

The Seventh Session of the Scientific Advisory Committee
on Acid Deposition Monitoring Network in East Asia
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Consideration on revision of Technical Manual for Wet Deposition Monitoring in East Asia and Technical Manual for Monitoring of Inland Aquatic Environment in East Asia

I. Background

1. The preparatory-phase activities of the Acid Deposition Monitoring Network in East Asia (EANET) was conducted by ten countries in East Asia – China, Indonesia, Japan, Malaysia, Mongolia, the Philippines, Republic of Korea, Russia, Thailand and Viet Nam from April 1998 – December 2000. The countries followed a set of monitoring guidelines adopted at the Second Expert Meeting on Acid Precipitation Monitoring Network in East Asia held in March 1995 as well as three technical manuals for wet deposition monitoring, soil and vegetation monitoring, and monitoring on inland aquatic environment, adopted at the Fourth Expert Meeting held in February 1997.
2. To supplement the guidelines and technical manuals, a set of three quality assurance and quality control (QA/QC) programs for EANET monitoring were developed for wet deposition monitoring, soil and vegetation monitoring, and monitoring of inland aquatic environment in the first year of the preparatory phase. It was emphasized that the guidelines, technical manuals and QA/QC programs need to be flexibly applied, taking account of diversities in different sub-regions in East Asia.
3. Based on the experience gained from the monitoring activities and the latest scientific/technical information, the guidelines were revised during the preparatory-phase activities. The Second Interim Scientific Advisory Group Meeting of EANET held in March 2000 in Jakarta, Indonesia adopted a revised set of the documents consisting of:
 - Guidelines for Acid Deposition Monitoring
 - Technical Documents for Wet Deposition Monitoring in East Asia
 - Technical Documents for Monitoring on Inland Aquatic Environment in East Asia
 - Technical Documents for Soil and Vegetation Monitoring in East Asia
 - Data Reporting Procedures and Formats for Acid Deposition Monitoring in East Asia

II. Issues to be considered

4. It has been almost ten years since the technical manuals were first produced and revised for the regular-phase activities of EANET in 2000. The membership of EANET is now more complete with the recent addition of Cambodia, Lao PDR and Myanmar. A review and revision of the monitoring manuals including the operation manuals of the monitoring equipment used in EANET may be necessary in view of recent progress in environmental

monitoring techniques, experiences on acid deposition monitoring accumulated by participating countries, and recent plans to expand the scope of monitoring and assessments due to emerging regional pollution issues.

5. With regard to soil and vegetation monitoring, the Task Force on Soil and Vegetation Monitoring has, in 2006, completed a Sub-Manual on Forest Vegetation Monitoring and discussions will take place soon to revise the Strategy Paper for Future Direction of Soil and Vegetation Monitoring of EANET to clarify particular objectives, ways, and milestones for ecological monitoring. The Sub-Manual is being distributed to the participating countries. In order to provide scientific data on effects of acidification on terrestrial ecosystem based on the elemental budget calculations, the Task Force will also prepare a set of guidelines/methodologies for the future catchment monitoring during the period 2007-2010.
6. Concerning dry deposition monitoring, a document titled Future Direction of Dry Deposition Monitoring of EANET was first produced to elaborate the strategy on dry deposition monitoring. A Strategy Paper for Future Direction of Dry Deposition Monitoring of EANET was later produced in 1999. The second edition of the Strategy Paper for Future Direction of Dry Deposition Monitoring of EANET was produced by the Task Force on Dry Deposition Monitoring in September 2005 to clarify pending issues on dry deposition monitoring such the use of the Filter Pack method.
7. One of the activities proposed in the Strategy on EANET Development (2006-2010) is a decision on whether there is a need to revise the Technical Documents for Wet Deposition Monitoring in East Asia and Technical Documents for Monitoring on Inland Aquatic Environment in East Asia. Although the existing Technical Documents for Wet Deposition Monitoring in East Asia is regarded as a comprehensive document, it does not contain detailed standard methodologies for analysis of fluoride, bicarbonate, nitrite and organic acids (carbonic, formic and acetic), which are required in some cases to achieve ion balance. Several countries are already conducting these measurements on their own. The World Meteorological Organization has produced a new edition of the Manual for the GAW Precipitation Chemistry Programme in November 2004 which provides the latest guidelines, Data Quality Objectives and Standard Operating Procedures. STM7 had recommended the WMO Manual be used as a reference for selection of monitoring sites. The EANET manual should therefore be updated to ensure international harmonization of monitoring practices.
8. The existing Technical Document for Monitoring on Inland Aquatic Environment in East Asia, focuses mainly on sampling and analysis of water samples collected from lakes. Some countries are sampling water from rivers and streams and there may be a need to update this document to include the new methodologies involved. In addition, if the other Technical Documents are updated it is appropriate that this document be updated in line with the plan for an integrated approach for monitoring ecological impacts in the EANET region.

9. Some EANET scientists are of the opinion that both the Technical Documents for Wet Deposition Monitoring in East Asia and Technical Documents for Monitoring on Inland Aquatic Environment in East Asia are still applicable for the period 2006-2010 without any changes and therefore they need not be revised at this stage. Changing the procedures and reporting formats significantly may create confusion among the technical staff of the participating countries who are already accustomed to the current system. Therefore sufficient training must be given to the staff if the manuals are revised substantially.
10. At the Eighth Senior Technical Managers' Meeting held in Bogor, Indonesia on 1 – 3 August 2007, the senior technical managers representing the countries participating in EANET discussed this issue and suggested that updates/revisions of the existing manuals should be considered according to the current situation, possibility and necessity of some requirements that would arise in EANET. It was also recommended that the schedule for the updates should be decided as a first step taking the circumstances of experts into account. It was pointed out that significance and meaning of the respective monitoring parameters should be clarified in the process of reviewing the current Technical Manuals.

III. Action Required

11. The Seventh Session of the Scientific Advisory Committee on Acid Deposition Monitoring Network in East Asia (SAC7) is invited to consider the current situation and deliberate on the necessity for a revision of the Technical Document for Wet Deposition Monitoring in East Asia and the Technical Document for Monitoring on Inland Aquatic Environment in East Asia in view of the following reasons:
 - i) progress in environmental monitoring techniques
 - ii) experiences in conducting monitoring of wet deposition and inland aquatic environment monitoring accumulated by participating countries during the regular phase monitoring during these 7 years
 - iii) possibility of new monitoring parameters
12. IG8 decided that the establishment of sub-groups or ad hoc meetings would be decided by IG. Therefore, if it is considered necessary to review the two documents, it is proposed that SAC7 recommend to IG9 the establishment of the following Ad hoc Expert Working Groups to carry out the tasks:
 - i) Ad hoc Expert Working Group on Revision of Technical Manual on Wet Deposition Monitoring
 - ii) Ad hoc Expert Working Group on Revision of Technical Manual on Inland Aquatic Monitoring

It is suggested that NC be the Secretariat of the two Ad hoc Expert Working Groups.