Twenty-first Session of the Scientific Advisory Committee
on the Acid Deposition Monitoring Network in East Asia
26-28 October 2021, Virtual Meeting

ACID DEPOSITION MONITORING NETWORK IN EAST ASIA (EANET)
SECOND MEETING OF THE EXPERT GROUP ON REVISION OF THE TECHNICAL MANUALS FOR DRY DEPOSITION FLUX ESTIMATION AND AIR CONCENTRATION MONITORING
(Internet meeting, 11 May 2021)
[UTC 5:30-8:30]

PROVISIONAL AGENDA (Draft)

May 11

UTC: 5:30-5:35 (5 minutes)

1. Introductory remarks, Introduction of membership, Adoption of agenda — All Members and NC

UTC: 5:35-7:35 (120 minutes)

2. Review on 2nd draft of Technical Manual for Air Concentration Monitoring in East Asia — All Members NC

(NC will explain the revision points in the draft of the manuals for each Chapter as follows. Then, the participants will hold discussions.)
Chapter 1 Introduction: Dr. Huo
Chapter 2 Monitoring design: Dr. Huo
Chapter 3 Automatic monitoring: Dr. Yuba
Chapter 4 Manual monitoring: Dr. Huo
Chapter 5 Maintenance: Dr. Huo
Chapter 6 Data reporting and validation: Dr. Sato
Chapter 7 Quality Control and Quality Assurance: Dr. Sato
Chapter 8 Conclusions: Dr. Sato

UTC: 7:35-8:20 (45 minutes)

3. Review on 2nd draft of Technical Manual on Dry Deposition Flux Estimation in East Asia — All Members NC

(NC will explain revision points and comments for each Chapter as follows. Then, the participants will hold discussions.)
Chapter 1 Introduction: Dr. Sato
Chapter 2 Fundamental items for dry deposition flux estimation: Dr. Sato
Chapter 3 Data reporting: Dr. Sato
Chapter 4 Methodology for dry deposition flux estimation in EANET: Dr. Sato
Chapter 5 Future direction of dry deposition flux estimation: Dr. Sato
Appendix 1-3: Dr. Sato

UTC: 8:20-8:25 (5 minutes)

4. Next steps and schedule — All Members and NC

UTC: 8:25-8:30 (5 minutes)
Closing

MEETING MINUTES

I. Introductory remarks, Introduction of members, Adoption of agenda

Dr. Patcharawadee Suwanathada, the Chairperson of the Expert Group on the revision of the Technical Manuals for Dry Deposition Flux Estimation and Air Concentration Monitoring (EGRTM), explained the Provisional Agenda of 1st meeting and adopted the agenda.

II. Review on 2nd draft of Technical Manual for Air Concentration Monitoring in East Asia

The NC has revised and put some comments on the Technical Manual for Air Concentration Monitoring according to the advice in 1st EGRTM.

Chapter 1 Introduction

NC deleted the classification of priority and option for the monitoring targets and made one group for the monitoring target. EG suggested particle size classifiers such as cyclone and impactor need to be included in the manual. The reason and method of monitoring NO needs to be described in the manual. NC answered that the monitoring data of NO is submitted to EANET from some participating countries, and NO is included in the EANET monitoring Guideline too. EG recommended including the minimum necessary parameters for dry deposition estimation in the manual. The wind direction and cloud coverage are not necessary. Solar radiation data is useful for dry deposition estimation, and at least one site from one country is recommended to submit the solar radiation data. The manual can recommend submitting hourly meteorological data. It is also recommended to use the data from the nearby meteorological station.

Chapter 2 Monitoring design

In the manual, the NOx was modified to NO and NO_2 to make a consistent description. Both NO and NO_2 are target pollutants shown in this manual.

Chapter 3 Automatic monitoring

The EG suggested that the section of chapter 3 will be considered to reorganize, and meteorological section will be recommended to be separated in another chapter, and also recommended that the detailed information of DOAS should be shown in appendix.

The NC and EG agreed that solar radiation measured in several monitoring sites will remain in the manual. In addition to the monitoring method, the NC will add an alternative way to obtain the monitoring data, such as solar radiation, if the measurement is not conducted in the EANET monitoring site.

Chapter 4 Manual monitoring

One suggestion from EG about the section of the denuder method is that the denuder can be introduced as one device connected to the filter pack to avoid the artifact. In this case, the information of the denuder device can be introduced in the artifact discussion in the filter pack section. Another option is that the denuder sampling method can be introduced independently as an alternative or optional method. Because the denuder sampling requires high skill and cost, it is not recommended by the manual.

Chapter 5 Maintenance

There was no major revision and comments from the EG.

Chapter 6 Data reporting and validation

There was no major revision and comments from the EG.

Chapter 7 Quality Control and Quality Assurance

EG suggested that the DQO and data completeness should be shown for automatic methods and manual methods, respectively. The data completeness also depends on the objective of monitoring, such as estimation of the long-term trend. NC explains the reason to set 75% data completeness. If the required value of data completeness is too high, it may be very difficult for some participating countries to monitor and submit data.

Chapter 8 Conclusions

NC will modify this Chapter in the next meeting.

IV. Review on the current Technical Manual on Dry Deposition Flux Estimation in East Asia
The NC has revised and put some comments on the Technical Manual on Dry Deposition Flux Estimation and explained the main points chapter-by-chapter, and then the contents were reviewed.

Chapter 1 Introduction
The NC suggested that the methodology calculating the dry deposition flux of the fine and coarse particulate matter will be added in the annex if the deposition velocity of size classified particulate matter is available. Dr. Matsuda will share the advanced techniques to calculate dry deposition of fine and coarse particulate matter among the NC and EG. The EG agreed that it would be shown in the appendix.

Chapter 2 Fundamental items for dry deposition flux estimation
The NC suggested that the inferential method will be applied to estimating the dry deposition flux because of its feasibility and usability. The advanced methodologies using the weather forecast model or resistance model will be described in the appendix. Cloud coverage is included in the fundamental items for dry deposition flux estimation. But the measurement of cloud coverage is not conducted in almost all EANET sites. The EG suggested adding a sentence like that if necessary, the monitoring data nearest meteorological site will be referred.

Chapter 3 Data Reporting
There was no major revision and comments from the EG.

Chapter 4 Methodology for dry deposition flux estimation in EANET
The EG suggested that the inferential method will be applied for all East Asian countries in the future direction. The NC suggested that the direct measurement method of dry deposition flux will provide the advanced techniques even though no direct measurement is conducted in the EANET monitoring site. The EG agreed with the revision points.

IV. Next Steps and Schedule
The NC suggested that the 3rd EGRTM on November or December 2021 and the 4th EGRTM on May or June 2022 finalize the draft of the TMACM and TMDDFE. The EG agreed with the suggestion.

List of participants

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