

EANET NEWSLETTER

ACID DEPOSITION MONITORING NETWORK IN EAST ASIA

EANET MEETINGS IN 2008

Tenth Session of the Intergovernmental Meeting (IG10)

The Intergovernmental Meeting (IG) on the Acid Deposition Monitoring Network in East Asia held its Tenth Session (IG10) in Chiang Mai, Thailand on 20-21 November 2008. The Report of the Session is already available in the EANET website: <http://www.eanet.cc>. Some highlights of the Session are indicated below:



Report of the Working Group on Future Development (WGFD) on the Text of the Instrument to Provide a Sound Basis for Contribution to EANET

The Ninth Session of the Intergovernmental Meeting (IG9) held in November 2007 requested the WGFD to continue the discussion on the Instrument to provide a sound basis for contribution to EANET and report the result of the discussions to IG10 for its consideration. With this mandate and request, the "WGFD Progress Report on the Instrument to Provide a Sound Basis for Contribution to EANET" submitted to IG10 reported on the status of discussions and the issues raised by respective countries. The IG10 decided to task the WGFD to further develop the Instrument in accordance with the conclusions of this meeting, and to consider and suggest any procedures necessary to obtain the signatures of the participating countries for the Instrument.

Activities of the Working Group on Future Development (WGFD) after 2008

As of November 2008, the WGFD has not completed all its tasks including developing an appropriate Instrument mentioned above. The Terms of Reference (TOR) of the WGFD (2007-2008) expired on 31 December 2008. The IG10 decided that the WGFD shall continue its tasks and endorsed

the "Activities of the Working Group on Future Development (WGFD) after 2008" as well as adopted its new TOR for the period 2009-2010.

Report on the Outcomes of the Eighth Session of the Scientific Advisory Committee (SAC8)

The Session considered and endorsed the report on "Outcomes of the Eighth Session of the Scientific Advisory Committee (SAC8)" and approved the "Procedures for Establishing Task Forces and Expert Groups under the Scientific Advisory Committee (SAC) of EANET including the "Terms of Reference of the Task Forces and Expert Groups". Furthermore, the three high-priority research projects proposed by SAC were endorsed by the Session. The Session also applauded the announcement on the inaugural edition of the "EANET Science Bulletin" (Vol. 1) published in November 2008 and viewed that this is a significant achievement of EANET.

It was indeed a fruitful Session of the IG as other important considerations were undertaken. The Session endorsed the Report on the Review of Performance of the Secretariat and the Network Center (2005-2007) as well as it adopted the Work Program and Budget of EANET in 2009.

Seventh Session of the Working Group on Future Development of EANET (WGFD7)

The WGFD held its Seventh Session (WGFD7) in Pathumthani, Thailand on 29-31 July 2008. One of the main objectives of this Session was to consider the Draft Text of the Instrument to Provide a Sound Basis for Contribution to EANET and consideration of the Draft Report of the WGFD on the Text of the Instrument to Provide a Sound Basis for Contribution to EANET.

The Session prepared two different structures of options (Option A and Option B) of the Instrument to reflect all the comments from the participating countries of EANET. To facilitate the discussion and accommodate the strong desire of the Session to make one consolidated text of the Instrument

to be submitted to IG10, at the suggestion of the Chairperson, the Session requested the Secretariat to merge Option B into Option A of the Instrument.

The Session reviewed several documents to be submitted to IG10 for consideration and endorsement including Report of Progress of EANET after the Ninth Session of the Intergovernmental Meeting (IG9), Financial Report of the Secretariat and the Network Center in 2007, Draft Report on the Review of Performance of the Secretariat and the Network Center (2005-2007), Draft Work Program and Budget in 2009 for EANET and Activities of the Working Group on Future Development (WGFD) after 2008.



Third Special Session of the Working Group on Future Development of EANET (WGFD-S3)

The Third Special Session of the Working Group on Future Development (WGFD-S3) was held on 19 November 2008, back to back with IG10. The Session adopted the Draft Report of the WGFD on the Text of the Instrument to Provide a Sound Basis for Contribution to EANET (Fifth Draft) including the Revised Draft Text of the Instrument to Provide a Sound Basis for Contribution to EANET and agreed to submit this document to IG10, for its consideration.

Eighth Session of the Scientific Advisory Committee (SAC8)

The Scientific Advisory Committee (SAC) held its 8th Session (SAC8) in Hanoi, Viet Nam on 15-17 October 2008. In this Session, the newly appointed Chairpersons of the various task forces and expert groups established under SAC made presentations on their activities in 2008.

SAC endorsed the draft Data Report 2007, the draft Inter-laboratory Comparison Project 2007, the Strategy Paper for Future Direction of Soil, Vegetation and related Ecosystem Monitoring, the Guidelines for selection and implementation of high priority research projects and the draft table of content of the Technical Manual on Dry Deposition Flux Estimation, the Technical Manual on Wet Deposition Monitoring (revised) and Technical Manual on Inland Aquatic Environment Monitoring (revised). SAC also agreed to submit the Procedures for Establishing Task Forces and Expert Groups under SAC, the TOR of the task forces and expert groups already established under SAC and the concept papers for the three high priority research



projects to the Intergovernmental Meeting (IG) for its approval. Finally, SAC agreed that the EANET data could be shared on the HTAP Global Database, following the rules and procedures on data and information disclosure of EANET.

The Task Force on Hemispheric Transport of Air Pollutants (TF HTAP) of CLRTAP in cooperation with EANET held an International Workshop on Regional and Intercontinental Transport of Air Pollution just before the SAC8 on 13-14 October 2008. All participants of SAC8 were invited by the TF HTAP to attend the workshop. Collaboration on global and regional modeling, impacts of long range transport, ozone and aerosol observations, mercury observations, and emissions and projections of air pollutants were discussed. The workshop presentations are available on the TF HTAP website <http://www.htap.org>.

Ninth Senior Technical Managers' Meeting (STM9)

The Ninth Senior Technical Managers' Meeting (STM9) was held in Niigata, Japan on 27-29 August 2008. The participants of STM9 updated their national monitoring plans, and discussed the preliminary draft Data Report 2007, the draft Report on inter-laboratory comparison projects 2007, research activities and were briefed on the activities of the

task forces and expert groups established under SAC. The participants also reported on problems encountered in their respective countries in conducting the monitoring activities and shared experiences. The inputs from countries are useful to the Network Center (NC) in its planning of future training activities.



EANET ACTIVITIES IN 2008

Capacity Building Workshop for Policy Makers of the Participating Countries of EANET

The Capacity Building Workshop for Policy Makers of the Participating Countries of EANET organized by EANET Secretariat at UNEP RRC.AP was held in Pathumthani, Thailand from 23 to 26 September 2008. The objectives of the workshop were to enhance the capacity of officials of the participating countries of EANET and those involved in the policy making process to contribute to the process of discussion necessary for future development of EANET; to improve the awareness of policy makers of participating countries on the adverse impacts on the environment caused by acid deposition and to strengthen the regional cooperation by providing the policy makers with the good practices and knowledge on other international policies and regulations related to acid deposition and air pollution. Given the lectures and the Handbook for the workshop on "Multilateral Cooperation on Air Pollution: Science, Policy and Negotiations for Agreements/ Instruments," the group exercises at this workshop were very productive.



EANET Research Fellowship Program 2008

The NC received seven applications from three countries namely Indonesia, Malaysia and Thailand for the EANET Research Fellowship program 2008. The Selection Committee of the

NC decided to award the fellowships to Ms. Yani Sumarriani Sutaryo from Indonesia and Ms. Soontree Khuntong from Thailand based on their research proposals. The research topic of Ms. Sutaryo was on effect of acid deposition and related air pollutants on ecosystems/Inland Water Aquatic, while Ms. Khuntong conducted research on ion chromatographic determination of organic acids in rainwater. The researchers conducted their research at ADORC from late October to late December 2008. The EANET Research Fellowship program 2009 will start by late 2009 and young researchers in participating countries are encouraged to apply for the fellowship.



JICA Training Course on Acid Deposition Monitoring Network in East Asia 2008

The JICA Training Course on Acid Deposition Monitoring Network in East Asia, in JFY 2008 was held from 5 October through 13 December 2008 in Kobe and some other places in Japan. Five trainees attended this course from four EANET participating countries, namely Cambodia, China, Lao P.D.R. and Myanmar. The JICA trainees visited the NC in

Niigata from 4–7 November 2008. During their visit, NC staff presented lectures on acid deposition monitoring of EANET including wet/dry deposition monitoring, QA/QC activities, data reporting, modeling activities. The participants also visited the various facilities in ADORC and the monitoring site in Maki.



Strategy Paper for Future Direction of Soil, Vegetation, and related Ecosystems Monitoring (2009-2014)

Agencies involved in soil and vegetation monitoring of EANET should take note that a Strategy Paper for Future Direction of Soil, Vegetation and related Ecosystem Monitoring of EANET (2009-2014) has recently been adopted by SAC and copies of the paper were distributed to all participating countries. The document was prepared by the Task Force on Soil and Vegetation Monitoring and it proposed the roadmap and several milestones for development of the EANET

ecological monitoring. The milestones include “development of the guidelines for the catchment monitoring”, “identification of the areas susceptible to acid deposition”, “trial campaign for measurement of ozone concentration in forest area and its effects”. The activities described in the Strategy Paper for Future Direction of Soil, Vegetation, and related Ecosystems Monitoring of EANET (2009-2014), are in line with the Strategy on EANET Development (2006-2010) adopted by IG.



FUTURE EVENTS/ACTIVITIES

JICA Third Country Training Program (TCTP) 2009

JICA TCTP on Control Strategies and Mitigation Measures of Acid Deposition 2009 will be held on 19 January - 6 February 2009 at the Environmental Research and Training Center (ERTC), Thailand. Trainees from 10 EANET countries namely, Cambodia, China, Indonesia, Lao PDR, Malaysia,

Mongolia, Myanmar, Philippines, Thailand and Vietnam, will participate to gain knowledge and understanding on acid deposition problems as well as to develop the abilities and skills on control strategy for abatement of acid deposition in the region.

EANET Individual Training Course 2009

Taking into account the urgent needs expressed by some countries for further training on specific areas of acid deposition monitoring, the NC had invited the National Focal Points (NFPs) of five participating countries namely Indonesia, Malaysia, Mongolia, Russia and Thailand, to nominate one

participant each to attend the EANET Individual Training Course on Acid Deposition Monitoring in 2009. The course will be held on 1-28 February 2009 at ADORC, Niigata, Japan. The requests from other countries will be considered in the following years.

Third Scientific Workshop on Evaluation of Status of Acid Deposition in East Asia

Third Scientific Workshop on Evaluation of the Status of Acid Deposition in East Asia will be held in October 2009 back to back with SAC9 in a participating country as a first step to start the preparations of the Second Periodic Report on the State of the Acid Deposition in East Asia (PR SAD2). SAC members and experts in EANET region and other international

programs will be invited. The tentative program items are:

- Existing methodologies and new approaches;
- State and long-term trend of acid deposition;
- Ecological impacts of acid deposition;
- Improvements on monitoring methodologies.

9th Workshop on Public Awareness for Acid Deposition Problems (WSPA9)

The NC in collaboration with Niigata Prefectural Environmental Conservation Corporation (NPECC), Japan will be organizing WSPA9 in Niigata, Japan on 12-13 February 2009. Invitations have been sent to the NFPs of the participating countries to nominate suitable participants for the workshop. A project to enhance environmental awareness on acid

deposition problems is presently being conducted by schoolchildren in selected schools in Thailand and Japan in collaboration with the Pollution Control Department, Thailand and NPECC. Some school children will be invited to present on the results of their experiments and studies of the environment on the first day of the workshop.

Implementation of three high priority research projects of EANET from 2009

Three high priority research projects have been approved by the IG for implementation in 2009 by SAC in cooperation with participating countries. These projects are:

1. Studies on the suitability of various low-cost methodologies, such as passive samplers, for monitoring air concentration (Project leader: Prof. Ruibin Wang, China)
2. Aerosol deposition study in forests for improvement of estimation methods for dry deposition flux (Project leader: Dr. Pojanie Khummongkol, Thailand)
3. Analysis of existing data for improving the understanding of the status of acidification in East Asia (Project leader: Dr. Hiromasa Ueda, NC)

The first project will make measurements of gaseous and particulate species using various methodologies at selected sites in the EANET region under different climate conditions and compare the data obtained. Direct measurement of aerosol deposition flux of sulfate and nitrate aerosols will be conducted in a forest in Thailand in the second project and seasonal differences will be determined. The third project will involve an evaluation of analytical methods for acid

deposition, analyzing the status of acidification using various methods – statistical, visualization, numerical models, and preliminary analysis of accumulated data up to 2009 for spatial distribution of deposition, trends. The NC as the secretariat will coordinate the implementation of the projects. Detailed implementation plans are being developed by the project leaders with assistance from the NC.

Introduction of Achievements of Model Intercomparison Study (MICS-Asia)

Hiromasa UEDA, Acid Deposition and Oxidant Research Center

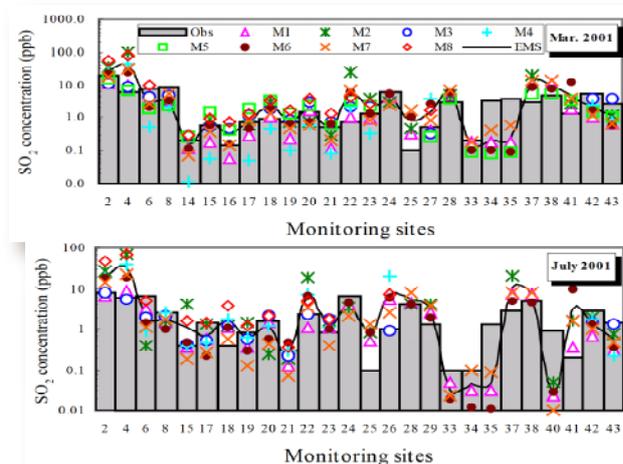
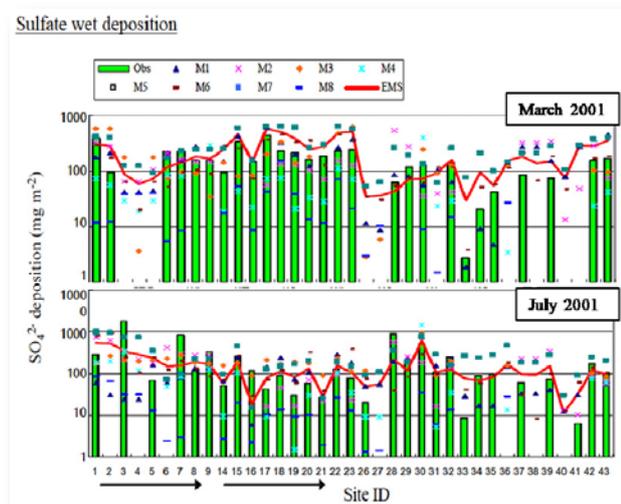
MICS-Asia (Model Inter-Comparison Study for Asia) Phase II delivered its achievements as a Special Issue in the most authorized scientific journal 'Atmospheric Environment' in May 2008. It contains model intercomparison and evaluation of acid deposition, ozone and other gaseous pollutants, aerosols, impact of global emissions on regional air quality, emission inventory intercomparison and overview of findings.

The MICS-Asia program was started in 1998 to make a common understanding of model performance and uncertainties in East Asia application, to make model intercomparison on long-range transport and deposition and to build a modeling research community. More than 30 members from China, Korea, Japan and Thailand in EANET region, and the US and Europe participate in the program, and hold their workshop in IIASA (International Institute for Applied System Analysis), Laxenburg, Austria, every year.

Model intercomparison in the Phase II was made for sulfur, nitrogen compounds, ozone and aerosols for various seasons, locations and altitude ranges. The target was EANET wet and dry deposition monitoring data. Ozone soundings and airplane observations of SO₂, O₃, NO, NO₂, HNO₃ and PAN in TRACE-P experiment were also used. Eight regional chemical transport models, CTMs, were participated with

their meteorological and wind fields predicted individually or given by objective reanalysis. Lateral and top boundary conditions were presented from a global CTM (MOZART-II) by Holloway et al (2008). Emission inventory of 0.5x0.5 deg. was specially-prepared for anthropogenic and natural pollutants (SO₂, NOx, NMVOC, elemental and organic carbons) by Streets et al (2005) and for volcanic SO₂ by Kajino (2004). As an example, observation of sulfate wet deposition and SO₂ concentration are presented below. For sulfur compounds all models showed good performance. Model performance was also fairly good for ozone but it was relatively poor for nitrogen compounds. However, ensemble mean statistics (EMS) of all models that participated gave good performance as seen below. It is something like an empirical "law", and encourages us to promote modeling work as an EANET activity through more contribution of scientists from many countries.

The Task Force on Hemispherical Transport of Air Pollutants (TF HTAP) of CLRTAP, which held a Workshop on Regional and Intercontinental Transport of Air Pollution in Hanoi on 13-14 October 2008 just before the SAC8 specially prepared a session for MICS-Asia. The MICS members presented their updated results and the SAC members joined in the discussions.



EVENTS IN 2009

ACTIVITIES	TENTATIVE DATE	VENUE
JICA Third Country Training Program on Control Strategy and Mitigation Measures of Acid Deposition	19 Jan. – 6 Feb. 2009	ERTC, Pathumthani, Thailand
EANET Individual Training at ADORC	1-28 Feb. 2009	ADORC, Niigata, Japan
9 th Workshop on Public Awareness for Acid Deposition Problems (WSPA9)	12-13 Feb. 2009	ADORC, Niigata, Japan
2 nd Meeting of Expert Group (EG) on Dry Deposition Flux Estimation	19 Feb. 2009	Meisei Univ., Tokyo, Japan
Capacity Building Workshop for Policy Makers of the Participating Countries of EANET	13-15 May 2009	AIT, Pathumthani, Thailand
2 nd Meeting of EG on Revision of Technical Manual on Inland Aquatic Environment Monitoring	1-2 July 2009	ADORC, Niigata, Japan
2 nd Meeting of Task Force (TF) on Soil and Vegetation Monitoring	15-16 July 2009	ADORC, Niigata, Japan
8 th Session of the Working Group on Future Development of EANET (WGFD8)	29-31 July 2009	Thailand
2 nd Meeting of TF on Monitoring Instrumentation	25 Aug. 2009	Participating country with STM10
10 th Senior Technical Managers' Meeting (STM10)	26-28 Aug. 2009	Participating country
EANET Research Fellowship Program 2009	Sep. – Dec. 2009 (2 months)	ADORC, Niigata, Japan
2 nd Meeting of TF on Monitoring for Dry Deposition	15-16 Sep. 2009	ADORC, Niigata, Japan
2 nd Meeting of EG on Revision of Technical Manual on Wet Deposition Monitoring	29-30 Sep. 2009	ADORC, Niigata, Japan
JICA Training Course on Acid Deposition Monitoring Network in East Asia 2009	Oct. – Dec. 2009	JICA-HIC, Kobe, Japan, etc.
2 nd Meeting of TF on Research Coordination	12 Oct. 2009	Participating country with SAC9
3 rd Scientific Workshop on Evaluation of the Status of Acid Deposition in East Asia	13 Oct. 2009	Participating country with SAC9
9 th Session of Scientific Advisory Committee (SAC9)	14-16 Oct. 2009	Participating country
11 th Session of Intergovernmental Meeting (IG11)	19-20 Nov. 2009	Participating country

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