

- DC 3 FOR PRSAD 2 1
- WGFD 10 1
- GUIDELINE FOR CATCHMENT
SCALE MONITORING 2
- NEW TECHNICAL MANUALS..... 2
- INSTRUMENT 3
- INDIVIDUAL TRAINING 3

EANET Newsletter

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

The Second Meeting of the DC (DC2) was held on 28-29 June 2011 in AIT, Pathumthani, Thailand. The meeting was attended by the DC, Lead Authors, and contributors from participating countries, namely, Cambodia, China, Indonesia, Japan, Lao PDR, Malaysia, Mongolia, Myanmar, Philippines, Republic of Korea, Russia, Thailand, and Vietnam, and the Secretariat and the Network Center (NC) for EANET.

The meeting discussed several topics which include: progress of PRSAD2 preparation since the First Drafting Committee and Lead Authors' meeting, first draft of the Regional Assessment of Periodic Report, National Assessment Report of the participating countries, and other issues.

The DC2 made suggestions on further progress of report preparation including the deadline for submission of the respective part of lead authors, the schedule of drafting the report, the date for the DC3, and others.



The Tenth Session of the Working Group on Future Development of EANET (WGFD10)

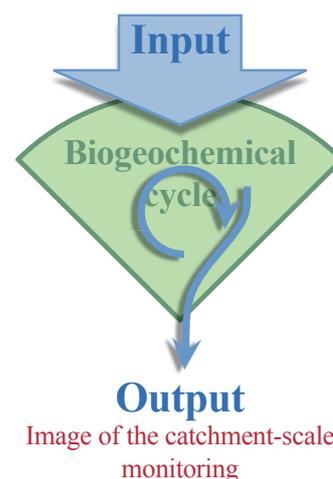


The Tenth Session of the Working Group on Future Development (WGFD10) of the Acid Deposition Monitoring Network in East Asia (EANET) was held in Pathumthani, Thailand on 19-20 July 2011. The Session reviewed, discussed, and made comments on the draft documents which include: Progress of EANET since the Fourth Special Session of the Working Group on Future Development of EANET (WGFD-S4) and Financial Report of the Secretariat and the Network Center in 2010, Current Financial Modalities for Further Improvement on Transparency of EANET and the Ceiling of Increase on Financial Contributions, Expansion of the Scope of EANET and Possible Impacts of the Adoption and Operation of the Instrument for Strengthening the EANET, Final Report on Implementation of the Strategy on EANET Development (2006-2010), and Work Program and Budget of EANET in 2012.

Guideline for Catchment-scale Monitoring

An integrated approach was required to discuss on effects of acid deposition on terrestrial ecosystems qualitatively and quantitatively. Catchment-scale monitoring may be one of the solutions for the requirement. Scientists of the EANET participating countries have been conducting the joint research projects on catchment-scale analysis with the Network Center (NC) in Kajikawa site (Niigata, Japan), Sakaerat site (Nakhon Ratchasima, Thailand) and Danum Valley site (Sabah, Malaysia). Based on experience through the projects, the Guideline for Catchment-scale Monitoring was developed by the Task Force on Soil and Vegetation Monitoring and endorsed by the Scientific Advisory Committee at its Tenth Session (SAC10) in 2010.

The Guideline recommended that input from atmosphere and output from stream be monitored with biogeochemical processes on a soil-plant system in a same small catchment/watershed. Since ion constituents will be transported by water flow, the input-output budget of ions (material balance) can be discussed on the catchment basis quantitatively. Seasonal and/or annual changes in stream water chemistry can be also compared more directly with atmospheric deposition and material fluxes in the catchment. Catchment-scale monitoring may allow us to draw a clear picture on the current situation of the ecosystems. The monitoring methodologies described in the Guideline were not special but similar to those for the existing regular monitoring. Existing EANET Technical Manuals can be referred practically. It is not difficult to start the catchment-scale monitoring, if the atmospheric data is available near the catchment area. The monitoring can be started just from collection of the stream water and then upgraded step-by-step. The catchment-scale data will also be informative for biogeochemical simulation modeling and future projection of atmospheric deposition effects.



Development of New EANET Technical Manuals

1. Technical Manual for Wet Deposition Monitoring in East Asia-2010

The first technical manual, "Technical Manual for Wet Deposition Monitoring in East Asia", was developed in March 2000 and adopted at the Second Interim Scientific Advisory Group Meeting (ISAG2) of Acid Deposition Monitoring Network in East Asia (EANET). "Technical Manual for Wet Deposition Monitoring in East Asia-2010", was prepared as a revised version of the first technical manual through the discussion at the Expert Group on Revision of Technical Manual on Wet Deposition Monitoring, endorsed at the Tenth Session of the Scientific Advisory Committee (SAC10), and adopted at the Twelfth Session of the Intergovernmental Meeting (IG12) held in 2010.

The revised manual basically harmonizes with that of WMO/GAW and EMEP. Determination methods for hydrogen carbonate, fluoride, nitrite, phosphate, and organic acids are added reflecting the status that many those parameters other than mandatory ones have already been reported from many countries due to progress of analytical skill and understanding characteristics of rainwater properties. In contrast, sample collection methodology was not changed in order to clarify long-term trend of wet deposition in EANET region accurately.

2. Technical Manual on Dry Deposition Flux Estimation

The Strategy Paper for Future Direction of Dry Deposition Monitoring of EANET (2nd edition, endorsed in 2005) presented the status quo of dry deposition monitoring, the revised list of major chemical species for dry deposition monitoring in EANET and included a step-by-step future strategy on dry deposition monitoring. However, it did not identify the method for estimating dry deposition flux in the EANET region. On the basis of this background, the Expert Group on Dry Deposition Flux Estimation under the Task Force on Monitoring for Dry Deposition was established in 2007 to develop the method for estimating dry deposition fluxes in the EANET region and to produce the Technical Manual on Dry Deposition Flux Estimation. In November 2010, the technical manual was adopted at the IG12, and dry deposition flux at EANET sites can be calculated following the estimation method described in the manual.

Dry deposition flux can be calculated by the so-called "Inferential Method" (Matsuda, J. Jpn. Soc. Atmos. Environ., 2008, Endo et al., Atmos. Environ., 2011). The inferential method is a combination of routine air concentration measurement and modeling that involves indirect estimation of dry deposition rates on the basis of meteorological parameters. Under the assumption of steady state, dry deposition fluxes (F_{dry}) are estimated as the product of an air concentration of gaseous and particulate matter (C) and a dry deposition velocity (V_d). Deposition fluxes must be calculated for different chemical species and different types of deposition surface. Because there are diurnal variations of deposition velocity in most cases, providing hourly air concentration and meteorological data is recommended. The Network Center will distribute the program file for dry deposition velocity and flux calculation as well as the technical manual so that any individual can calculate dry deposition fluxes.

3. Technical Manual for Inland Aquatic Environment Monitoring-2010

Recently, several scientific facts suggesting acidification of inland water have been reported in the EANET countries. Taking the latest scientific information and current situations of the EANET monitoring sites into account, the Technical Manual-2010 was developed by the Expert Group on Revision of Technical Manual on Inland Aquatic Environment Monitoring. The basic procedures in the Technical Manual-2010 were mostly the same as the previous version, although the following subjects were adopted as major revised part:

- Rivers and streams could be selected as the monitoring site more freely. Consequently, modification on sampling frequency and measurement parameters was proposed.
- Clearer criteria on selection of lakes and rivers was described, including size of the catchment, priority among natural lakes, rivers/streams, and reservoirs/dams, etc.
- Parallel measurements by the end-point pH 4.8 method and the Gran's Plots titration method were recommended for alkalinity.
- The reporting forms were included in the same book.

Moreover, analytical procedures were described in further detail, and definition and meaning of the parameters were clarified for surveyors and analysts.

Signatures on the Instrument for Strengthening the EANET

The Instrument for Strengthening the EANET was signed by Vietnam and China respectively.

The Minister for Natural Resources and Environment of Vietnam, H.E. Mr. Pham Khoi Nguyen, signed the Instrument on 30 May 2011 in Hanoi, Vietnam.

The signing ceremony was held in the Ministry of Environmental Protection (MEP) of China on 15 June 2011, during the World Acid Rain Conference, back-to-back with a courtesy meeting participated by representatives from MEP. The NC and the Secretariat reported the progress of EANET, progress of the Instrument and financial situation of the network. MEP shared the progress on national environmental protection in China. Ms. Song Xiaozhi, Deputy Director General of International Cooperation Department of MEP of China, signed the Instrument.



The signing ceremony in MEP, China
(During World Acid Rain Conference)

EANET Individual Training at ACAP

The Individual Training Course in 2011 at the NC was implemented taking the situation in participating countries into account. Trainees, one each from China, Malaysia and Russia, were invited for the program from 13 February through 13 March 2011. The trainees received training on wet deposition, dry deposition, soil/vegetation and inland aquatic environment monitoring, and data management. Names of trainees are Mr. Zhang Yashuang (China), Mr. Mohd Firdaus Jahaya (Malaysia) and Mr. Roman S. Ivanov (Russia).



Mr. Zhang Yashuang



Mr. Mohd Firdaus Jahaya



Mr. Roman S. Ivanov

Updates on Events in 2011

Activities	(Tentative) Dates	Venue
Tenth Session of the Working Group on Future Development of EANET (WGFD10)	19-20 Jul. 2011	AIT, Pathumthani, Thailand
First Meeting of the Expert Group on Preparation of Technical Manual for Air Concentration Monitoring (EG/TMA1)	11-12 Aug. 2011	Niigata, Japan
Twelfth Senior Technical Managers' Meeting (STM12)	21-22 Sep. 2011	Kuala Lumpur, Malaysia
EANET Research Fellowship Program	Oct.-Dec. 2011	Niigata, Japan
Fourth Meeting of the Task Force on Research Coordination (TFRC4)	11 Oct. 2011	Ho Chi Minh City, Vietnam
Eleventh Session of the Scientific Advisory Committee (SAC11)	12-14 Oct. 2011	Ho Chi Minh City, Vietnam
Third Meeting of the Drafting Committee (DC3) for the Second Periodic Report on the State of Acid Deposition in East Asia (PRSAD2)	13 Oct. 2011	Ho Chi Minh City, Vietnam
Thirteenth Session of the Intergovernmental Meeting (IG13)	30 Nov.- 01 Dec. 2011	Hanoi, Vietnam

Secretariat	Network Center
<p>United Nations Environment Programme, Regional Resource Centre for Asia and the Pacific (UNEP RRC.AP) c/o Asian Institute of Technology 3rd Floor, Outreach Building P.O. Box 4, Klongluang, Pathumthani 12120, Thailand Web: http://www.rrcap.unep.org</p>	<p>Asia Center for Air Pollution Research (ACAP) 1182 Sowa, Nishi-ku, Niigata-shi, 950-2144 Japan Tel: +81-25-263-0550 Fax: +81-25-263-0566 Web: http://www.acap.asia</p> <p>EANET website: http://www.eanet.cc</p>