

The First Meeting of the Drafting Committee
for the Third Periodic Report on the State
of Acid Deposition in East Asia
8-9 June 2015, Niigata, Japan

MINUTES
of the First Meeting of the Drafting Committee
for the Third Periodic Report
on the State of Acid Deposition in East Asia

1. The First Meeting of the Drafting Committee (DC) for the Third Periodic Report on the State of Acid Deposition in East Asia (PRSAD3) was held 8-9 June, 2015 in Niigata, Japan. Meeting was attended by DC members and some alternatives from 13 participating countries, namely, Cambodia, China, Indonesia, Japan, Lao PDR, Malaysia, Mongolia, Myanmar, Philippines, Republic of Korea, Russia, Thailand, and Viet Nam. Two resource persons and the staffs of the Network Center for EANET (NC) also took part in the meeting. The list of participants is attached as Annex 1.
2. Dr. Kazuhiko Sakamoto, the Director General of Asian Center for Air Pollution Research (ACAP), delivered the opening remark.
3. Dr. Sukjo Lee, the Deputy Director General of ACAP, made the introductory remark. The DC members and other participants were introduced by themselves. Prof. Seog Yeon Cho, Professor of Inha University, Republic of Korea, was nominated as the Chair of the DC.
4. The Provisional Agenda, attached as Annex 2, was adopted as proposed.
5. The NC presented overview of the 1st and 2nd Periodic Report on the State of Acid Deposition in East Asia (PRSAD 1 and 2). Major discussions included the following:
 - Time schedule of preparation of the 3rd Periodic Report on the State of Acid Deposition in East Asia (PRSAD3) will be considered in the Agenda 7. The NC will submit the draft schedule.
 - The PRSAD 1 and 2 and the Review of the State of Air Pollution in East Asia (RSAP) were distributed to EANET countries, other international organizations and experts. There were no significant comment regarding to the reports.
 - It was suggested that the draft of PRSAD3 will be reviewed by external scientists or comments from the public to increase the visibility. One option is that the draft may be disclosed in Internet for open access and reviewed by public under agreement by member countries. The other option is that scientific workshop presenting the outcomes of PRSAD3 will be held at UNEP meeting, Better Air Quality (BAQ) meeting or the other independent chance. The possible time is year

2016.

6. The NC presented the Format and Contents of PRSAD3. Dr. Gromov also explained the Trend Assessment in Data Analysis of Regional Atmospheric Pollution Monitoring Networks. Major discussions included the following:

(General discussions)

- Trend analysis can be applied to respective monitoring items, and the results could be highlighted in an independent chapter or sections. Mann-Kendall test was applied to inland water and (wet deposition) data in PRSAD2. Trend analysis can be also highlighted as a topic of the Executive Summary.
- Trend analysis will be incorporated to the appropriate Chapters instead of having all in a separate Chapter.
- It was clarified that the dry deposition flux was calculated only in Japanese sites because only hourly meteorological dataset of these sites were available to the NC.
- Contents of air concentration can be separated from that of dry deposition as an independent chapter.
- Each Chapter should include the section of Conclusion or Summary.

(Discussions on each Chapter of Regional Assessment)

- Chapter 1
 - ✧ Global perspectives should be included under Section 1.1 Background or as a separate section.
- Chapter 3
 - ✧ Title should be modified to “Precipitation chemistry in East Asia”.
 - ✧ Sections on wet deposition will be moved to the Chapter 5.
 - ✧ Section of dataset and data quality should be moved to the Chapter 2.
 - ✧ Meteorological conditions including precipitation amounts will be included as Section 3.2 Meteorological conditions including precipitation.
- Chapter 4
 - ✧ Title should be modified to “Trace gas and aerosol concentrations affecting the acid deposition in East Asia”.
 - ✧ Section of measurement methodologies should be modified as trace gas and aerosol concentrations measurement methodology.
 - ✧ Sections on dry and overall deposition will be moved to Chapter 5.
- Chapter 5
 - ✧ The title of Chapter 5 will be “Wet and dry deposition in East Asia”.
- Chapter 6

- ✧ Title should be modified to “Impacts on Ecosystems in East Asia”.
- ✧ Section 6.2 will be Soil features and temporal changes
- ✧ Section 6.3 will be Vegetation features and temporal changes
- ✧ Section 6.4 will be Inland water chemistry and trends
- ✧ Section 6.5 Catchment-scale analysis may include the regular monitoring in Lake Ijira and other related research sites.
- Chapter 7
 - ✧ Title should be modified to “Conclusion and recommendations for future activities”.

(Discussions on National Assessment)

- Title of Chapter 3 should be modified to “Review of national air quality management including acid deposition”.
 - It was clarified that each country’s report would include Chapter 4 Conclusion or Summary. It was also clarified that the detailed structure the country’s report can be decided by each country.
7. The Draft Content of PRSAD3 was revised according to the discussions. The revised Content of PRSAD3 was agreed as Annex 3 by the DC. The contents of sections in each Chapter can be further modified by each Lead Author.
8. The NC presented the list of Lead Authors and Contributors in the case of PRSAD2. Then, the Members of the Lead Authors Meeting (LAM) for the PRSAD3 were considered. Major discussions included the following:
- List of the contributors is flexible as the open-end manner but limited to member countries. The lead authors may change the contributors in each Chapter.
9. The list of Lead Authors and Contributors in each Chapter was agreed as Annex 4 by the DC. It will be e-mailed to the DC members for confirmation, and additional recommendations of the contributors can be sent to the Secretariat by the 1st LAM.
10. The NC presented the Draft Implementation Plan of PRSAD3. Then, the detailed plan, time schedule and measures for process of preparing the PRSAD3 were considered. Major discussions included the following:
- The schedule was prepared based on the experience of PRSAD2. Based on the experience on PRSAD2, to avoid any delay in the drafting of PRSAD3 there would be a need to increase manpower for preparation of PRSAD3.

- The NC clarified that an independent workshop cannot be held because of the budget constraints. The workshop will be associated with the other EANET meeting.
- Immediately after the DC meeting, the whole dataset until the 2013 data should be sent to the lead authors. The NC clarified that the 2014 data would be available and can be provided to the lead authors after SAC15 in autumn 2015.
- The scientific workshop to review the contents of PRSAD3 will be held in early 2016 just after preparation of the 1st draft. It should be held back to back the 2nd DC meeting.
- It was clarified that the presentation on EANET including preparation of PRSAD3 at the 9th International Acid Rain Conference on October 19-23, 2015, may be a good chance to promote EANET and to get feedback by experts from other international networks.
- Schedule of the national assessment report should be proposed at SAC15. The Secretariat of DC will contact the National Focal Points (NFPs) in participating countries and confirm the authors of national report.
- It was clarified that the contents of the national assessment report might be decided depending on the monitoring activities in the respective countries. The template of the report has to be provided to the member countries.

11. The Draft Implementation Plan of PRSAD3 was revised according to the discussions. The revised plan was agreed as Annex 5 by the DC.

12. The NC presented the other issue of Utilization of EANET data and the spread of EANET research. Major discussions included the following:

- Limitation of data access and lack of promotion on data request procedure will cause less number of EANET data utilization. It was recommended that those issues should be addressed.
- It was recommended that the survey of utilization of EANET data is reported at SAC15.
- It was recommended that the special issue of a peer reviewed journal contributed by young scientists in EANET countries is organized.
- To utilize PRSAD among more scientists and experts, it is suggested that the members of DC, Lead Authors and contributors should use the outcome of the PRSAD to publish peer reviewed journals.
- It was recommended that the brochure to summarize PRSAD is prepared and distributed at conferences, workshops, conventions etc. The PRSAD Web page

should be linked to other organizations' Web page.

- It was suggested that SAC should more consider capacity building of scientific matters of EANET.
- It was recommended that the measurement units to be used in PRSAD3 are discussed in SAC15. The NC should survey the list of units among various international networks in communication with the Chair of DC.

13. The meeting adopted this minutes.

Annex 1**List of Participants**Participating CountriesCambodia

Mr. Kong Savuth
 Vice-Chief Office, Laboratory Office
 Department of Environment Pollution Control
 Ministry of Environment

China

Prof. Fan Meng
 Institute Director, Senior Research Fellow
 Atmospheric Environment Institute
 Chinese Research Academy of Environmental
 Sciences

Indonesia

Prof. Edvin Aldrian
 Director
 Research and Development Center
 Meteorological Climatological and Geophysical
 Agency (BMKG)

Japan

Dr. Toshimasa Ohara
 Fellow, Planning Department
 National Institute for Environmental Studies

Dr. Junko Shindo
 Professor
 Department of Environmental Sciences
 Faculty of Life and Environmental Sciences
 University of Yamanashi

Lao PDR

Mr. Phongsavath Yingyong
 Technical Staff
 Natural Resources and Environment Institute
 Ministry of Natural Resources and Environment
 (MONRE)

Malaysia

Mr. Jayaprakash Murulitharan
 Principal Assistant Secretary
 Environment Management and Climate Change
 Department
 Ministry of Natural Resources and Environment

Mongolia

Dr. Azzaya Dolgorsuren
 General Manager & Scientific Secretary
 Administration
 Information & Research Institute of Meteorology,
 Hydrology and Environment

Myanmar

Ms. Htay Htay Than
 Director
 Department of Meteorology and Hydrology
 Ministry of Transport

Philippines

Prof. Wilfredo M. Carandang
 Professor
 Institute of Renewable Natural Resources
 College of Forestry and Natural Resources
 University of the Philippines Los Baños

Republic of Korea

Dr. Seog Yeon Cho
 Professor
 Department of Environmental Engineering
 Inha University

Russia

Dr. Sergey Gromov
 Deputy Director
 Institute of Global Climate and Ecology
 Roshydromet and RAS

Thailand

Dr. Patcharawadee Suwanathada
Director of Ambient Air Quality Division
Air Quality and Noise Management Bureau
Pollution Control Department
Ministry of Natural Resources and Environment

Dr. Hiroaki Minoura
Head
Atmospheric Research Dept.

Dr. Hiroyuki Sase
Head
Ecological Impact Research Department

Vietnam

Dr. Hong Duong Son
Deputy Director General
Institute of Meteorology, Hydrology and Climate
Change
Ministry of Natural Resources and Environment

Mr. Shiro Toda
Head
Planning and Training Department

Mr. Jiro Sato
Senior Fellow

Resource Person

Dr. Kazuhide Matsuda
Associate Professor,
Faculty of Agriculture Field Science Center,
Tokyo University of Agriculture and Technology

Dr. Tsuyoshi Ohizumi
Director
Research Development Department

Secretariat

Network Center for EANET

Asia Center for Air Pollution Research (ACAP)

Dr. Kazuhiko Sakamoto
Director General

Dr. Sukjo Lee
Deputy Director General

Mr. Yusuke Kusakawa
Deputy Director General

Dr. Ken Yamashita
Head
Data Management Department

Dr. Keiichi Sato
Chief Senior Researcher
Data Management Department

Annex 2

Provisional Agenda

- (1) Opening of the meeting
- (2) Introducing of the Drafting Committee (DC) members and other participants of the meeting, and election of the Chairperson
- (3) Adoption of the Agenda
- (4) Objectives of the DC and procedures to prepare the Third Periodic Report on the State of Acid Deposition in East Asia (PRSAD3)
- (5) Elaboration of formats and contents of the PRSAD3
- (6) Election of the Members of the Lead Authors Meeting (LAM) for the PRSAD3
- (7) Detailed plan, time schedule and measures for process of preparing the PRSAD3
- (8) Other issues
- (9) Wrap-up of the meeting
- (10) Closing of the meeting

Annex 3

**Draft Contents of the Third Periodic Report on the State of Acid
Deposition in East Asia (PRSAD3)**

PART I: Regional Assessment

Table of Contents

List of authors and contributors to the third periodic Report
Drafting Committee members in Scientific Advisory Committee

Foreword

Overview of the Report

Chapter 1. Introduction

- 1.1 Background
- 1.2 Global Perspectives
- 1.3 Objectives
- 1.4 Institutional arrangement
- 1.5 EANET activities in 2010-2014
- 1.6 References

Chapter 2. Data Quality

- 2.1 Introduction
- 2.2 General procedures of QA/QC
- 2.3 Evaluation of Inter-laboratory Comparison Projects
- 2.4 Evaluation of the measurements
- 2.5 Conclusion (Summary)
- 2.6 References

Chapter 3. Precipitation chemistry in East Asia

- 3.1 Introduction
- 3.2 Meteorological conditions including precipitation
- 3.3 pH (and pAi)
- 3.4 Concentrations of major ions
- (3.5 Chemical composition)
- 3.6 Relative contribution of some ion pairs

3.7 Conclusion (Summary)

3.8 References

Chapter 4. Trace gas and aerosol concentrations affecting the acid deposition in East Asia

4.1 Introduction

4.2 Trace gas and aerosol concentrations measurement methodology

4.3 Spatial variation of trace gas and aerosol concentrations

4.4 Temporal variation of trace gas and aerosol concentrations

4.5 Trends of trace gas and aerosol concentrations

4.6 Conclusion (Summary)

4.7 References

Chapter 5. Wet and dry deposition in East Asia

5.1 Introduction

5.2 Wet and dry deposition assessment methodology

5.3 Spatial distribution of wet and dry deposition

5.4 Trends of wet and dry deposition

5.5 Overall analysis on atmospheric deposition

5.6 Conclusion (Summary)

5.7 References

Chapter 6. Impacts on Ecosystems in East Asia

6.1 Introduction

6.2 Soil features and temporal changes

6.3 Vegetation features and temporal changes

6.4 Inland water chemistry and trend

6.5 Catchment-scale analysis

6.6 Conclusion (Summary)

6.7 References

Chapter 7. Conclusion and Recommendations for Future Activities

7.1 Introduction

7.2 Conclusion

7.3 Recommendations for future activities

List of the Secretariat of the Drafting Committee for the third Periodic Report

PART II: National Assessment

Participating countries:

Cambodia,

China,

Indonesia,

Japan,

Lao PDR,

Malaysia,

Mongolia,

Myanmar,

Philippines,

Republic of Korea,

Russia,

Thailand,

Vietnam.

(Modification of structure can be made by each country)

Chapter 1. Basic Information on National Monitoring Activities

- 1.1 Outline of the activities on acid deposition and National Monitoring Plan
- 1.2 Monitoring program from 2010 to 2014
- 1.3 Monitoring Stations
- 1.4 Sampling and Measurements

Chapter 2. State of Acid Deposition in each participating country

- 2.1 Outline of the activities on acid deposition and National Monitoring Plan
 - 2.1.1 State of wet deposition
 - 2.1.2 State of dry deposition
- 2.2 State of inland aquatic environment
- 2.3 State of soil and vegetation
- 2.4 State of catchment monitoring
- 2.5 Overall analysis

Chapter 3. Review of National Air Quality Management including Acid Deposition

Chapter 4. Conclusion or Summary

PART III: Executive Summary

Annex 4

**Draft List of Lead Authors and Contributors in each Chapter
of the Third Periodic Report on the State of Acid Deposition
in East Asia (PRSAD3)**

| Chapter | Lead author | Contributor |
|---|----------------------------------|---|
| 1. Introduction | Dr. Lee (NC) | Prof. Nik (Malaysia), Dr. Akimoto (Japan), Mr. J Sato (NC), Mr. Toda (NC), Dr. Sutamihardja (Indonesia) |
| 2. Data Quality | Dr. Gromov (Russia) | Dr. K Yamashita (NC), Dr. K Sato (NC), |
| 3. Precipitation chemistry in East Asia | Prof. Cho (R. of Korea) | Dr. Patcharawadee (Thailand), Dr. Gromov (Russia), Dr. Hara (Japan), Prof. Aldrian (Indonesia), Mr. Savuth (Cambodia), Dr. Ohizumi (Japan) |
| 4. Trace gas and aerosol concentrations in affecting acid deposition in East Asia | Dr. Meng (China) | Dr. Gromov (Russia), Dr. Minoura (NC), Prof. Hu (China), Mr. Gong (China), Dr. Hong (R. of Korea), Ms. Kusumaningtyas (Indonesia) |
| 5. Wet and dry deposition in East Asia | Dr. Son (Vietnam) | Dr. Dolgorsuren (Mongolia), Dr. K Sato (NC), Dr. Matsuda (Japan), Dr. Ohizumi (Japan) |
| 6. Impacts on Ecosystems in East Asia | Prof. Carandang (Philippines) | Dr. Philip (Malaysia), Dr. Ocampo (Philippines), Dr. Sase (NC), Dr. N. Yamashita (NC), Prof. Shindo (Japan) |
| 7. Conclusion and Recommendations for Future Activities | Dr. Sakamoto (NC) | Dr. Philip (Malaysia), Ms. Win (Myanmar), Dr. Ohara (Japan), Prof. Cho (R. of Korea) |

Annex 5

**Draft Implementation Plan of the Third Periodic Report
on the State of Acid Deposition in East Asia (PRSAD3)**

| Year | Month | Activities/Events | Deliverables |
|-------------|-------------------------------|--|--|
| 2014 | September | SAC14 | Proposal on establishment of the DC of PRSAD3 to SAC14 by the NC |
| 2015 | June | 1 st Meeting of the DC Preparation of Report of DC meeting | Draft Table of Contents of PRSAD3 Names and contacts of DC members Names of Lead Authors of Regional Assessment Report Names of Contributors to the National Assessment Report Work Schedule |
| | June | Report of 1 st DC meeting sent to DC members and NFPs | Report of 1 st DC meeting |
| | July | Provide EANET dataset until 2013 to Lead Authors | EANET dataset until 2013 |
| | August | 1 st Meeting of Lead Authors | Confirmation of authors of each chapter, items etc. Clarification of responsibilities. Intensive discussion based on the outline of each chapter prepared by LA. |
| | August 2015- February 2016 | Compilation, editing and communications with contributors and Lead Authors | Preliminary draft of some sections of PRSAD3 |
| | September/October | SAC15 Preparation of Report of Chairman of DC | Report of Chairman of DC to SAC15 |
| | November | Provide EANET dataset in 2014 to Lead Authors | EANET dataset in 2014 |
| | November | IG17 Chairman of SAC reports progress of PRSAD3 to IG17 | SAC Chairman's Report to IG17 |
| 2016 | February | Preparation of First Draft of PRSAD3 | First Draft of PRSAD3 |
| | February | Circulation of First Draft among DC members, contributors, Lead Authors for comments | Comments from DC members, contributors and Lead Authors |
| | March/April | 2 nd Meeting of the DC 2 nd Meeting of Lead Authors/SWS for PRSAD3 back to back 2 nd DC meeting (2 days) Preparation of Report of DC meeting | Comments from DC members, Lead Authors and related experts |

| | | | |
|--|-------------------|--|--|
| | May | Report of DC meeting sent to DC members | Report of DC meeting |
| | May | Revision of First Draft to include comments from 2 nd DC meeting and Lead Authors Meeting | Second Draft of PRSAD3 Submission of National Assessment (Part II) |
| | May | Circulation of Second Draft to DC members, contributors, Lead Authors and NFPs for comments | Comments from DC members, contributors, Lead Authors and NFPs |
| | July | Revision of Second Draft to include comments from DC members, contributors and Lead Authors Drafting of Executive Summary | Third Draft of PRSAD3 and Draft Executive Summary |
| | July/August | 3 rd Meeting of the DC 3 rd Meeting of the Lead Authors after DC Preparation of Report of DC meeting | Comments from DC meeting and Lead Authors Meeting |
| | August | Request for review of to voluntary outer experts | Comments from experts |
| | August | Report of the DC meeting sent to DC members | Report of DC meeting |
| | August | Revision of the Third Draft of PRSAD3 and Executive Summary to include comments from the DC meeting and Lead Authors Meeting | Final Draft of PRSAD3 |
| | September/October | SAC16 Preparation of the report of the Chairman of DC to SAC16 Presentation of Final Draft of PRSAD3 and Executive Summary to SAC16 for adoption | Final Draft of PRSAD3 and Executive Summary (to be approved by SAC16) |
| | October | Circulation of the Final Draft of PRSAD3 and Executive Summary to DC members and SAC members for approval | Final Draft of PRSAD3 and Executive Summary (approved by DC and SAC members) |
| | October | Circulation of the Final Draft of PRSAD3 and Executive Summary to NFPs for endorsement | Final Draft of PRSAD3 and Executive Summary (endorsed by NFPs) |
| | November | IG18 | Final Draft of PRSAD3 and Executive Summary (endorsed by IG18) |
| | December | Language Check | Final Draft of PRSAD3 checked by language expert |
| | December | Printing and distribution of PRSAD3 | |