

The Second Senior Technical Managers' Meeting
of the Acid Deposition Monitoring Network
in East Asia
19-21 September 2001, Niigata, Japan

Training Needs for EANET in Regular Phase

I. INTRODUCTION

1. The (Interim) Network Center ((INC) of EANET has carried out the various activities of training and capacity building in the participating countries of EANET in line with the Training Program for the Network (EANET/ISAG/1/5/1 rev.) endorsed by the First Interim Scientific Advisory Group (ISAG) Meeting, held in October 1998.
2. After implementation of the preparatory-phase activities of EANET since April 1998, the Second Intergovernmental Meeting on EANET, in October 2000, concluded that the activities had been successful recognizing that there still remain many issues in EANET that require improvement such as capacity building and the level of quality assurance/quality control (QA/QC) activities.
3. NC is required to develop and implement education/training programs for those engaged in the network activities in regular phase as described in the Tentative Design of EANET (EANET/IG 2/5/3) endorsed at the Second Intergovernmental Meeting. At the First Senior Technical Managers' Meeting held in February 2001, it was emphasized as the priority technical issue that intensive training should further be undertaken at national and regional levels.
4. To identify precisely the training needs among participating country and develop the training program, NC has implemented the Questionnaire Survey for Training/capacity Building Needs following the Work Program and Budget in 2001 for EANET (EANET/IG 2/7/2), as well as utilizing the experiences and information obtained through the various activities such as dispatch of technical missions to participating countries, holding the training workshops and implementation of individual training at Acid Deposition and Oxidant Research Center (ADORC) until now.
5. This paper describes the activities of training/capacity building of EANET from 1998, the result of the Questionnaire Survey for Training/capacity Building Needs,

the identification of the training needs and target of the training activities and draft Training Program for EANET in regular phase for review and comments by Senior Technical Managers at its Second Meeting, Scientific Advisory Committee at its First Meeting.

II. MAJOR IMPLEMENTED TRAINING ACTIVITIES OF EANET

II.1 Utilization of existing training programs (JICA Group Training Course)

6. The Japan International Cooperation Agency (JICA) has been implementing the Group Training Course on Monitoring and Control Technologies of Acid Deposition since Japan fiscal year (JFY) 1997 for leading technical officials or researchers in national or local governments of East Asia, in cooperation with Hyogo Prefecture of Japan and other relevant organizations. In the training programs for EANET, this training course was designated as one of the training activities under EANET.

II.2 Development and implementation of training programs by INC (Training workshops on EANET)

7. The First Training Workshop on EANET was conducted by INC in November 1998 in Niigata, Japan. The objective of the workshop was to assist the participating countries in implementing the preparatory-phase monitoring activities in a smooth and effective manner, by disseminating the major outcomes of the First ISAG Meeting and the Third WG Meeting, particularly regarding the technical matters on monitoring, and by exchanging information and views on the situations of respective countries. Senior managers of the national centers participated in the workshop and discussed various issues related to EANET. Questionnaire survey on training and equipment needs was undertaken prior to the workshop and discussed during the workshop.
8. Taking into account the recommendations of the First Training Workshop, the Second Training Workshop on EANET was held from 31 August through 3 September 1999 in Beijing, China, focusing on ecological impact monitoring of acid deposition (soil and vegetation monitoring). Intensive discussions were held among soil/vegetation experts in the participating countries, which resulted in the

identification of the objectives and future directions of soil and vegetation monitoring.

II.3 Implementation of individual training

9. Considering the importance of intensive training, the individual training at ADORC has been promoted to the participating countries. The individual training aimed at enhancing the proficiency of various monitoring skills of participating countries, taking account of specific situations in the countries. The numbers of the individual training carried out by August 2001 are as follows:

- November 1998: a technical official of the Pollution Control Department, Thailand (training for the filter pack method of dry deposition monitoring);
- November 1998: the Head, Laboratory of Hydrochemistry and Atmospheric Chemistry, Russia (training for the filter pack method of dry deposition monitoring);
- April 1999: an official of the Ministry of Environment, Indonesia;
- April 1999: nine members from the State Environmental Protection Administration and the three cities, China;
- March 2000: Assistant Director of Environmental Management Bureau, the Philippines;
- May to June 2000: two officials of the Pollution Control Department (PCD), Thailand (training for the wet and dry deposition monitoring and data management); and
- February to March 2001: One each official from the Environmental Management Center (EMC), Indonesia, Department of Chemistry (DOC), Malaysia and Environmental Management Bureau (EMB), the Philippines (training for the wet and dry deposition monitoring especially in terms of data analysis and data management).

II.4 Dispatch of short-term experts

10. In consultation with (I)NC, JICA has dispatched short-term experts on acid deposition monitoring to the participating countries, namely, China, Indonesia, Malaysia, Philippines, Thailand and Viet Nam by September 2001.

III . PROMPT RESULT OF QUESTIONNAIRE SURVEY FOR TRAINING /CAPACITY BUILDING NEEDS

11. Questionnaire Survey for Training/capacity Building Needs was implemented in August 2001 to identify the training/capacity building needs in the participating country of EANET. As of 7 September 2001, 6 participating countries submitted the questionnaire forms to NC, namely China, Indonesia, Japan, Malaysia, Thailand and Viet Nam. The following things are expressed in the replies so far:

- All countries that submitted the questionnaire forms emphasized the importance of the training/capacity building of EANET for obtaining reliable data in this region.
- 5 countries except Japan need to receive the training of EANET for monitoring methodology including the wet and dry deposition, soil and vegetation monitoring, and inland aquatic environment monitoring. Some countries need the training for soil and vegetation monitoring, and inland aquatic environment monitoring so that they can start the monitoring.
- Maintenance of sampler and apparatus for sample analysis in terms of monitoring methodology are also needed because there often are problems on the instruments.
- 5 countries except Japan need the training for administrative activities such as management of training for monitoring activities and coordination for implementation of monitoring activities to enhance the national activities of EANET monitoring.
- As to views on various training activities such as group training course, individual training, dispatch of short and long term experts, workshop in each country and training workshop on specific topics, all countries admitted the usefulness and effectiveness for those activities, though there are various opinions on duration, program etc. of the training.

IV. IDENTIFICATION OF TRAINING NEEDS AND TARGET OF TRAINING ACTIVITIES

IV.1 Identification of Training Needs

12. It is very important to know the present status of the participating countries in

terms of their capability in dealing with acid deposition problems, and identify actual training needs.

13. Through the experiences of the activities in preparatory-phase and in regular phase, and with the result of Questionnaire Survey for Training/capacity Building Needs, NC has been making effort to identify the training needs of the participating countries, improve the training activities and elaborate the relevant activities having close communication, cooperation and coordination with relevant organizations, and will continue to do so in the future.

IV.2 Target of Training Activities

14. Based on the communication with the participating countries, and the training needs already identified through the above activities, the target to the training programs is set to create sufficient capability in respective participating countries in dealing with acid deposition problems, with particular emphasis on monitoring activities that differ from each country in terms of progress, research activities for preventing or reducing adverse environmental impacts of acid deposition, and awareness raising for general public as well as decision makers.
15. Target groups of the training programs are the personnel to work for EANET and relevant researchers in the existing and prospective participating countries.
16. NC will continuously make effort to elaborate the training programs, while implementing the presently agreed activities in the work program and training programs.

V. DRAFT TRAINING PROGRAM FOR EANET IN REGULAR PHASE

17. NC is planning to prepare a draft training program for EANET in regular phase for the consideration at the First SAC Meeting. A preliminary draft is attached as ANNEX.

ANNEX

Preliminary Draft Training Program for EANET in Regular PhaseI. Introduction

1. At the time that the First Intergovernmental Meeting on EANET decided the initiate the preparatory phase activities of EANET, extensive training needed to be provided during the preparatory phase since the acid deposition monitoring systems significantly differ from country to country in East Asia.
2. After about two years and a half activities of preparatory-phase, the Second Intergovernmental Meeting concluded that the preparatory-phase activities of EANET had been successful recognizing that there still remain many issues in EANET that require improvement such as capacity building and the level of quality assurance/quality control (QA/QC) activities.
3. The (Interim) Network Center ((INC) of EANET has implemented various activities of training/capacity building among participating countries in line with the Training Program for the Network (EANET/ISAG/1/5/1 rev.) endorsed by the First Interim Scientific Advisory Group (ISAG) Meeting, held in October 1998, and been trying to identify the training needs through its technical missions, workshops, individual trainings, other meetings and the Questionnaire Survey for Training/capacity Building Needs as well as daily communications in various means.
4. NC has developed the Preliminary Draft Training Program for EANET in Regular Phase taking account of the above activities and survey.

II. Target of Training Activities

5. Based on the communication with the participating countries, and the training needs already identified through the above activities, the target to the training programs is set to create sufficient capability in respective participating countries in dealing with acid deposition problems, with particular emphasis on monitoring activities that differ from each country in terms of progress, research activities for

preventing or reducing adverse environmental impacts of acid deposition, and awareness raising for general public as well as decision makers.

6. Target groups of the training programs will be the personnel to work for EANET and relevant researchers in the existing and prospective participating countries.
7. NC will continuously make effort to elaborate the training programs, while implementing the presently agreed activities in the work program and training programs.

III. Contents of Training

III.1 Utilization of Existing Programs (JICA Training Course)

8. In the Training Programs for the Network, this course was identified as one of the activities under EANET. In the current fiscal year, this training course was strengthened as the Country Focused Training Course “The Acid Deposition Monitoring Network in East Asia (EANET)” training course from a viewpoint which aims at much more strengthening of EANET activities, and will be carried out.
9. Since the name of training course was changed in the current fiscal year, the existence of the request from the participating countries of EANET became important further. Moreover, it is necessary to make effort to obtain appropriate participants from the participating countries.
10. NC maintained close communication and coordination with the organizers of this course on the curriculum by sending its staff to the steering committee, holding ad hoc technical coordination meetings and informing EANET activities in a timely manner. The course has been playing an important role for training junior laboratory staff in the participating countries. It is expected that the course will continue to contribute and even improve its contribution by increasing laboratory exercises, training for maintenance of equipments etc.

III.2 Development and Implementation of Training Programs by NC

III.2.1 Training Workshop

11. During the preparatory phase, two different types of needs were identified. The one is to provide opportunities for exchange of information and experiences among senior managers of the national centers or the national QA/QC managers. The other is to provide training opportunities for focused, specific topics such as soil and vegetation monitoring. NC generally considers that the Training Workshop should be reorganized to meet the latter needs. The participating countries are expected to express their views on this matter. NC would like to hold the workshop about the case where there are needs about a special field.

III.2.2 Implementation of Individual Training

12. Considering the importance of intensive training, the individual training is expected to enhance. A possibility of using existing fellowship schemes should also be explored to provide opportunities for junior researchers to study advanced sciences on acid deposition. The individual training aimed at enhancing the proficiency of various monitoring skills of participating countries, taking account of specific situations in the countries. Individual training at ADORC/NC tentatively is planned for five trainees from the participating countries in a year.

IV. Relevant Activities for Capacity Building of the Participating Countries

IV.1 Technical Missions to the Participating countries

13. NC dispatched technical missions to the participating countries to exchange information and experiences, to provide technical advice and to disseminate the latest technical information. The NC missions visited (candidate) network monitoring sites and laboratories, and had technical discussions with local experts on acid deposition and to exchange information and experiences on the EANET activities. In some countries, technical workshops were held during the NC technical missions. These missions were considered very useful for NC in grasping the present capacities of the participating countries, and for participating countries in having detailed technical discussions among various experts from relevant agencies and academies. The similar missions will also be undertaken in

line with the work program.

IV.2 Dispatch of short/long-term experts

14. In consultation with NC, JICA dispatched short-term Japanese experts to the participating countries to assist in the development of a national monitoring plan, to assist in the implementation of acid deposition monitoring. A possibility will further be explored to send short/long-term experts to assist the activities of EANET, as appropriate.

IV.3 Implementation of national training programs

15. The implementation of national training programs is considered to be very effective in disseminating the outcomes of the regional training for the Network. NC provided assistance such as the provision of training materials and advice on training curricula for those who undertaken such training. NC will continue to provide such activities of assistance for the national training programs holding communication with participating countries.

IV.4 Development of training materials

16. In a variety of training activities, appropriate training materials are required for trainees. NC has reviewed and revised the monitoring guidelines and technical manuals which are significant materials for both actual monitoring activities and training. NC also continues to develop detailed training materials, technical documents for monitoring wet deposition, dry deposition, soil and vegetation and inland aquatic environment step by step.

IV.5 Implementation of joint research activities

17. An application of a researcher from Republic of Korea was approved by the Ministry of Environment to carry out a study on inland aquatic environment in ADORC utilizing Eco-frontier Fellowship Program under the Global Environment Research Program. The researcher is expected to join ADORC in October 2001. NC also will explore a possibility for other researchers in East Asia to carry out joint research activities in Japan, by using existing schemes such as the fellowship

scheme under the Ministry of Education, Culture, Sports, Science and Technology. Through such activities, the overall scientific and technical levels of the network activities will be improved.

V. Cooperation and Coordination with Other Organization

18. There are many international as well as bilateral organizations that have been carrying out training activities in the field of acid deposition issues. NC makes effort to have closer communication, cooperation and coordination with those organizations, obtain information on relevant training and other activities and so on.