The Twenty-fifth Senior Technical Managers' Meeting
of the Acid Deposition Monitoring Network in East Asia
28 and 29 August 2024, in Bangkok, Thailand

MINUTES OF THE MEETING

I. Introduction

1. The Twenty-fifth Senior Technical Managers' Meeting (STM25) on the Acid Deposition Monitoring Network in East Asia (EANET) was held at Novotel Bangkok Ploenchit Sukhumvit in Bangkok on 28 and 29 August 2024. The Meeting was hosted by Thailand and organized by the Network Center (NC) for the EANET in collaboration with the Secretariat for the EANET.

2. Senior technical officials, who were involved in the EANET monitoring activities from Cambodia, China, Indonesia, Japan, Lao PDR, Malaysia, Mongolia, Myanmar, Philippines, Republic of Korea, Russia, Thailand, and Vietnam, as well as the Secretariat and representatives of the NC for the EANET participated in the Meeting. The List of Participants is attached as Annex.

II. The opening of the Meeting (Agenda 1)

3. The meeting was opened by the NC
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4. Dr. Toshimasa Ohara, Director General, Asia Center for Air Pollution Research (ACAP), delivered the Opening Remarks. He expressed the objectives of this annual meeting: to exchange information on the status of the EANET monitoring activities, to consider the preliminary results of the draft Data Report 2023, the results of the Inter-laboratory Comparison Project 2023, and the National Monitoring Plans (NMPs), and to discuss the future development. He also mentioned the continuous monitoring is the key points and fundamental. It is important not only to consider the current monitoring but also the future development of monitoring plan.

5. Mr. Bert Fabian, Coordinator, Secretariat for the EANET, delivered the Welcome Remarks. He welcomed all participants for the twenty-fifth Senior Technical Managers meeting on behalf of the United Nations Environment Program and the Secretariat for the EANET. He also appreciated their efforts, hard works, and strong ambition to support the EANET and to improve the Region's problems on acid deposition and air pollution. He emphasized that the EANET is the only network in the Asia-Pacific region which conducted the monitoring for decades. He also shared the information of EANET to UNEP and pointed out the importance of sharing the information of monitoring data.

III. Election of the Officers (Agenda 2)

6. Two Co-chairpersons have been elected from the participating countries. The NC proposed Dr.

Xiaofei Wang, China, and Mr. Pichaid Atipakya, Thailand as co-chairpersons of first and second day, respectively.

IV. Adoption of the Agenda (Agenda 3)

7. The Agenda was adopted as proposed (EANET/STM 25/3/1).

V. Progress of EANET activity (Agenda 4)

8. The Secretariat and NC presented the progress of the EANET activity since IG25 (EANET/STM 25/4/1). The meeting was invited to discuss and provide comments, as appropriate.

9. Major discussions on this agenda included the following:
   - No comment was given in this item.

10. The NC presented Survey findings for questionnaire on the status of EANET monitoring system (EANET/STM 25/4/2). The meeting was invited to discuss and provide comments, as appropriate.

11. Major discussions on this agenda included the following:
   - The NC mentioned that the questionnaire survey was implemented by personal basis during the STM last year in Niigata. It is important to hear about problems related to equipment and monitoring devices and discuss with the persons in charge directly. NC would like to hear the specific questions and problems in person during the STM meeting this time.
   - It was confirmed that if there is no problem of equipment and no instrument donation, names of corresponding countries are not described in the meeting document. That does not mean there is no response from the countries.
   - No response from Thailand was included in the presentation. It was clarified that no problem on monitoring equipment was mentioned in the questionnaire results from Thailand, while other results on budget issues, etc. have already compiled in the presentation.
   - NC pointed out that maintenance of monitoring equipment was an important issue in the EANET but possible allocations of the EANET core budget to this problem should carefully be considered taking account of balance with other important activities. Because STM members are most familiar with the actual monitoring activities in the EANET, this issue should be discussed in the 2nd day of the meeting.

VI. Overview of the Preliminary Draft Data Report 2023 (Agenda 5)

12. The NC presented the Preliminary Draft Data Report 2023 (EANET/STM 25/5), which contains wet deposition, dry deposition (air concentration), soil and vegetation, inland aquatic environment

and catchment-scale monitoring based on monitoring data submitted by the participating countries. The meeting was invited to discuss and provide comments, as appropriate.

13. Major discussions on this agenda included the following:

(Wet deposition)

i. It was informed that NC would submit the data to the "data verification group members" to find out any ambiguous or incorrect points. All the data should be submitted to NC no later than end of September.
ii. It was confirmed that some countries have not submitted the data yet.
iii. It was pointed out that data of a country submitted just before the STM meeting were not included in the meeting document of STM but will be reported at the next SAC meeting (SAC24).
iv. It was informed that the corrected data will be submitted to SAC24 and after the approval at SAC24, the data would be finalized, and "Data Report 2023" would be published.
v. No comment was given in this item.

(Dry deposition)

i. NC informed that data tendency in Mongolia was different from those in previous years. Air concentrations in Terlj site in remote area were higher than those in Ulaanbaatar site in urban area in 2023. Mongolia informed that flow rate of the filter pack in Ulaanbaatar site was significantly lower than the setting value. The NC and Mongolia will discuss how to deal with the data in Data Report 2023.
ii. China informed that a significant low value of $PM_{2.5}$ in Wuzhishan site was due to technical problems, and therefore, the data should be removed from Data Report 2023.
iii. Trends on SO_4^{2-} concentration in PM and $PM_{2.5}$ concentration in Hoa Binh site are different. It was clarified that PM collected by the filter pack method is total suspended particulate matter, which was not separated by particle size.
iv. NC has not received data of passive samplers from three sites.
v. The Particulate SO_4^{2-} decreased in almost participating countries. The gaseous HNO_3 and particulate NO_3^- are classified into two group to show different trends.
vi. It was confirmed that PM monitored by filter pack measurements is total suspended particle except for Republic of Korea.
vii. The NC has received the data in 2022 from some participating countries after publication. It was confirmed that those data would be shown in the Data Report 2023.
viii. The NC compiled the monitoring data arrived by August 9 to the Draft Data Report 2023 for STM25, but accidentally auto monitoring data of Mongolia had been overlooked, which arrived even before the due date. The NC apologize not to compile the data by the STM meeting but promised to update the data by SAC24. In addition, the Thailand data have arrived after the due date, so the NC will include them to the Draft Data Report 2023 by SAC24.
ix. The NC explained about the Corrigenda with previous Data Reports. As almost every year the

NC received additional data, remaining data or revised results, revised version needs to be disclosed as the Corrigenda and from the EANET data download site.

(Soil and Vegetation)

i. Observations of tree decline were conducted in China and Japan in 2023, and constant decline was observed in Ijira region of Japan.
ii. Soil and forest survey was conducted in Malaysia, where the site was newly established.
iii. Soil and vegetation data were submitted from the Philippines but have not been reflected in the current Draft Data Report 2023 yet.
iv. No comment was given in this item.

(Inland aquatic environment)

i. It was suggested that assessment of concentration trends be conducted using statistical ways similar to that of wet deposition, which would be more understandable for readers. The NC agreed to improve the presentation style.
ii. The Secretariat suggested also that government officials would like to know the current conditions of the region and monitoring results should be presented taking account of this point.
iii. The NC clarified that the STM meeting should basically focus on technical issues of monitoring activities and confirmation of the submitted data. Therefore, initial analysis could be discussed in the STM meeting and detailed scientific discussion would be conducted in the SAC sessions.
iv. It was pointed out that an outlier in Ambulalakao Lake, Philippines, should be removed from the trend graph because the data have already removed from the verified dataset.
v. The NC informed that Philippines and Thailand have just submitted the data before STM25.
vi. Decreasing trends of SO_4^{2-} and NO_3^- have been observed in many sites, suggesting recovery from acidification. It was pointed out that the monitoring be continued to confirm the recovery trends.

(Catchment-scale)

i. The catchment-scale monitoring has been conducted in Lake Ijira, Japan and La Mesa Watershed, Philippines. Regarding the La Mesa watershed in Philippines, stream discharge measurement has been started recently and the annual data will be available by the end of this year.
ii. Stream water discharge data in La Mesa Watershed have not been submitted so far. It was informed that measurement of stream water discharge would be conducted by H-Q curve method and the data would be available soon.
iii. It was clarified that the atmospheric input in La Mesa Watershed would be calculated by using the deposition data in Metro Manila. The NC can help to calculate dry deposition fluxes by the Inferential method.

iv. The data from Philippines will be updated for SAC24.

14. The countries which have not submitted their monitoring data 2023 or which have the necessity of data modifications, were requested that the data be submitted to the NC as early as possible.

15. The updated draft Data Report 2023 will be submitted to SAC24 for adoption.

VII. Evaluation for the Results of the Inter-laboratory Comparison (ILC) Projects 2023 (Agenda 6)

16. The NC presented the preliminary draft Report on the Inter-laboratory Comparison Projects in 2023 for wet deposition, dry deposition (filter pack method), soil and inland aquatic environment (EANET/STM 25/6). The participating countries were requested to submit the results of the Inter-laboratory Comparison (ILC) Projects by the deadline, the end of February every year. Also, the participating countries which have not submitted the 2023 ILC data were requested to submit the data as soon as possible, so as to complete the ILC Project Report 2023 for adoption at SAC24. The meeting was invited to discuss and provide comments.

17. Major discussion on this agenda included the following:

(Wet deposition)

i. The most flag parameter is the Ca^{2+} for both high and low concentrations samples. Compared with DQO in 2022, the results improved in 2023.
ii. The NC requested that the participating countries re-analyze the flagged items and submit the analytical results of the artificial rainwaters. The technical guidance, in turn, will be provided from the NC.
iii. No comment was given in this item.

(Dry deposition)

i. NC distributed ILC samples to 11 countries in 2023 and NC still waits submission from some participating countries.
ii. NC explained the case of Myanmar and recommend participating countries to submit the result as early as possible, so there is time to discuss the result or send sample again.
iii. No comment was given in this item.

(Soil)

i. The soil No.231s and No.232s were collected under Japanese larch and Japanese cedar plantations in Toyama Prefecture, Japan. Eight laboratories from 4 countries participated in the 25^{th} project.
ii. Outliers were detected in many measurement items. Both random and systematic errors were observed as factors contributing to variability in measurements. Ex-base cations were

measured with enough spare capacity. The ratio of outliers decreased significantly compared to last year.

iii. The NC requested participants of ILC to check the results for exchangeable acidity. According to the definition, Ex-acidity is the sum of Ex-Al and Ex-H.

iv. No comment was given in this item.

(Inland Aquatic Environment)

i. 17 laboratories participated in the project, and all laboratories submitted their analytical data. Flagged data of pH, NO_3^-, Cl^-, Na^+, Ca^{2+}, Mg^{2+}, NH_4^+ increased from the last attempt. Flagged data of Alkalinity and K^+ decreased from the last attempt.

ii. The number of flagged data of Ca^{2+} is highest. It was pointed out that there was possibility of contamination of Ca^{2+} in the laboratory and thus, it is necessary to pay more attention to the Ca^{2+} analysis. It was suggested to use fresh deionized water and calibration curve by using appropriate concentrations of the standard solutions (set the range of the calibration curve to match the concentration of the sample) for improvement.

iii. The flag samples of NH_4^+ in inland water are higher than in wet deposition. The inland water has high concentrations of Na^+, so it is more difficult to analyze the NH_4^+ for inland water. For the wet deposition, the sample is diluted, but for the inland water, the sample is analyzed directly. The NC recommended that analysts pay more attention to NH_4^+ analysis such as considering the possibility of contamination in the laboratory.

18. For the countries which have not submitted the ILC 2023 to the NC or have the necessity of data modifications, it was requested that the data be submitted to the NC as early as possible. The announcement of ILC 2024 has already been sent to QA/QC managers. The NC requested the QA/QC managers to check the email and answer the survey. Based on the questionnaire, NC will distribute the ILC samples in 2024 around November and December. Because the schedule of distributing the ILC samples falls behind, NC will request participating Labs to carry out analysis as early as possible.

VIII. Consideration of the National Monitoring Plans (NMPs), Current Monitoring Activities for the EANET Monitoring and Overall Air Concentration Monitoring Status of the Participating Countries (Agenda 7)

19. Each representative of the participating countries made presentations on their NMPs and the current EANET activities, including monitoring capacities, technical problems, future plan and so on, for improvement of the EANET activities. The NC requested for the participating countries to submit the NMPs as early as possible. (EANET/STM 25/7).

20. The meeting was invited to review the above issues and to discuss with their experiences and knowledge to solve the problems for their future innovation.

21. Major discussion on this agenda included the following:

i. Cambodia

- It was confirmed that filter pack monitoring is stopped due to malfunction of flow meter. The NC recommended to use valve and gas meter to collect Filter pack samples.
- It was informed that the refrigerator of the wet-only sampler in Siem Reap was broken. NC suggested to use biocide to keep sample quality before collection.
- After the meeting, it was confirmed that wet deposition in Siem Reap site is not included in the NMP 2024.
- It was clarified that ozone concentration in Phnom Penh was measured on hourly basis, although the presentation showed annual average concentrations. It was requested to confirm which data (one hour or eight hour) were used for calculation of the annual average.

ii. China

- The NC asked details about the annual technical meeting held by China. It was informed that experts were invited to Lijiang to discuss the analytical problem. The samples from Wuzhishan will be analyzed by other cities, because there are some problems of the device at Wuzhishan site.
- It was confirmed that the Xi'an site was relocated, but it is still classified as urban site.
- It was informed that an inter-laboratory comparison activity among 3 cities was conducted by using a sample from Wuzhishan. It was pointed out that identification of the most reliable data among laboratories might be difficult only by one trial. It was clarified that the results of the national inter-laboratory comparison project would be evaluated taking account of R1, R2 and other information, too.
- It was pointed out that the EC values in 2001 is zero that would be checked later.

iii. Indonesia

- It was confirmed that passive sampler monitoring in Bandung and Serpong would not be included in NMP 2024 and at this stage there is no plan for resuming filter pack and automatic monitoring.
- It was recommended that the reason why seasonal variations are clearly shown in $PM_{2.5}$ but not shown in SO_2 and NO_x should be investigated.
- It was confirmed that domestic monitoring data is not opened to the public, but air quality index based on the monitoring data is opened to the public.
- It was clarified that air quality monitoring in most sites was conducted using automatic monitors, but passive sampler was also used in some sites and the hybrid monitoring using low-cost sensor was also conducted.

iv. Japan

- In response to a question from the EANET Secretariat, the national center of Japan explained that Lake Ijira catchment was thought to have been acidified and nitrogen-saturated in the mid-1990s and during 1990s, Ijila had the highest H^+, NO_3^- and SO_4^{2-} deposition among 100 sites in Japan. It has been suggested that extreme weather events may have caused these phenomena under conditions with the highest level of acid deposition. The acidification process including the above mechanisms has been published in the international journal, Biogeochemistry.
- It was recommended that for Tokyo, even though automatic monitoring is not conducted, monitoring results of filter pack and other domestic monitoring results should be shown as air quality of urban sites.

v. Lao PDR

- It was confirmed that the rain sensor replaced when the NC visited Lao PDR as the technical mission of EANET is working properly and before the replacement the samples were collected manually. It was also confirmed that monitoring data in 2023 is under verification processes and would be submitted in September.
- It was confirmed that the filter pack system was also replaced at the technical mission and the filter pack monitoring resumed this year after Republic of Korea provided the filters.
- It was confirmed that after repairment of data recording system, the automatic monitor is working properly and thus, the monitoring is included in NMP 2024 and the data would be submitted for Data Report 2024 next year.
- It was confirmed that technical training especially for $PM_{2.5}$ is necessary for capacity building program.
- It was confirmed that points for continuous monitoring are necessity of instruction for how to install, maintain, and repair as well as budget for the maintenance when some problems occur to monitoring equipment,.

vi. Malaysia

- It was informed that soil and vegetation monitoring will discontinue in the Bintulu site. It was recommended that monitoring could be reactivated anytime in the future, because the monitoring site is a rehabilitated forest and conservation forest.
- It was confirmed that calibration activities introduced in the presentation is not conducted as EANET activities.
- It was recommended to discuss possibility of domestic monitoring sites to be included in the EANET monitoring sites.

vii. Mongolia

- It was recommended that the location (longitude and latitude) of Terelj site should be confirmed using a GPS sensor.
- It was pointed out that the precise location of monitoring sites (of all participating countries) should be reported and if the sites are moved, the information of location must be updated and

reported to the NC. The location information of monitoring sites is crucial to validation of air quality models.

- It was confirmed that Ulaanbaatar and UB4 sites are at different places and thus, their location information (longitude and latitude) needs to be reported independently.
- It was clarified that Terelj is included in soil and vegetation monitoring stie in NMP 2024.
- It was pointed out that pH values in Terelj (remote) is lower than that of Ulaanbaatar (urban) and wet deposition of anions/cations in Terelj is larger than those of Ulaanbaatar, both of which might conflict the site attributes. It was suggested the reason related to dry deposition might be the difference of the flow rate of filter pack in Ulaanbaatar and Terelj that would be confirmed later.

viii. Myanmar

- It was clarified that a new site, Kengtong site (Eastern Myanmar), would be established by March 2025.
- It was recommended that considering the limitation of accuracy, LCS is not suitable for monitoring of whole country and should be used for urban scale monitoring.
- It was recommended that LCS should be installed around the reference monitoring stations.

ix. Philippines

- For significant increasing trends of SO_4^{2-} and NO_3^- detected in Pandin Lake by the Mann-Kendall test, it was pointed out that this kind of data assessment would be important and possible mechanisms should carefully be discussed.
- It was confirmed that the reason of decreasing trends of SO_2 in urban site could be due to efforts of Philippines for controlling air pollution.
- It was confirmed that automatic monitoring sites have been included in NMP since 2023 and monitoring data that are currently under verification would be submitted to the NC later.
- It was confirmed that all sites classified as “Remote” in NMP 2023 are classified as “Rural”.

x. Republic of Korea

- It was pointed out that there are large differences between pH values around Seoul between 2022 and 2023 that should be confirmed later.
- It was confirmed that the description of the name of the monitoring site in Republic of Korea were changed.

xi. Russia

- It was clarified that data of soil samples collected in 2023 in Primorskaya would be submitted to Data Report 2023.
- It was recommended that even though there is no actual monitoring planned in 2024-2025, if the soil and vegetation monitoring sites are active, the sites should be included in NMP 2024.
- It was confirmed that Mondy site has been deleted from NMP since 2023 and the situation is

not changed in 2024. However, it was also pointed out that Mondy was very important background site and thus, it is preferable to continue efforts to resume Mondy site.

xii. Thailand

- It was confirmed that the reason why high number of days when air quality exceeds standard criteria is found in the northern part of Thailand is basically forest fires and agricultural open burning during the dry season.
- It was confirmed that wet deposition monitoring at Kanchanaburi is suspended but plan to resume in the near future and thus, included in NMP 2024.
- It was confirmed that automatic monitoring sites, Chang Phueak, Si Phum, and Nai Mueang are reference sites and thus, not included in NMP 2024, but their monitoring data would be submitted to the NC.
- It was confirmed that relatively high concentration of NH_4^+ in Pathumthani site was due to agricultural activities. It was recommended to consider resuming the filter pack monitoring at Pathumthani site.

xiii. Vietnam

- It was confirmed that automatic $PM_{2.5}$ monitor at Hoa Binh site has problems recent years. However, the $PM_{2.5}$ monitor was repaired last year. Therefore, it is still working so far and is included in NMP 2024.
- It was confirmed that soil and vegetation monitoring is not planned and thus, not included in NMP 2024.
- It was recommended to contact the NC if technical guidance of LCS is necessary.

xiv. Summary of the National Monitoring Plans in the Participating Countries

- The NC presented the summary of the National Monitoring Plans and confirmed the current status of the monitoring activities in the respective countries.
- The results of discussions on each country were included in the corresponding parts above.

IX. Discussion on Future Development of EANET Monitoring and Analysis Activities (Agenda 8)

22. The representatives of three on-going EANET projects made presentations for sharing information related to the development of EANET including core and project activities within the current scope as well as considerable expansions of scope in the future steps. In addition, representatives of China and Philippines presented monitoring practices of each country and lessons learned that are also related to the development of EANET. All participants were invited to discuss the issues and provide advice, observations, and insights.

23. "EANET project, Methodology Study for Development of LCS Hybrid Air Quality Monitoring

Network (HAQMN)" was presented. Major discussion on this presentation included the following:

- No comment on this item.

24. "EANET project, Promoting VOCs related Capacity Building in the EANET VOCs" was presented. Major discussion on this presentation included the following:
    - An explanation of the online monitoring of VOC conducted in Republic of Korea was requested from a participant. It was informed that the automatic monitoring in Republic of Korea is conducted under the research project. VOC monitoring under the EANET project will be conducted using the cost-effective method such as the daily manual monitoring using the tube sampling. The automatic monitoring data was compared with the monitoring data of the manual sampling to estimate the performance of both methods.
    - It was confirmed that the measurement methodology of the automatic VOC monitor is using PID detector for the VOC detection.
    - It was informed that advisory group members of Republic of Korea can bring the mobile automatic monitor to Cambodia and Vietnam as well as Philippines if necessary and monitoring results by different devices will be compared.
    - It was informed that Philippines has DOAS stations for BTEX, that are considered for possible inclusion in future air quality standards. Results of DOAS will be compared with standard methods such as canister sampling and GCMS, solvent tube, passive sampler, and online monitoring and then, after evaluation of the results, how to utilize DOAS results for settings of air quality standard will be considered.
    - It was pointed out that after collection of VOC monitoring data, ozone formation potential as well as secondary organic aerosol formation potential will be calculated and evaluated.

25. "EANET project, Sustainable Nitrogen Management Seminar" was presented. Major discussion on this presentation included the following:
    - No comment on this item.

26. "Knowledge and experience sharing of the EANET Participating Countries on Monitoring" was presented from China. Major discussion on this presentation included the following:
    - NC confirmed the procedure and condition of the automatic monitoring instrument for acid rain. It was informed that there are some problems compared with the traditional method but provides good quality when the results of the automatic rain analyzer with those of the manual method.
    - It was confirmed that $PM_{2.5}$ component monitoring were conducted both by automatic analyzer and manual method. NC is interested in if the $PM_{2,5}$ component data are used for source apportionment studies in China that will be confirmed after the meeting.
    - It was clarified that daily standard values of $PM_{2.5}$ (75 $\mu g/m^3$) was applied to all area in the country. It was announced that discussion has been made in Myanmar regarding the possibility of applying different daily standard values to different areas.

27. "Knowledge and experience sharing of the EANET Participating Countries on Monitoring" was presented from Philippines. Major discussion on this presentation included the following:
    - NC expressed the impression on the public awareness to the citizens especially toward the high school students and confirmed that there is a specific division for the public awareness in Environmental Management Bureau Central Office of Philippines.
    - NC confirmed the details of the competition regarding the acid deposition by high school students. It was reported that the high school students participated on their own not endorsed by the schools.
    - NC is interested in popular and effective ways for promotion of EANET especially for young generation. It was informed that young generation uses different social networking services. And as an example, it was informed that some government agencies in Philippines have own Tiktok accounts.

X. Other Issues (Agenda 9)

28. The NC proposed additional discussions for development of the next Medium-Term Plan (MTP) that requested participants to state opinions from technical perspectives on the following discussion points:
    - The possibility of adding more EANET monitoring stations in each country for further expansion of EANET monitoring network.
    - The possibility and ability of conducting the intensive sampling campaign of $PM_{2.5}$ components such as elemental carbon (EC) / organic carbon (OC), and necessary precursors of $PM_{2.5}$ during high concentration season. For instance, starting from intensive monitoring campaign for 2 weeks or so.
    - From the monitoring expert's perspective, what do you think is most important for the development of EANET?

29. Participants accepted the proposal from the NC and made comments to the discussion points as follows:
    - Note that following comments are from participants as technical experts not as government official positions.
    - Some countries suggested intensive monitoring campaigns such as for $PM_{2.5}$ and PM_{10} would be useful or feasible including conducted as EANET Project activities, but limitation of necessary human resources and necessary equipment especially for monitoring $PM_{2.5}$ components are problems.
    - Some countries suggested that number of EANET stations could be increased or monitoring data could be shared with EANET, but some countries suggested difficulties in increasing monitoring sites and activities including the intensive monitoring. Anyway, most countries noted that it depends on decisions of each government.

- A country suggested hybrid monitoring using low-cost sensors and reference monitors could be used for the expansion of monitoring network.
- It was insisted that providing high quality of monitoring data is the advantage of EANET. EANET should provide capacity building and share information of scientific research and experiences with participating countries.
- It was recommended that the NC should provide capacity building for analysis of monitoring data and how to translate to public and policy makers.
- A country suggested some intensive monitoring are conducted but the places are different from those of EANET monitoring sites.
- A country suggested that to start monitoring of new substances, capacity building for the activities is necessary.
- A country recommended that cooperation between EANET and WMO would be promoted.
- Some countries suggested the important of expansion of remote sites that are necessary for regional assessment.
- It was suggested combining domestic monitoring network with EANET is one considerable way to expand the EANET monitoring network, but on the other hand, relationships between EANET and domestic monitoring networks especially for targeting urban sites should be considered carefully.
- Some countries suggested that for starting intensive monitoring, many preparatory considerations for designing the monitoring are necessary such as for objectives, protocols, selection of periods and their reasons, etc.
- Some countries suggested that not just monitoring but also utilization of monitoring especially for policy making as well as co-benefit for climate change and human health issues should be considered for the expansion.
- A country suggested that expansions of monitoring could be considered not only for increasing number of stations but also for increasing monitoring items and species.
- It was suggested that when considering addition of monitoring sites and intensive monitoring to the EANET, why the addition needs to be conducted in the EANET needs be explained (to the governments).
- It was suggested that for sustainability of monitoring, one big problem is maintaining monitoring equipment and thus, sharing the information of benders and markets related to monitoring equipment is considered to be useful.

XI. Closing of the Meeting (Agenda 10)

30. On behalf of the NC, Dr. Meng Fan, Deputy Director General, ACAP, delivered the Closing Remarks. He expressed for his great appreciation to the participating countries and all EANET colleagues for their continuous efforts and contributions to improve the EANET data quality. He explained that the Data Report, Report of the ILC project, and the summary of the National

Monitoring Plan will be revised based on discussions at STM25 and reported at SAC24. In addition, he appreciated presentations and constructive discussions on the future potential development of EANET. He pointed out that insights from participating countries are essential for the future development of EANET as well as for formulating the next MTP. He finally appreciated PCD, Thailand, for hosting STM25 and Dr. Xiaofei Wang and Mr. Pichaid Atipakya for co-charing the STM25 meeting sessions.

31. The Meeting was officially closed.

The Twenty-fifth Senior Technical Managers' Meeting
of the Acid Deposition Monitoring Network in East Asia
28 and 29 August 2024, in Bangkok, Thailand

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