

The Thirteenth Session of the Scientific Advisory Committee
on the Acid Deposition Monitoring Network in East Asia
25-27 September 2013, Xiamen, China

REPORT OF THE SESSION

I. Introduction

1. The Scientific Advisory Committee (SAC) of the Acid Deposition Monitoring Network in East Asia (EANET) held its Thirteenth Session (SAC13) from 25 to 27 September 2013 in Xiamen, China. The Session was organized by the Secretariat and the Network Center (NC) for the EANET and hosted by the Government of China.
2. The Session was attended by the members of the SAC and/or their alternates and other nominated persons from the participating countries of the EANET, namely: Cambodia, China, Indonesia, Japan, Lao PDR, Malaysia, Mongolia, Myanmar, Philippines, Republic of Korea, Russia, Thailand and Vietnam as well as the Secretariat and the NC. The Session was also attended by an expert from the State Key Lab of Atmospheric Physics and Atmospheric Chemistry, Institute of Atmospheric Physics, Chinese Academy of Sciences, China, a consultant and observers. The List of Participants is attached as Annex.

II. Opening of the Session (Agenda Item 1)

3. The Session was opened with the Welcome Remarks delivered by Mr. Tang Dingding, Director General, Department of International Cooperation, Ministry of Environmental Protection, the People's Republic of China. He emphasized that Chinese government attaches great importance on air pollution prevention and control and introduced the progress and achievements. The new released "Air Pollution Prevention and Control Action Plan (2013-2017)" was briefed to the Session. The proposals to improve cooperation were proposed, i.e. 1) further strengthen cooperation on capacity building and public awareness; 2) take the process of air pollution control as an opportunity to develop green and circular economy and encourage development of environmental-friendly industries; 3) utilize EANET as an information platform, not only on monitoring data and scientific research, but also on clean air technologies and experiences. He also pointed out the EANET should consider the differences among countries. In the end, he hoped that the Session would review the recent development of EANET and exchange views on the future cooperation from technical and scientific point of view and wish the Session a success.
4. Mr. Chen Ning, Deputy Director General, Environmental Protection Department of Fujian Province, Peoples' Republic of China delivered the welcome speech with introduction of the Fujian Province. He introduced Xiamen and some of the environmental protection actions

undertaken in the Province including international cooperation such as participation in the project of Long-Range Transboundary Air Pollutants in Northeast Asia (LTP)

5. On behalf of the Secretariat for the EANET, Dr. Supat Wangwongwatana, Coordinator of the Secretariat for the EANET, Regional Resource Centre for Asia and the Pacific (RRC.AP) at Asian Institute of Technology (AIT) delivered the Opening Remarks. He welcomed the participants to the Session. He reminded the Session that EANET is in the mid-way of implementing the Medium Term Plan (MTP) (2011-2015) and a review is required as well as to start work on the development of the next MTP (2016-2020) for the EANET. He stated that the next two years is important to discuss the future development of the EANET based on the results of the review on the state of air pollution in East Asia by the Task Force on Research Coordination (TFRC).
6. Dr. Hajime Akimoto, Director General of the Asia Center for Air Pollution Research (ACAP) delivered the Introductory Remarks. He said that the EANET is a science based network. He expressed his desire that the SAC should discuss more scientific issues and the SAC should play more important role in the development of the EANET.

III. Election of the Officers (Agenda Item 2)

7. The Secretariat introduced the previous system of 3-year fixed term bureau members and re-election of the officers of the SAC. The 3-year fixed term of the SAC members from the Fourth Session to the Sixth Session of the SAC (SAC4-SAC6) in 2004-2006 and from the Ninth Session to the Eleventh Session of the SAC (SAC9-SAC11) in 2009-2011 were implemented by means of re-election.
8. Last year, the Twelfth Session of the Scientific Advisory Committee (SAC12) also decided 3 year (2012-2014) fixed term for the SAC bureau members composed of one Chairperson and two Vice-chairpersons. Therefore, the bureau members (Chairperson and Vice-chairpersons) were re-elected as follows: Dr. Sergey A. Gromov, Head of Scientific Sector, Environmental Pollution Department, Institute of Global Climate and Ecology, Roshydromet and Russian Academy of Science (RAS), Russia as Chairperson, Prof. Wang Ruibin, Director of Department of Air Quality Monitoring, China National Environmental Monitoring Center (CNEMC), China and Prof. Wilfredo M. Carandang, College of Forestry and Natural Resources, University of the Philippines Los Baños, Philippines as Vice-Chairpersons.
9. Dr. Elizabeth M.P. Philip, Head of Climate Change and Forestry Programme, Forest Research Institute Malaysia (FRIM), Malaysia was elected as Rapporteur of the Session.

IV. Adoption of the Agenda (Agenda Item 3)

10. The Session adopted the Agenda (EANET/SAC 13/3/1) and the Draft Program (EANET/SAC 13/3/3) as proposed.

V. Review on the Report on the Progress of the Acid Deposition Monitoring Network in East Asia (EANET) since the Twelfth Session of the Scientific Advisory Committee (SAC12) and the Draft Financial Report in 2012 (Agenda Item 4)

11. The Secretariat and the NC made presentations on the Report on the Progress of the Acid Deposition Monitoring Network in East Asia (EANET) since the Twelfth Session of the Scientific Advisory Committee (SAC12) (EANET/SAC 13/4/1) and the Financial Report of the Secretariat and the Network Center in 2012 (EANET/SAC 13/4/2).

12. Major discussions included:

- The Secretariat highlighted some constraints in the budget in 2011 but the financial problem was avoided in 2012 with voluntary financial contributions from participating countries and cost cutting efforts.
- The institutional arrangement of the Secretariat must be addressed in a transparent manner and will be discussed in the Working Group on Future Development (WGFD) of the EANET and the Intergovernmental Meeting (IG).
- China has been positively supporting the network. To support the Secretariat, China will consider properly increase the financial contribution and provide strong in-kind contribution, such as dispatch a senior official to work at the Secretariat as a high level staff.
- A sustainable institutional arrangement of the Secretariat to ensure the proper functioning of the network is necessary. Therefore, the participating countries encouraged the Secretariat to actively seek support and advice from UNEP Experts, and prepare feasible options and analysis on advantages and disadvantages of each option on institutional arrangement adjustment of the Secretariat as soon as possible.
- The Secretariat briefly clarified on the proposed options for institutional arrangement as well as the potential implications.

VI. Review on the Preliminary Final Draft of the Mid-Term Report on the Implementation of the Medium Term Plan (MTP) for the EANET (2011-2015) from January 2011 to June 2013 (Agenda Item 5)

13. The Secretariat and the NC presented the Preliminary Final Draft of the Mid-Term Report on the Implementation of the Medium Term Plan (MTP) for the EANET (2011-2015) from January 2011 to June 2013 (EANET/SAC 13/5).

14. Major discussions included:

- The NC clarified that the fellowship is awarded based on the contents of the research plan in the application. The Secretariat and the NC informed that the call for nomination was sent to all National Focal Points (NFPs) and the applications were submitted to the NC by the NFPs.
- It was suggested that the NFPs should select the most appropriate candidates to be nominated for the fellowship program. The NC and the NFPs should make a follow up to ensure the recipients to fulfill the obligation and utilize the knowledge acquired during the fellowship.
- Some form of performance index/indicator, including comparison with other similar organizations, may be utilized for certain EANET activities to indicate the improvements made over the years.
- It was suggested that quantitative performance index for some activities such as the quality assurance and quality control (QA/QC) activities may be useful for the EANET but this may be difficult due to data availability.

VII. Adoption of the EANET Data Report 2012 (Agenda Item 6)

15. The NC presented the Draft Data Report 2012 (EANET/SAC 13/6). The report included data on wet deposition, dry deposition, soil and vegetation, inland aquatic environment and catchment-scale, from the monitoring activities carried out by the participating countries in 2012, which were submitted to the NC.
16. Major discussions included:
 - A plan of termination on monitoring of the Petaling Jaya site due to relocation of the Malaysian Meteorological Department (MMD) Headquarters was reported from Malaysia.
 - It was noted that filter pack method is appropriate for rural area and may be inaccurate for urban area. Filter pack data for SO₂ showed seasonal variation especially in summer in urban areas, and therefore it is suggested that a comparison be made between filter pack and an automatic SO₂ monitor.
 - Some corrections in PM₁₀ data for Republic of Korea need to be done.
 - The NC mentioned a plan on revision of “Procedures on Data and Information Disclosure for the EANET” in the next year due to necessity of correction of the published Data Reports. Hourly meteorological data are necessary for calculation of the dry deposition flux.
 - The soil pH fluctuated in several sites but did not show any obvious trend. However, no clear reason for this has been identified.
 - No obvious effect of acid deposition on tree health was identified so far in vegetation monitoring.
 - It was pointed out that soil and vegetation monitoring could detect some changes such as soil acidification and tree decline symptoms, but could not identify the causes of the

symptoms. Therefore, catchment-scale monitoring is necessary to show relationship between atmospheric deposition and ecosystems.

- Soil and vegetation monitoring in Mt. Naejang, Republic of Korea may be restarted within a few years, although the surveys have been conducted just twice in 2001 and 2004. It was suggested that changes in soil chemical properties for the last decade in Mt. Naejang could be clarified if the survey would be done in 2014/2015.
- It was clarified that the previous data formats were still used for calculation of R_2 in the inland aquatic environment monitoring for the Data Report 2012, and there may not be any significant difference between the old and new formats. New formats according to the new Technical Manual will be provided to the participating countries soon.

17. The Session adopted the Data Report 2012 with appropriate corrections.

VIII. Adoption of the Report on the Inter-laboratory Comparison Projects 2012 (Agenda Item 7)

18. The NC presented the Draft Report of the Inter-laboratory Comparison Projects 2012 on wet deposition, dry deposition (filter pack method), soil and inland aquatic environment (EANET/SAC 13/7).

19. The Session adopted the Report on the Inter-laboratory Comparison Projects 2012.

20. The Session was further informed that the NC would ship the samples for the Inter-laboratory Comparison Projects 2013 to the participating laboratories at the beginning of October 2013. Participating laboratories were strongly requested to submit their results to the NC after the review of their National QA/QC Managers by 28 February 2014.

IX. Overview of the Updated National Monitoring Plans of the Participating Countries (Agenda Item 8)

21. The NC presented the Overview of the Updated National Monitoring Plans of the Participating Countries (EANET/SAC 13/8).

X. Consideration of the Reports from the Chairpersons of the Task Force and Expert Group of the Scientific Advisory Committee (SAC) (Agenda Item 9)

Task Force on Research Coordination

22. The Chairperson of the Task Force on Research Coordination (TFRC) presented the Progress Report on the Activities of the Task Force on Research Coordination (EANET/SAC 13/9/1).
23. Major discussions included:
- The TFRC Chair clarified that up to now there is no research proposal developed yet but the NC will establish a group to develop the research priority. Feasibility study on Clean Air Technology information platform was suggested as one of the research priority themes.
 - The ownership of intellectual property right was raised. It was suggested that the rule on intellectual property depended on funding donor agencies and may be included in the Memorandum of Agreement. The joint research project on sulfur dynamics is funded by Asia-Pacific Network on Global Change Research (APN). In the case of APN, the funded data must be fully available to any party for scientific research as an open-access manner. Additionally, the EANET may develop a policy/procedure on intellectual property right.
 - It was clarified that an informal small group will be considered by the NC to develop research proposals on priority research themes for potential external funding sources or donor agencies with support of the Secretariat.

Expert Group on Preparation of Technical Manual for Air Concentration Monitoring

24. The NC on behalf of the Chairperson of the Expert Group on Preparation of Technical Manual for Air Concentration Monitoring (EGACM) presented the Progress Report on the Activities of the Expert Group on Preparation of Technical Manual for Air Concentration Monitoring (EANET/SAC 13/9/2).
25. Major discussions included:
- This manual is timely. As many different types of instruments are recommended, competency in handling of each instrument is necessary.
 - It was pointed out that calibration is necessary for DOAS method as well as the other automatic gas monitors. The manual will be modified to include calibration procedures.
 - It is suggested that once experience is gained in using the Manual, update and further improvement could be made if necessary.
26. The Session adopted the Technical Manual for Air Concentration Monitoring with corrections as appropriate.

XI. Consideration of the dissolution of the Expert Groups of the SAC. (Agenda Item 10)

27. The NC presented a proposal on Dissolution of the Expert Groups of the Scientific Advisory Committee (SAC) (EANET/SAC 13/10).

28. The Session agreed on the dissolution of the following Expert Groups of the Scientific Advisory Committee, and recommends to the IG for approval:

- Expert Group on Dry Deposition Flux Estimation
- Expert Group on Revision of the Technical Manual on Wet Deposition Monitoring
- Expert Group on Revision of the Technical Manual on Inland Aquatic Environment Monitoring

XII. Consideration on the Preliminary Draft Report of the Review on the State of Air Pollution in East Asia (Agenda Item 11)

29. The Co-chairpersons of the Reviewing Committee (RC) on the Status of Air Pollution in East Asia, which was established under the TFRC, presented the Preliminary Draft Report of the Review on the State of Air Pollution in East Asia (EANET/SAC 13/11).

30. Major discussions included:

- The SAC members are welcomed to provide comments by 27 December 2013.
- The Chair clarified that the review has been made based on the peer-reviewed papers in scientific journals. Lead authors, authors and contributors have been selected and the preliminary draft report is already completed.
- The Chair of the RC clarified that the 'other impacts' are those impacts that are not classified under previous subsections.
- It was also clarified that referencing statements will be considered.

XIII. Consideration on Future Development of the EANET (Agenda Item 12)

31. The NC made a presentation on Future Development of the EANET (EANET/SAC 13/12). The presentation included Review of the present scope of the EANET and Recommendations in the Second Periodic Report on the State of Acid Deposition in East Asia (PRSAD2).

32. Major comments and discussions included:

- It was suggested that the future development discussion should be linked with the current topics. On a step-by-step approach, feasibility on increasing monitoring sites and items could be discussed.
- It was pointed out that the future development should focus on methodology, instrument and technology needs.
- The change in terminology used for monitoring items may be considered but most countries understand the current terminology.

- It was suggested that clean air technology should be considered as one of important areas of cooperation using the EANET as a platform for such a cooperation.

XIV. Review on the Preliminary Final Draft of the Third Report for Policy Makers (RPM3) (Agenda Item 13)

33. The Secretariat provided the background information and the Consultant made a presentation on Preliminary Final Draft of the Third Report for Policy Makers (RPM3) EANET/SAC 13/13).
34. Major comments and discussions included:
- It was informed that the Report will be distributed to the participating countries and at the High level Segment which may be held in 2015.
 - It was suggested that some research projects mentioned in the document EANET/SAC 13/12 on Consideration on Future Development of the EANET should be included in the Future Direction of the EANET (subchapter 6.3).
 - The title Chapter 5 should be reviewed.
 - The report seems to indicate that PM_{2.5} is black carbon which may not necessarily be true. The health impact of PM_{2.5} should be included if information is available.
 - It was suggested that a special expert team comprising of experts nominated by NFPs of each participating country should be established to review the draft RPM3 before formal approval by the IG considering that the report includes a wide range of areas that exceed the current EANET activities and the quoted references need to be reviewed for their validity and credibility.
 - The Secretariat clarified that such arrangement will affect the implementation plan of MTP as well as the Work Program and Budget of the Secretariat and the NC in 2014. IG will make decision on working procedure and time schedule of RPM3.
 - It was indicated that the report may have emphasized too much on Short-Lived Climate Pollutants (SLCPs).
 - It was suggested that messages from the RPM3 and Report of the Review on the State of Air Pollution in East Asia (RSAP) should be coordinated.
 - It was suggested to replace crop production to food security in subchapter 2.1.
 - Participating countries are requested to submit their country efforts in managing atmospheric environmental issues as soon as possible.

XV. Consideration of the EANET Science Bulletin (Vol. 3) (Agenda Item 14)

35. The NC made a presentation on EANET Science Bulletin (Vol. 3) (EANET/SAC 13/14).
36. The Session endorsed the EANET Science Bulletin (Vol.3) with addition of one article by the NC.

XVI. Consideration of the Relevant Scientific Activities (Agenda Item 15)**Progress of the Joint Research Activities on Model Inter-comparison Study in Asia (MICS-Asia)**

37. Prof. Wang Zifa, a resource person made a presentation on the Progress of the Joint Research Activities on Model Inter-comparison Study in Asia (MICS-Asia) (EANET/SAC/13/15/1). His presentation included work plan of MICS-Asia Phase III and its progress. It was informed that scientific outcomes of MICS-Asia can be incorporated to chemical forecasting system in China.

Joint Research Project on Sulfur Dynamics in Forest Ecosystems in Thailand, Malaysia and Japan

38. The NC made a presentation on Joint Research Project on Sulfur Dynamics in Forest Ecosystems in Thailand, Malaysia and Japan (EANET/SAC 13/15/2). It was informed that ion-exchange resin sampling was applied to determine sulfur isotopic ratio in rainwaters in tropical study sites. Although the method does not have high time resolution, the data for several months will be available. The results could be presented in the Fourteenth Session of the Scientific Advisory Committee (SAC14) in 2014.

XVII. Consideration of the Draft Proposal on the Presentation of the EANET Plaques of Recognition to the Experts, Scientists, and Resource Persons for Their Contribution to the EANET (Agenda Item 16)

39. The Secretariat made a presentation on the Draft Proposal on the Presentation of the EANET Plaques of Recognition to the Experts, Scientists, and Resource Persons for Their Contribution to the EANET (EANET/SAC 13/16). The Session took note of the Draft Proposal.
40. Major comments and discussions included:
- It was clarified by the Secretariat that the recognition is currently planned for only one time. How frequent the recognition will be made depend on the decision of the IG.

XVIII. Consideration of the Draft Work Program and Budget of the EANET in 2014 from Scientific and Technical Viewpoints (Agenda Item 17)

41. The Secretariat and the NC made presentations on the Draft Work Program and Budget of the EANET in 2014 (EANET/SAC 13/17).

42. The major comments and discussion:
- The NC clarified the reason why the network activity can be managed with less amount of revenue than original budget in the MTP.

XIX. Updates on the Activities of Other Regional and International Initiatives related to Acid Deposition and Transboundary Air Pollution (Agenda Item 18)

43. Prof. Dr. Hu Min, Director of State Key Joint Laboratory of Environmental Simulation and Pollution Control, College of Environmental Sciences and Engineering, Peking University, made a presentation on Scientific Understanding and Gaps of Acid Deposition under Complex Air Pollution. Her presentation included history of air pollution control in China, evolution and Projects on acid deposition worldwide and scientific understanding and gaps of acid deposition. She concluded that the control policy for the complex air pollution in China should be based on full understanding of scientific gaps in acid deposition, photochemical smog, haze, and their impacts on climate change and human health. She also mentioned recent decrease in dust emission in China.
44. Dr. Supat Wangwongwatana, Coordinator of the Secretariat for the EANET, Regional Resource Centre for Asia and the Pacific (RRC.AP) at Asian Institute of Technology (AIT) made a presentation on Information on Activities under “Climate and Clean Air Coalition (CCAC)”. His presentation included information on impacts related SLCPs, overview of CCAC and regional intergovernmental consultation on near-term climate protection and clean air benefits in Asia and the Pacific.
45. Dr. Hajime Akimoto, Director General of the Asia Center for Air Pollution Research (ACAP) made a presentation on Asia Science Panel for Air and Climate (ASPAC). His presentation included background and aims of ASPAC, the proposal on possible contents of ASPAC to hold an Ad-hoc High-Level Science Meeting.

XX. Other issues (Agenda Item 19)

46. Dr. Meng Fan, Director, Atmospheric Environment Institute, Chinese Research Academy of Environmental Sciences, made a presentation on Atmospheric Haze Control and Countermeasure in the Megacities of China including the progress of Air Pollution Prevention and Control. He specifically introduced the actions in newly released ‘Airborne Pollution Prevention and Control Action Plan (2013-2017)’.

XXI. Consideration and Adoption of the Report of the Session (Agenda Item 20)

47. The Report of the Session (EANET/SAC 13/20) was considered and adopted.

XVII. Closing of the Session (Agenda Item 21)

48. The Session expressed its deepest gratitude to the host country, China, the Secretariat and the NC for organizing the SAC13. The Session also appreciated the efforts made by the Chairperson, Vice-Chairpersons, Rapporteur and resource persons.
49. The Session was officially closed by the Chairperson, thanking all the participants for their great contributions.

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Annex 1

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