

The Second Meeting of Drafting Committee for the Periodic Report  
on the State of Acid Deposition in East Asia  
19-20 April 2006, Niigata, Japan

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**MINUTES**

1. The Second Meeting of the Drafting Committee (DC) for the Periodic Report on the State of Acid Deposition in East Asia (PR SAD) was held 19-20 April, 2006 in Niigata, Japan. Meeting was attended by DC members from 11 participating countries, namely, Cambodia, China, Indonesia, Japan, Lao PDR, Malaysia, Mongolia, Philippines, Russia, Thailand, and Viet Nam. The Secretariat of EANET took part in the meeting. The list of participants is attached as Annex 1.
2. Prof. Muhamad Awang, Chair of SAC bureau opened meeting. Dr. Hiromasa Ueda, Director General of ADORC delivered welcoming speech.
3. The Meeting started with overviewing the progress on the development of the report. The first draft was prepared for discussion at the meeting with some chapters and sections under preparation. The tables of received materials before DC2 were prepared by NC. The status of National Assessments was also presented with clarification from participating countries on revision/update after DC2. The meeting proposed to have better coordination among the authors and also with NC in order to comply with the proposed schedule and deadline for report preparation.
4. The meeting reviewed the Part I on the Regional Assessment of the draft report presented by the leading authors. The possible use of published EANET materials is considered for elaboration of all the chapters.
5. The draft Chapters 1 and 2 (lead author Prof. Hara) will be completed within one month after DC2 with help of NC with the following suggestions and recommendations:
  - More general information and philosophy of EANET history could be compiled from the published materials and available information on EANET.

- An updated map of monitoring network and some other figures will be prepared by NC.
  - The metadata on measurement sites are required to complete Chapter 2 (QA/QC activities and their evaluation). The necessary information will be clarified by lead author and NC.
6. The draft section 3.2 of Chapter 3 (lead author Dr. Cho) was presented by NC based on the received manuscript. Then, suggestions and comments are as follows:
- Clearer explanation is required on data variations for SO<sub>2</sub> and nss-sulfate and also their ratio. The words on chemical reactions (e.g., I-3.2 p.11, para 4) need to be more specific.
  - More explanation is required for pA<sub>i</sub> (I-3.2 p.35, para 2) presented as formula and corresponding references are needed.
  - Data on SO<sub>2</sub> for the graph on Hanoi (Fig. 3.2.5 on I-3.2 p.35) should be checked accordingly.
  - The agricultural activities could not be a general reason of higher NH<sub>3</sub> and NH<sub>4</sub><sup>+</sup> concentrations in summer at Mondy site (I-3.2 p.25).
  - Potential errors in data of Chinese sites were noted for Fig. 3.2.22, and request to check data was addressed to the contributor from China.
7. New results on trend analysis of wet deposition were presented by Prof. Hara as a contribution to section 3.2.3. Some suggestions were made:
- To put 1 or 2 graphs to explain the concept of the trend analysis (on I-3.2.3 p.1).
  - Clearer terminology is required to be used for parameters, e.g. accumulation rate or inter-annual variability. However, some discrepancies between possible negative values of parameter and “accumulation rate” were pointed out.
  - The parameters on I-3.2.3 page 1 need to be explained more and discussed further.
  - Figures I-3.2.3 page 8-10 should be revised.
8. The contents of part 3.3 were presented by lead author (Prof. Awang) and contributors (Dr. Ocampo and Dr. Esrom). The major questions and suggestions were raised:
- The data on evaluation of ecological impact could be obtained from the relevant research and modeling in Japan.
  - To complete citation or reference on possible impact on ecosystem - by NC.
  - The term “acid rain” should be replaced by “wet deposition”.

- It is more suitable to use Nitrogen or Sulfur for explanation of loads instead certain compounds.
- Some harmonization of reviewed theoretical approaches with existing results of studies in East Asia could be considered as well as an analysis of present status of impacts.
- Suggestions were made to members to provide results of their country studies on Critical Load or other approaches to ecological effects as well as on impact on crops.
- The analysis of  $\text{HCO}_3$  was suggested to investigate the impact on inland aquatic environment.
- Necessary parameters for the future works on ecological impact monitoring could be put into text.

9. Chapter 4 was presented by lead author Dr. Pojanie. Some suggestions were:

- More detailed records on achievements including lists of manuals, reports, training programs, and workshops should be included.
- To avoid the repetition, the coordination with Chapter 1 is needed on history of EANET and other topics. Chapter 4 should described tables of meetings and events for reference of readers. General descriptions and philosophy of process will be included in Chapter 1.
- Some sub-titles should be elaborated or changed.
- The creation of monitoring systems in countries could be described as the achievement of EANET as well as designing and development of SAC and other bodies of EANET.
- NC will support in preparation of records on developed documents, manuals, supporting materials. The suitable appendix could be prepared upon the decision.
- Workshop and other events should be separated from capacity building like training, technical missions, etc. NC was requested to prepared short descriptions on past workshops.
- More pages could be used for additional description.

10. The revised Chapter 5 was presented by lead author Dr. Akimoto. After the discussions the some conclusions were made:

- The Table 5-7 will be revised with adding enough explanation in text to highlight the importance of the concept on source-receptor relationship for atmospheric deposition. The splitting of the table was proposed as one of the cases for revision.
- “Other regional studies for East Asia” was considered as better title for the Chapter.

- It was clarified that emission inventory and modeling studies within the respective countries would be included in the national assessment.
- Information is requested from DC members on regional studies which are not included in review, if available.

11. Some points were decided for completion of the Part I (Regional Assessment) of the Report:

- General conclusions, concluding remarks, or recommendations of the respective chapters should be summarized in the Chapter 6 (draft preparation by Dr. Ueda) upon the submission of them by all lead authors. These materials could be sent during the updating or revision of the first draft together with recommendations for future works.
- The Introduction of Report should be prepared by the same way based on updated first draft.
- NC will compile the remarks by the leading authors and make a draft of the Chapter and mentioned Introduction. After the discussion among the leading authors on their meeting, the final draft will be completed under the supervision of Chair of DC.
- The content of Executive Summary will be drafted by NC under the cooperation with lead authors and be completed by the same way.
- The information on national criteria, standards or guideline was requested from DC members to complete Appendix.
- The balance between texts, graphs and table is recommended together with using prepared technical requirements (EANET/DC 2/5 Appendix II-1) for completion and revision of Report by utilizing the EMEP report as a general format.
- The first draft of Chapters of Regional Assessment should be completed within a month after DC2 by the May 21, 2006.
- The name of editors, list of authors and list of the secretariat should be prepared by NC and send to the leading authors to review.

12. The National Assessments of some countries (Cambodia, Indonesia, Japan, Russia, Viet Nam) were presented to overview updated or new reports. Major comments were done as following:

Cambodia:

- The application of wet-chemical analysis of sulfate is suggested before installation of IC under sharing experience of a SAC member and NC.
- The data on precipitation amount should be checked in the table of section 2.4.

Indonesia:

- Interpretation of wet deposition results can include an investigation of anion-cation relationship, and the Na/Cl ratio should be checked for further understanding of effects of sea salt.
- Data on pH value should not be used alone for overall comprehensive analysis of wet deposition being meaningless, so using of whole set of compounds and  $pA_i$  was suggested.
- The definition of acid deposition by pH (as  $pH < 5.6$ ) cannot be accepted from scientific view point, but if it is used as the national standard of acid deposition quality, it should be mentioned.
- Deletion is not good solution of problem on data quality for evaluation. The evaluation of results being out of R1 and R2 criteria is needed.

Japan:

- Importance of learning Japanese efforts to decrease of  $SO_2$  emission was expressed with particular interest for developing countries. The materials of the 6<sup>th</sup> Workshop for Public Awareness (WSPA6) in February 2006 were mentioned to know current policy with more details.
- The interpretation of the presented data on deposition of  $NO_3$  with precipitation collected in rural and urban sites was discussed. It was expressed that the site category of rural sites has some uncertainty for interpretation. The importance of time for chemical transformation of emission gases transported from urban territories was mentioned for explanation of Figure 2-4 and 2-5. It takes a few hours for conversion from  $NO_2$  to  $HNO_3$ , while it takes a few days in case of  $SO_2$ .
- Possible effects of high concentration ozone on vegetation were suggested looking for presented results in 2.1.2.2 since 40 ppb of ozone was defined as the threshold for reduced growth of plants in model experiments.

Russia:

- It was clarified that significant increase of  $SO_2$  concentration in 2005 at Eastern Siberian sites might be caused by increased emission from coal combustion during more severe winter of this year.
- Bicarbonate, which had not been analyzed in other countries, may contribute considerably to ion balance of wet deposition samples, especially in frigid zone, such as Mongolia, Russia, and Northern part of China, where effects of dusts derived from soil might be large. It may be important for evaluation of inland aquatic environment, and the possibility of including its measurement into the QA/QC

program should be considered.

- Relationship between pH and  $pA_i$  should be described with same-scale axis and 1:1 line for the interpretation of pH values.

Viet Nam:

- The country could decide by themselves on the including of materials related to acid deposition issues with general following to suggested contents. However, DC could not recommend all countries to extend the contents of their National Assessments.

13. The further process of report preparation was discussed based on revised schedule. Meeting agreed on:

- Deadline for updating of the first draft of Report was established by the end of May, 2006. The meeting of lead author should be organized in June 2006 to make 1<sup>st</sup> draft better for further circulation among the SAC member, NFPs and experts. The Implementation Plan was revised as presented in Annex II.
- NC will make necessary efforts to organize exchange of materials and managing of the process. The lead authors should take more responsibility to communicate with contributors and other DC members on preparation of their Chapters.
- The lead authors should propose a list of candidates of external experts for review of the report or their Chapters after this meeting. NC will negotiate with proposed reviewers on their availability.
- The scientific workshop for DC will be organized under the cooperation and with support of the Secretariat in conjunction with Regional scientific workshop at the beginning of September 2006. NC and the Secretariat will start the necessary preparation under the coordination with Head of DC and leading authors.
- Language check by native English speakers will be carried out for the final draft prior to SAC6.
- NC will communicate with National Focal Points and their designated persons on revision/update or preparation of the National Assessment by the end of May 2006.

15. The meeting considered this Minutes and adopted through the circulation after DC2.

## *Participants*

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**Since this list includes personal information,  
please handle it with enough care.**