EANET website

57. New information has been included on the EANET web site such as publication (e.g. Second Report for Policy Makers, Fact Sheets, Data Report 2008 and Inter-laboratory comparison projects 2008), EANET Newsletter, EANET meeting reports, monitoring site information, and so on.
58. In accordance with the renaming of the organization, former ADORC website was renewed as the new ACAP website on 30 June 2010. The new ACAP is as follows:
URL: <http://www.acap.asia/index.html>

XII. EVALUATION OF IMPLEMENTATION OF THE ACTIVITIES IN THE

STRATEGY ON EANET DEVELOPMENT (2006-2010)

59. As of end of 2009, 9 out of the 43 projects have been completed. Table 1 below shows the number of outputs from implementing the Strategy and other existing activities of the NC (and the Secretariat) in each year compared with the expected number outputs. A tally of the total number of manuals, reports, procedures, proceedings, etc. each year indicated that between 89% to 93% of the expected number of outputs had been achieved in 2006-2009. The publication of the EANET Science Bulletin in 2008 was an additional output of EANET. One activity could not be implemented due to decisions made by the IG related to recent developments in EANET.

Table 1: Outputs from implementing the Strategy and other existing activities

Outputs	2006		2007		2008		2009	
	Expected	Actual	Expected	Actual	Expected	Actual	Expected	Actual
Strategy Papers	-	-	-	-	1	1		
Plans	-	-	-	-	-	-		
Technical Manuals	1	1	2	2	2	1	1	1
Scientific and Technical Reports	8	8	8	8	9	9	9	8
Recommendations	-	-	1	-	1	1	1	-
Procedures	-	-	2	1	-	-		
Proceedings	9	9	9	9	9	8	7	7
Public Awareness Materials and EANET Newsletters, Scientific Bulletins	7	6	2	2	4	4	5	5
Others	3	2	3	2	-	-	-	-
Total	28	26 (93%)	27	24 (89%)	26	24 (92%)	23	21 (91%)

60. The implementation period for the expected results and outputs was adjusted taking into consideration various factors. Whenever a change of the dates is required, the new implementation years were inserted in brackets below the original implementation period in Annex 4 as a Reference. A summary of the implementation status is shown in Table 2 below:

Table 2: Implementation status of the activities of the Strategy

Number of activities ahead of schedule	1
Number of activities on schedule	27
Number of activities with adjusted implementation dates	14
Number of activities deferred for implementation under the next Medium Term Plan	1
Total	43

Annex 1

Members and meeting dates of Task Forces and Expert Groups under SAC

Name	Members	3 rd Meeting
Task Force on Monitoring for Dry Deposition	Dr. Cho Seog-Yeon (R. of Korea) - Chairperson Mr. Chhek Roth/ Mr. Kong Savuth (Cambodia) Dr. Li Jianjun (China) Ms. Rina Aprishanty (Indonesia) Dr. Shiro Hatakeyama (Japan) Ms. Setouvanh Phanthavongsa (Lao PDR) Ms. Maznorizan Mohamad (Malaysia) Ms. B. Altantuya (Mongolia) Ms. Htwe Htwe Win (Myanmar) Engr. Jean N. Rosete (Philippines) Dr. Chang Lim-Seok (Republic of Korea) Dr. Tamara V. Khodzher (Russia) Dr. Pojanie Khummongkol (Thailand) Dr. Duong Hong Son (Vietnam)	26-27 July 2010 in Niigata, Japan
Task Force on Soil and Vegetation Monitoring	Dr. Wilfredo M. Carandang (Philippines) - Chairperson Mr. Haijiang Liu (China) Dr. Masamichi Takahashi (Japan) Dr. Nik Abdul Majid/Dr. Ahmad Makmum Abdullah (Malaysia) Dr. Apolonio M. Ocampo (Philippines) Dr. Kim Hye-Jin (Republic of Korea) Dr. Tatiana A. Mikhailova (Russia) Mr. Bopit Kietvuttinon (Thailand) Dr. Hiroyuki Sase (ACAP)	27-28 July 2010 in Niigata, Japan
Task Force on Monitoring Instrumentation	Prof. Wang Ruibin (China) - Chairperson Mr. Chhek Roth (Cambodia) Mr. Zheng Haohao (China) Ms. Novy Farhani (Indonesia) Dr. Tsuyoshi Ohizumi (Japan) Ms. Setouvanh Phanthavongsa (Lao PDR) Ms. Siniarovina Urban (Malaysia) Mr. Barkhasragchaa Baldorj (Mongolia) Ms. Htwe Htwe Win (Myanmar) Engr. Arturo Bongco /Engr. Robert Co (Philippines) Dr. Ahn Joon-Young (Republic of Korea) Dr. Sergey Paramonov (Russia) Ms. Wassana Toruksa (Thailand) Mr. Tran Son (Vietnam)	No plan

Name	Members	3 rd (1 st) Meeting
Task Force on Research Coordination	Dr. Sergey Gromov (Russia) - Chairperson Prof. Wang Ruibin (China) Dr. Hiroshi Hara (Japan) Prof. Katsunori Suzuki (Japan) Dr. Elizabeth Phillip (Malaysia) Dr. Cho Seog-Yeon (R. of Korea) Dr. Wilfredo M. Carandang (Philippines) Dr. Tamara Khodzher (Russia) Dr. Pojanie Khummongkol (Thailand) Dr. Duong Hong Son (Vietnam) Dr. Hajime Akimoto (ACAP)	14 October 2010 in Pattaya, Thailand (during SAC10)
Expert Group on Dry Deposition Flux Estimation	Dr. Pojanie Khummongkol (Thailand) - Chairperson Dr. Kazuhide Matsuda (Japan) Dr. Kentaro Hayashi (Japan) Dr. Akira Takahashi (Japan) Dr. Hiromasa Ueda (Japan) Dr. Chang Lim-Seok (R. of Korea)	24-25 June 2010 in Niigata, Japan
Expert Group on Revision of Technical Manual on Wet Deposition Monitoring	Dr. Hiroshi Hara (Japan) - Chairperson Dr. Tsuyoshi Ohizumi (Japan) Mr. Izumi Noguchi (Japan) Ms. Leong Chow Peng (Malaysia) Ms. Bulgan Tumendemberel (Mongolia) Dr. Ahn Joon-Young (R. of Korea) Dr. Hathairatana Garivait (Thailand) Dr. Dave Mactavish (WMO/Canada)	No plan
Expert Group on Revision of Technical Manual on Inland Aquatic Environment Monitoring	Dr. Tamara Khodzher (Russia) - Chairperson Dr. Simon S. Brahmana (Indonesia) Dr. Senichi Ebise (Japan) Dr. Haruo Fukuhara (Japan) Dr. Vu Van Tuan (Vietnam) Prof. Seiichi Ohta (Japan) Prof. Tomonori Kawakami (Japan) Dr. Hiroyuki Sase (ACAP)	12-13 July 2010 in Niigata, Japan
Expert Group on Preparation of Technical Manual for Air Concentration Monitoring	Dr. Duong Hong Son (Vietnam) – Chairperson (Other members will be selected soon.)	Not decided yet (1 st Meeting)

Annex 2

Summary of Technical Missions of the NC since STM10

Country	Duration	Major Activities/Outcomes of the Mission
Malaysia	31 Aug. -7 Sep. 2009	The mission visited the organizations relevant to EANET and discussed possibility of future research collaboration. The mission also visited the EANET monitoring site at Danum Valley (DV), Sabah and exchanged information and views on EANET activities with the staff in charge.
Russia	6-11 Sep. 2009	The mission discussed the MOA of the Joint Research Project. It was contracted by ADORC and Limnological Institute (LIN). The mission visited LIN and discussed EANET activities in Russia. The Mission also visited two atmospheric monitoring stations and a monitoring site for inland aquatic environment.
Myanmar	23-27 Nov. 2009	The mission visited Department of Meteorology and Hydrology (DMH) to exchange information and views with the staffs of DMH, and visited the lab of DMH to hold a seminar of IC and pure water apparatus. The mission confirmed that new IC system installed by JICA can be operated without any problems.
Philippines	16-21 Jan. 2010	The mission requested moving positions of the wet-only sampler and the rain gauge of Mt. Sto Tomas site in order to remove obstruction to collection of the sample based on the site criteria because the distance between those instruments and the fence of 2 meters in height was less 2 meters. Regarding results of Inter-laboratory comparison projects 2008, the mission requested to select appropriate concentration range of standard solutions for every ion to measure. Although ozone monitor in Metro-Manila site has been broken, the data will be submitted as EANET data after it is repaired.
Cambodia	9-13 Feb. 2010	The mission requested to start filter-pack monitoring as soon as possible because almost one year has passed since they received necessary equipment and so on from the NC, and the monitoring equipment was installed appropriately to the Phnom Penh monitoring site. Cambodia decided to start filter-pack monitoring from 12 February 2010. The mission instructed all of necessary technical matters of the monitoring to the staff in charge again during the mission.
Lao PDR	21-25 Mar. 2010	The filter-pack monitoring has not been implemented yet though long time has passed since Lao PDR received necessary equipment and so on from the NC. The mission instructed all of necessary technical matters of the monitoring to the staff in charge again during the mission. With regard to the Inter-laboratory comparison projects 2008, since there are many flagged data, the mission confirmed the reasons including the contamination of pure water for the projects.

Annex 3

National Training Activities in the Participating Countries of EANET in 2009

Country	Title of Training course / Meeting	Duration	No. of Participants	Major Topics
Cambodia	None	-	-	-
China	Training on wet deposition monitoring and data reporting	11-12 November 2009 2 days	52	-Lecture on wet deposition sampling; -Lecture on QA/QC on laboratory analysis -Lecture on data reporting
	Training on wet deposition monitoring and data reporting	25-26 November 2009 2 days	74	-Lecture on wet deposition sampling -Lecture on QA/QC on laboratory analysis -Lecture on data reporting
Indonesia	Training on Inland Aquatic, Soil & Vegetation Analysis to Support The Acid Deposition Activities	20- 22 Oct, 2009 3 days	16	Inland aquatic , soil sampling & analysis
	Meeting of Acid Deposition Activity in 2009	1 day	16	To discuss about annual monitoring and data
	Workshop on Acid deposition and Impact Management	2 day	100	Introducing acid deposition activities to the students and public communities
	Meeting of Acid Deposition Activity in 2009	3 day	10	To arrange the publication of Acid deposition State in Indonesia (for Wet and Dry Deposition)
Japan	The training of atmospheric and traffic environment	29 September - 2 October 2009 4 days	89	-Atmospheric and traffic environment
	The training of equipment operation	24 June - 9 July 2009 12 days	43	- Equipment operation training
	The training of atmosphere monitoring	26 January - 6 February 2009 10 days	10	- Sampling/analytical methods for atmospheric monitoring
	The training of acid deposition monitoring for officials of municipalities	20-21 May 2009 2 days	15	- General consideration of acid deposition - Sampling/analytical methods for acid deposition monitoring
	Audit (Inspection and guidance) of National monitoring sites (including EANET monitoring sites)	January – December 2009 33 days	51	-Site and laboratory audit -Wet and dry deposition sites -Soil and vegetation Monitoring sites -Sites on inland aquatic environment

Country	Title of Training course / Meeting	Duration	No. of Participants	Major Topics
Lao PDR				
Malaysia	Basic Course for Meteorological Officer – “Introduction on Air Pollution”	21-22 July 2009 2 days	53	-Air Pollution Monitoring and Instrumentation -Acid Deposition -GAW Activities
	Hands-on training on maintenance and calibration of the air pollution instrumentation	5 times during the visit to the site	35	- Wet-Only System and Acid Precipitation System - High Volume Air Sampler
Mongolia	Yearly seminar for environmental monitoring	March 2009 10 days	11	-Water and soil chemical analysis, Operation of some sampling and analytical equipments
Myanmar	System Installation and operation for Ion Chromatograph	27-31 July 2009 5 days	10	-Ion Chromatography Equipment -Rain water Chemical Analysis
	Ultra pure water System	3-7 August 2009 5 days	10	-Production of Ultra pure water for glass washing, electrochemical analysis and Standard preparation
	Training on sampling and analysis method for Wet deposition monitoring	24-27 November 2009 4 days	5	-Introduction of EANET - Acid deposition process - Methodologies for sampling and analysis of Wet deposition monitoring - QA/QC and data reporting - Practice on sampling and analysis
	World Environment Day	5 June 2009 1day	100	- Acid deposition monitoring in Myanmar (Paper reading session) - Air quality monitoring in Yangon City (Paper reading session)
	Opening session of Training on sampling and analysis method for Wet deposition monitoring	24 November 2009 (1/2)day	17	-Wet deposition monitoring and analysis

Country	Title of Training course / Meeting	Duration	No. of Participants	Major Topics
Philippines	National Training/Hands-on Exercises on Ambient Air Monitoring	26-27 October 2009 2 days	40	-Actual sampling, siting consideration (EPA Part 58), Calibration of TSP
	National Training/Hands-on Exercises on Stack/Source Monitoring	28-29 October 2009 2days	40	-Method 1 to 5 – Particulates, Method 6/8 SO _x , Method 7, NO _x , Calibration of stack equipment such as pitot tube, thermocouple, console, etc.
	Lecture/Workshop on Satellite Monitoring, Receptor and Trajectory Modeling	30 October 2009 1 days	40	-Satellite monitoring on NO ₂ , SO ₂ and O ₃ . Hysplit modeling, meteorological parameters used in air pollution monitoring
	Meetings/discussions	continuing	20	-Establishment of mass emission rate standards for SO ₂ –stationary
	Seminar	3 days	30	-Motor vehicle emission limits for EURO 2
	Hands-on/actual tests on power plants for CEMS audit for Sox, NO _x	2 days	3	-Actual conduct of RATA test for CEMS
	(Seminar/Workshop on Continuous Emission Monitoring System (CEMS) of large industrial sources (SO _x , NO _x , O ₂ , CO ₂ , CO))	(20-21 Oct. 2008 2 days)	(40)	(CEMS Performance Specifications of SO _x , NO _x , CO ₂ , CO, CEMS Quality Assurance of 40 CFR Part 60 and Audit)
	(Training on Ambient Air Monitoring on Quality Assurance Project Plan/Siting Criteria)	(22-23 October 2008 2 days)	(40)	(Quality Assurance Project Plan Per EPA Parts 58 and 50, Checklist for Network inspection on equipment, meteorological, and calibration)
	(Overview lectures on Air Dispersion Modeling)	(24 October 2008 1 days ((20)	(Screen 3, AUSPLUME, and meteorological data)
R. of Korea				

Country	Title of Training course / Meeting	Duration	No. of Participants	Major Topics
Russia	Training on sampling and analysis method for wet and dry deposition monitoring	March, July, October 2009 Duration: 3 40 days	10	-Acid deposition monitoring; -Analysis of wet and dry deposition monitoring; -QA/QC activity; -Practice on sampling and analysis - Using the high-performance liquid chromatography for analysis of chemical compounds in precipitation and aerosol
	Annual training course on the surface water analysis	June 2009 10 days	12	-Update of practical knowledge on QA/QC in surface water monitoring (sampling, analysis, data processing and reporting); In-situ intergroup and inter-laboratory comparison on analysis of major cations and anions of deep water samples taken in Lake Baikal
	Annual Scientific Meeting "Aerosols of Siberia"	24-27 November 2009 4 days	75	-Assessment of atmospheric pollution of Siberia and Far East of Russia, atmospheric compounds including greenhouse gases, biological aerosol, natural emissions, mathematical modeling of the atmospheric transport and diffusion
	Seminar for the control of the analyses quality in the analytical laboratories	17-20 February 2009 4 days	20	-Warning quality control -Assessment of quality of analytical results -Ensure the reliability of analytical results
	Seminar for the control of the chemical analyses quality	18-22 May 2009 5 days	25	-Control of analyses quality taking into account new requirements of the standards
Thailand	Third Country Training Course on Control Strategy and Mitigation Measures of Acid Deposition	January 19- February 6 2009 18 days	19	-General information of air pollution - Atmospheric chemistry - Air quality management -Air pollution control technology - Environmental economy -Acid deposition control technology
	Training on operation and maintenance of automatic air monitoring instrument	2 days	15	Theory and general information of instrument, operation and maintenance method
	The meeting of National Acid Deposition Monitoring Network Sub-committee	1 day/time 2 times	13	Consideration of EANET meeting documents, monitoring and inter-laboratory comparison data, the Instrument for Strengthening EANET, etc.
	The meeting with 6 universities for acid deposition monitoring data in 6 national monitoring sites	9 November 2009 ½ day	12	Consideration of acid deposition monitoring data in 6 national monitoring sites which monitored by 6 universities

Country	Title of Training course / Meeting	Duration	No. of Participants	Major Topics
Vietnam	Capacity building for air quality monitoring using passive sampling method	February - May 2009	32 come from environmental research units and management organizations	Passive sampling technology/ Application of passive sampling method in air quality monitoring/ Implementation of air quality monitoring activity in the site study of Northern Hanoi.
	User training on GCMS	19-23 October 2009	4	Use GCMS for methane analysis

Training Requirements

Country	Requirements
Cambodia	(1) Basic training on acid deposition monitoring (2) Basic training on wet and dry and its effects
Indonesia	(1) QA/QC, Maintenance of Ion Chromatograph
Malaysia	(2) Basic training on acid deposition monitoring (3) Interpretation and data analysis including the link of the impact studies of acid deposition
Mongolia	(1) Chemical analysis for air samples
Myanmar	(1) Basic training on acid deposition monitoring (2) Specific topic on training on analysis of IC in order to check output and accuracy
Philippines	(1) Use of satellite monitoring to correlate the ground level concentration of parameters of EANET (2) Training on continuous automatic monitor of sulfur dioxide, nitrogen dioxide, ozone, and acid deposition air parameters. (3) Use of modeling to determine transport, trajectory and etc.
Russia	(1) Procedures of the Passive sampling on Dry Deposition Monitoring
Thailand	(1) Air pollution/acid deposition and impact assessment analysis
Vietnam	(1) Basic training on acid deposition monitoring for new site and new Laboratory (2) Wet Deposition Monitoring as a specific topics

Suggestions in EANET Training Activities

<ol style="list-style-type: none"> 1. Providing the resource person and funding of the training courses. 2. Training for model application on urban, national and regional scales and emission inventories are necessary. 3. Duration of individual training course should be extended. 4. Review of existing emission inventories among regional and countries to establish harmonized emission factors to be used in mobile, stationary and area, etc. 5. Additional air parameters to consider automatic or continuous monitoring. 6. Data interpretation to determine whether data sets are still representative and in any case, if new major sources have located in the area, a new database would be required. 7. Mapping within the EANET monitoring stations. 8. The training that can provide a good understanding and action on air pollution (such as
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ozone)/ global warming/ acid deposition problems and the linkage to environmental impact.

9. Pay more attention to the procedures of the samples preparation and analysis of exposed filters, to the calculations of the results of analysis.
10. More Indonesian participants to join the group training courses.

Annex 4 (Reference)**Status of Implementation of the Activities of the Strategy on EANET Development (2006-2010)****i. Promotion of acid deposition monitoring**

No.	Activities to be undertaken	Targets	Expected results and Outputs		Implementation period	Status as of end of December 2009
(1)	Improvement of implementation of all required monitoring items with necessary data completeness and accuracy	To provide complete sets of high quality monitoring data in terms of accuracy, complete (up to 100%) coverage of all mandatory parameters and appropriate application of sampling/analytical equipment in all the participating countries	[1]	Report on improvement of data completeness and on application of sampling/analytical equipment at the EANET monitoring sites (including recommendation for improvement of equipment and proposal on cooperation with equipment makers for technical support and maintenance of equipment)	2007-2008 (2007-2010)	A report on activities to improve data completeness in EANET has been prepared by NC and was submitted to SAC9 in 2009. Discussions with equipment manufacturers to provide more technical support to countries using their brand of equipment are on-going.
			[2]	A set of Standard Operating Procedures (SOPs) for operational monitoring	2006-2008 (2006-2007)	A manual and CD containing a set of SOPs were prepared by NC in 2007 and distributed to participating countries to provide guidance on preparation of national SOPs.
			[3]	Data sets of all the mandatory items to analyze spatial distribution and trends, and to estimate acid deposition fluxes for assessment of impact (e.g. critical load analysis, catchment analysis, etc.)	2006-2010	Data on wet and air concentration, soil and vegetation and inland aquatic environment monitoring from all EANET sites are compiled annually by NC and stored in the EANET database
(2)	Consideration and efforts on appropriate distribution of monitoring sites	To increase the density of monitoring sites	[4]	Establishment of new EANET sites	2007-2010	The number of EANET sites has increased from 49 wet, 38 dry, 26 soil and vegetation, 15 inland aquatic environment at beginning of 2006 to 56 wet, 47 dry, 28 soil and vegetation, 18 inland aquatic environment (Annex 2)

No.	Activities to be undertaken	Targets	Expected results and Outputs		Implement- ation period	Status as of end of December 2009
(3)	Development and application of monitoring methods for dry deposition considering current country-specific monitoring methodology	To ensure the implementation of improved/ modern methods for dry deposition (especially in tropical region) including estimation of dry deposition fluxes in at least three EANET countries (as research studies)	[5]	Technical Manual for dry deposition fluxes estimation prepared by Task Force on Dry Deposition Monitoring	2008-2010	The Technical Manual is being prepared by the Expert Group on Dry Deposition Flux Estimation and submitted to SAC for comments in 2009. The document will be ready for adoption in 2010.
			[6]	Estimation of dry deposition fluxes at the selected monitoring sites in selected EANET countries	2009-2010	The software to calculate dry deposition flux at selected sites in EANET countries is being prepared by NC following the recommended procedures in the Technical Manual on Dry Deposition Flux Estimation and shall be completed by 2010.
(4)	Consideration on possible application of less expensive methods of monitoring including passive samplers	To provide more extensive data sets on acid deposition in EANET	[1]	Recommendation on use of less expensive methods to reduce monitoring cost and increase numbers of monitoring sites	2007-2008 (2009-2010)	A high priority research project on “Feasibility study on low cost methodologies for monitoring air concentrations” was proposed by SAC in 2008 and endorsed by IG for implementation in 2009-2010. A report with recommendations will be prepared after 2010.
(5)	Review and revision of the monitoring Manuals including operation manuals of monitoring equipment	To provide participating countries with revised guidelines for monitoring	[7]	A decision on the revision of Technical Manuals: for Wet Deposition Monitoring of EANET, and for Monitoring on Inland Aquatic Environment	2007 (2007-2010)	A decision to revise the technical manuals was made in 2007 and SAC established 2 expert groups to carry out the tasks. A first draft of the revised technical manuals was submitted to SAC9 in 2009 for comments. The document will be ready for adoption in 2010.
(6)	Review of Strategy Paper for future directions of soil and vegetation monitoring	To clarify particular objectives, ways, and milestones for ecological monitoring	[8]	A revised Strategy Paper for Future Direction of Soil and Vegetation Monitoring of EANET	2007-2008	The Strategy Paper for Future Direction of Soil, Vegetation and related Ecosystem Monitoring of EANET (2009-2014) was prepared by the Task Force on Soil and Vegetation Monitoring and adopted by SAC in 2008.

No.	Activities to be undertaken	Targets	Expected results and Outputs		Implement- ation period	Status as of end of December 2009
(7)	Promotion of the future catchment monitoring in line with Strategy Paper	To provide the scientific data on effects of acidification on terrestrial ecosystem based on the elemental budget calculations	[9]	Guidelines/methodologies for the future catchment monitoring	2007-2010	The guidelines are being prepared by the Task Force on Soil and Vegetation Monitoring and will be completed by end of 2010 according to the revised strategy paper. The guidelines will be based on information obtained from studies conducted in Japan, Thailand and Malaysia funded by the Global Environment Research Funded for the Ministry of Environment, Japan.
(8)	Evaluation of monitoring data with application of approach for assessment of impacts (e.g. critical load analysis, catchment analysis, etc.)	To identify areas which has potential for damage by acid deposition	[10]	Identification of area or regions susceptible to acid deposition damages	2008-2010	An initial map showing the hotspots will be prepared by the Task Force on Soil and Vegetation Monitoring by 2010. This activity is expected to continue after 2010 with further updates and improvements of the initial map.

ii. Compilation, evaluation, storage and provision of data

No.	Activities to be undertaken	Targets	Expected results and Outputs		Implement- ation period	Status as of end of December 2009
(9)	Compilation and storage of monitoring data including assistance to participating countries on developing their national databases	To maintain the EANET database of monitoring data for support to reporting and scientific studies on acid deposition in East Asia	[11]	Databases of EANET monitoring data in NC and some participating countries	2006-2010 (2009-2010)	NC will communicate with participating countries to identify the individual country's needs.
(10)	Evaluation of appropriateness of monitoring data	Improvement of data quality by data verification	[12]	Establishment of data verification system	2007 (2007-2008)	The procedures have been established in NC. An update of the members of the verification groups was carried out in 2007-2008.

(11)	Promotion of access to monitoring data for data users	Provision of EANET data through Internet	[13]	Website for data downloads system and communication system.	2006-2010 (2009-2010)	NC provided the downloadable monthly data in excel format in the EANET web site. The download system of hourly data will be considered by the NC in 2010.
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iii. Promotion of quality assurance and quality control (QA/QC) activities

No.	Activities to be undertaken	Targets		Expected results and Outputs	Implementation period	Status as of end of December 2009
(12)	Evaluation of national QA/QC programs and their implementation	To review and develop national QA/QC programs of EANET	[14]	Progress report on performance of EANET monitoring in participating countries (including recommendation for QA/QC activities)	2008-2010 (2010)	A report with recommendations will be prepared by NC in 2010 for SAC endorsement.
(13)	Research on evaluation of inter-laboratory comparison project results to clarify and solve problems of laboratory analysis in the participating countries as well as for data quality assurance	To introduce measures for improvement of regular measurements by evaluating the results of inter-laboratory comparison projects on the regular phase	[15]	Report on the evaluation of inter-laboratory comparison tests in 2001-2005 and improvement of laboratory analysis	2007	An evaluation report of the inter-laboratory comparison projects from 2001 to 2005 with recommendations was prepared by NC and presented to SAC in 2007.

iv. Implementation of technical support and capacity building

No.	Activities to be undertaken	Targets		Expected results and Outputs	Implementation period	Status as of end of December 2009
(14)	Promotion of systematic training and education, and cooperation in training activities implemented by the participating countries and other relevant organizations	To improve training activities by considering feedback of trainees and using better training materials	[16]	Report on results of questionnaires on implementation of training initiatives in participating countries and by other relevant organizations	2006-2010	The questionnaire was revised in 2008 to obtain more comprehensive information from the participating countries and efforts have been made by NC to fulfill the training requirements of the countries. A summary of the questionnaire results are reported annually at STM, SAC and IG sessions.

			[17]	A set of training materials (textbooks, reviews of basic knowledge with exercises, special topic brochures)	2006-2010	A Textbook on Fundamental Methodology for Monitoring Wet Deposition in EANET was published in 2006. A set of environmental education tools will be prepared in 2010.
(15)	Promotion of technical support for monitoring in the participating countries	Improvement of capability for EANET monitoring in participating countries	[18]	Support to current EANET monitoring activities in participating countries	2006-2010	Technical missions to participating countries are made annually by NC. Equipment spares and consumables were provided as necessary. Two IC systems were provided to Cambodia and Lao PDR in 2006. The NC also made communications with countries to assist with instrument problems and monitoring issues. (Annex 2)
(16)	Promotion of technical assistance by other relevant organizations	Improvement of capability for EANET monitoring and policy making of the participating countries	[19]	Providing necessary equipment for national EANET monitoring by means of projects supported by external resources	2006-2010	An IC and pure water systems were provided to Myanmar in 2009 by JICA at the request of NC. Two capacity building workshops for policy makers of the participating countries were convened in 2007 and 2008, respectively by the Secretariat.

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

No.	Activities to be undertaken	Targets		Expected results and Outputs	Implement- ation period	Status as of end of December 2009
(17)	Preparation of periodic assessment reports on the state of acid deposition	To provide scientific assessment for the public, scientists and policy makers	[20]	The first periodic report (end of 2006)	2006	The first Periodic Report on the state of acid deposition in East Asia was prepared by SAC and adopted by IG in 2006.

			[21]	Preparation of the next periodic report	2009-2010 (2009-)	The Implementation Plan for the second Periodic Report was prepared by the Expert Group on Preparation for the second Periodic Report and it was adopted by SAC8 in 2008. The Drafting Committee was established in 2009 to start the tasks.
(18)	Studies for supporting assessment on the state of acid deposition by means of trend analysis, assessment indicators, numerical modeling, etc.	To provide scientific instruments for assessment of monitoring data such as trend analysis, assessment indicators, numerical modeling, etc.	[22]	Guidance on monitoring data application for assessment reports such as trend analysis, assessment indicators, numerical modeling and data presentation design	2007-2008 (before start of preparation of next periodic report) (2008-2010)	A high priority research project on “Analysis of existing data for improving the understanding of status of acid deposition in East Asia” was proposed by SAC in 2008 and endorsed by IG for implementation in 2009. A report of the project will be prepared by the end of March 2010.

vi. Promotion of research activities related to acid deposition problems

No.	Activities to be undertaken	Targets		Expected results and Outputs	Implement-ation period	Status as of end of December 2009
(19)	Consideration on general directions of research activities by SAC	Consideration and preparation of general directions of research activities in a transparent manner	[23]	Recommendation on general direction for research activities related to acid deposition problems in East Asia	2006-2008	A list of potential research activities was prepared by the Task Force on Research Coordination and presented to SAC in 2008. Three priority research projects were identified by SAC8 and approved by IG10 for implementation using EANET budget.

(20)	Promotion of inter-comparison studies and validation of existing models on acid deposition in East Asia	Clarification of the differences among related models and recommendations on the harmonization of models	[24]	Recommendation on improvement of regional atmospheric transport/chemistry/deposition models	2007-2010	The MICS-Asia project was initiated by NC and IIASA to develop a better understanding of the performance and uncertainties of CTMs applied in East Asia. The scientific papers on the studies are published in a special issue of Atmospheric Environment. A report was submitted to SAC9 and will be submitted to SAC10 in 2010.
			[25]	Support to initiatives of participating countries on atmospheric modeling and its application	2007-2010	The NC participated in the activities of the Long-range Transboundary Air Pollutants in Northeast Asia Project (LTP) initiated by Republic of Korea.

vii. Promotion of public awareness

No.	Activities to be undertaken	Targets	Expected results and Outputs		Implementation period	Status as of end of December 2009
(21)	Promotion of public awareness for EANET among the general public, policy makers, private sectors and local governments on acid deposition and its effects	To increase understanding and knowledge level of the general public, etc on acid deposition and its effects	[26]	Printed public awareness materials and updated e-Learning courses and Web-pages and provision of national workshops for the participating countries of EANET	2006-2010	A video and brochures on acid deposition were developed together with Myanmar in 2006. A guidebook on environmental education will be produced in 2010. The e-Learning course was updated in 2009 and the EANET homepage was improved in 2008-2009. National workshops on public awareness for acid deposition monitoring issues and problems were conducted in Cambodia, Lao PDR and Philippines in 2006, and Indonesia and Mongolia in 2009. In-country workshop on acid deposition issues was also held in Lao PDR and Myanmar in 2006 and 2007, respectively.

(22)	Efforts to help high-level policy makers to understand the importance of acid deposition problems in East Asia and EANET activities	To make high-level policy makers understand the importance of acid deposition problems in East Asia and EANET activities	[27]	Dissemination of information at a special session in high level meetings	2006 (2009-2010)	This event will be held in 2010.
			[28]	Dissemination of information at other regional meetings	2006-2010	Information on EANET is disseminated at all the regional/international meetings attended by the Secretariat and NC
			[29]	Second Report for Policy Makers "Clean Air for A Sustainable Future", November 2009	2008-2009	The Second Report for Policy Makers (RPM2) was prepared by the Secretariat and NC and was launched at IG11 in 2009.

viii. Other relevant activities including those for future development and new researches

viii-1. Modeling activities and emission inventories

No.	Activities to be undertaken	Targets	Expected results and Outputs		Implement- ation period	Status as of end of December 2009
(23)	Discussion on promotion of modeling activities and emission inventories	Clarification of future direction on modeling activities and emission inventories in EANET. Clarification of necessary measures to implement modeling activities and to develop emission inventories	[30]	Proposals on promotion of modeling activities and emission inventories	2007-2008 (propose for next MTP)	A proposal from SAC to establish an expert group for promotion of modeling activities and emission inventories was not approved by IG in 2007. It is proposed to implement this activity in the next Medium Term Plan (MTP).
(24)	Promotion of capacity building for model application on urban, national and regional scales	To enable interested participating countries to use existing models for their own objectives	[31]	Designation of suitable standard models of each scale for research/training application	2007 (2009-2010)	The NC will consult relevant experts on the designation of suitable models.
			[32]	Promotion of the training courses on application of the standard models including cooperation with other organizations	2006-2010	The NC provided training on the application of air pollution models during the JICA Training Course on EANET and JICA Third Country Training Course, to the EANET research fellows in 2007, and at the Individual Training Course in the NC in 2009 based on the request from participating countries. A training course on modeling is planned in 2010.

viii-2. Selection and review of priority substances to be assessed

No.	Activities to be undertaken	Targets	Expected results and Outputs		Implementation period	Status as of end of December 2009
(25)	Establishment of the framework for reviewing substances to be monitored including other air pollutants and monitoring parameters	To establish the framework for reviewing substances to be monitored and necessary parameters for regular monitoring as well as equipment for that purpose	[33]	Transparent framework for reviewing substances to be monitored	2006-2007 (2008)	In 2008, IG decided that the Task Force on Monitoring for Dry Deposition is the appropriate body to perform this activity.
			[34]	Recommendation on monitoring parameters, measurements and equipment for EANET sites	2006-2007 (2009-2010)	This activity will be implemented by the Task Force on Monitoring for Dry Deposition in collaboration with the Task Force on Monitoring Instrumentation in 2009-2010. A report/recommendation will be submitted to SAC.
(26)	Investigation on environmental/human effects of priority substances and their monitoring requirements such as monitoring equipment, sampling and analytical methods	To clarify the necessity, monitoring approaches and necessary activities to organize the monitoring of priority substances	[35]	Reports on environmental/human effects of priority substances and their monitoring requirements with available information such as good practices and results of case studies in EANET region	2008-2009 (2009-2010)	NC will prepare reports on the environment/human health effects of ozone and PM in 2009-2010, subject to availability of funds.
			[36]	Action plans for monitoring priority substances	2010	A report to promote ozone monitoring activities in East Asia will be prepared by NC and submitted to SAC in 2010.

viii-3. Promotion of formation of an “Epistemic Community”

No.	Activities to be undertaken	Targets	Expected results and Outputs		Implementation period	Status as of end of December 2009
(27)	Improvement of communication and sharing common understanding on a wide range of issues on the atmospheric environment in East Asia among the scientists, researchers and	To support formation of the Epistemic Community by EANET scientists, researchers and government officials	[37]	Creating a network of experts concerning a wide range of issues of the atmospheric environment within EANET	2006-2010	All the activities of EANET are expected to contribute to efforts to creating a network of experts on issues related to the atmospheric environment in East Asia.
			[38]	Periodic issue of Newsletter	2006-2010	The EANET Newsletter is published biannually from 2007.

	government officials of the participating countries		[39]	Regional Workshop on Acid Deposition in one of the participating countries of EANET for scientific community, national governments, civil society, academia, private sector and other international experts and agencies	2006	This activity was implemented in 2006.
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viii-4. Improvement and development of institutional arrangement

No.	Activities to be undertaken	Targets		Expected results and Outputs	Implementation period	Status as of end of December 2009
(28)	Further improvement of the guidelines for transparency and efficiency of EANET	To strengthen EANET activities. To promote efficiency and transparency of EANET	[40]	More transparent and efficient activities of EANET bodies including SAC, Task Forces and other sub-bodies	2006-2010	A report on the activities of the Secretariat and NC to promote more transparent and efficient activities of EANET bodies will be prepared and submitted to IG in 2010.
(29)	Studies on the establishment of a sound financial basis and the further development of EANET following the outcome of the feasibility study on an appropriate instrument	To support a process of development of an appropriate instrument	[41]	Report on future development of EANET to establish a sound financial basis	2006-2008 (2006-2010)	A Report of the WGFD on the Instrument to provide a sound basis for contribution to EANET was submitted to IG10. The text of the Instrument was finalized without any brackets at IG11 in 2009. The final agreement will be made at the High Level Segment during IG12 in 2010.
(30)	Consideration on future activities with discussions on possibilities of future development of EANET including a possibility to establish additional institutional structures, if necessary.	Improvement of structures of EANET to promote active participation. Preparation of the Medium Term Plan for next period	[42]	Second Report on Future Development of EANET	2009-2010	The Draft Second Report on Future Development of EANET was discussed at WGFD8 and IG11 in 2009. It was clarified at IG11 that the report is for possible adoption at IG12 in 2010. This activity is considered after finalization of the Instrument to provide a sound basis for contribution to EANET.
			[43]	Medium Term Plan (MTP) for EANET (2011-2015)	2009-2010	Discussions on the Draft MTP started at the WGFD8 and IG11 in 2009 and the Plan is for consideration/adoption by IG12 in 2010.

Note: The dates in brackets () show the revised implementation period for the activity.

