The Twenty-third Session of the Scientific Advisory Committee
on the Acid Deposition Monitoring Network in East Asia
10-12 October 2023, Virtual Meeting

REPORT OF THE SESSION (*Adopted)*

I. Introduction

1. The Scientific Advisory Committee (SAC) of the Acid Deposition Monitoring Network in East Asia (EANET) held its Twenty-third Session of the SAC (SAC23) from 10 to 12 October 2023, virtually. The Session was organized by the Secretariat and the Network Center (NC) for the EANET.

2. The Session was attended by the members of the SAC and/or their alternates and other nominated persons from the Participating Countries of the EANET, namely: Cambodia, China, Indonesia, Japan, Lao PDR, Malaysia, Mongolia, Myanmar, Philippines, Republic of Korea, Russia, Thailand, Viet Nam, the Secretariat, and the Network Center. The List of Participants is attached as Annex.

II. Opening of the Session [Agenda Item 1]

3. Mr. Bert Fabian, Coordinator, Secretariat for the EANET, delivered the Welcome Remarks. In his Remarks, he highlighted the recent Fifth Forum of Ministers and Environment Authorities of Asia Pacific, organized by the Ministry of Environment of Sri Lanka and UNEP, emphasizing the importance of global cooperation in addressing environmental challenges. He mentioned the upcoming UN Environment Assembly in 2024, themed around climate change, biodiversity loss, and pollution. Mr. Fabian welcomed the commitment of EANET countries to contribute to global environmental discussions and efforts to address acid deposition and air pollution. Partnerships with initiatives and organizations to promote better air quality were initiated with the aim to supplement or complement efforts in promoting better air quality. Finally, the agenda for the meeting was outlined including important discussions related to the EANET Progress and Financial Reports, the revised Guidelines, the Mid-Term Review of the MTP 2021-2025, the EANET Data Report, the 2024 Work Programme and Budget, and Project Plans consideration.

4. Dr. Shiro Hatakeyama, Director General of Asia Center for Air Pollution Research (ACAP), delivered the Introductory Remarks. In his speech, Dr. Hatakeyama mentioned that last year, many activities were conducted by researchers, including the preparation of the Data Report, QA/QC activities, several seminars and workshops, also as part of the EANET Project Fund activities, training, and joint research projects. As such, the EANET individual training, through the TNT Capacity Building Program, was conducted in partnership with the Republic of Korea, NIER and the Network Center. The EANET has been successfully leading capacity building activities, as well as other project activities which will be described during the meeting. Since the COVID-19 pandemic, IG24 was held almost fully face-to-face, and Dr. Hatakeyama hopes that the next SAC24 meeting will also be held in person in 2024. He highlighted the important agenda items to be discussed during the Session, such as the Revision of the Administrative and Financial Management Guidelines for the Secretariat and the Network Center as well as the EANET Project Fund and Project

Guideline and, the Mid-Term Review of the MTP 2021-2025, and looked forward to sincere discussions and recommendations.

III. Election of the Officers [Agenda Item 2]

5. The SAC21 Session had decided on a 3-year (2021-2023) fixed-term appointment for the SAC Bureau of officers composed of one Chairperson, two Vice-chairpersons, and a Rapporteur. The elected Bureau members in 2021 were: Mr. Mohan Kumar Sammathuria, Principal Assistant Director, Atmospheric Sciences and Cloud Seeding Division, Malaysian Meteorological Department, Ministry of Environment and Water, Malaysia, as the Chairperson; Prof. Atsushi Kume, Professor, Department of Agro-environmental Sciences, Faculty of Agriculture, Kyushu University, Japan, and Ms. Setouvanh Phanthavongsa, Deputy Director General, Natural Resources and Environment Institute (NRERI), Ministry of Natural Resources and Environment, Lao PDR as the Vice-Chairpersons; and Prof. Hu Jingnan, Director of the Institute of Atmospheric Environment, Chinese Research Academy of Environmental Sciences, China, as the Rapporteur of the Session. In 2023, the representative of Lao PDR was replaced by Mr. Lonkham Atsanavong, Director General of NRERI. The other Bureau members remained the same.

IV. Adoption of the Agenda [Agenda Item 3]

6. The Session considered and adopted the Draft Provisional Agenda (**EANET/SAC23/3/1**), Draft Annotated Provisional Agenda (**EANET/SAC23/3/2**), as well as the Draft Program (**EANET/SAC23/3/3**) of the Session.

V. Review on the Progress of the EANET since the Twenty-second Session of the Scientific Advisory Committee (SAC22) [Agenda Item 4]

7. The Secretariat and the Network Center presented the Draft Report on the Progress of the EANET Core Activities since the Twenty-second Session of the Scientific Advisory Committee (SAC22) (EANET/SAC23/4/1), the Draft Financial Report of Core Activities of the Secretariat and the Network Center (EANET/SAC23/4/2), the Draft Annual Report of the EANET Projects and EANET Project Fund (EANET/SAC23/4/3), and the Draft EANET Project Completion Reports in 2022 (EANET/SAC23/4/4).

8. The key points of the presentations of the Secretariat included:
   - It was emphasized that the implementation of the activities was guided by the Medium-Term Plan for the EANET (2021-2025) and in accordance with the Work Programme and Budget of the EANET in 2022 and 2023.
   - The Secretariat highlighted activities which were implemented since SAC22, including the organization of EANET meetings (IG24 in 2022, and The Online Meeting on the Revision of the Guidelines and Working Group Meeting in 2023), the EANET Regional Awareness Workshop in 2023, and National Stakeholders' workshops in Lao PDR and in the Philippines, as well as various communication activities (including updating EANET website, email campaigns and newsletters, videos and web stories). On administration, in 2022, the Secretariat developed a Small-Scale Funding Agreement (SSFA) with RRC.AP.

- The grand-total expenditure of the Secretariat approved by the IG23 in 2022 was US$ 572,600. The total voluntary financial contribution received by the Secretariat in 2022 was US$ 475,793. In addition, the total expenditures, and commitments of the Secretariat in 2022 were US$ 427,169. There were no expenditures related to the China in-kind financial contribution towards the costs of a Technical Consultant to work at the Secretariat in 2022.

9. The key points of the presentation of the Network Center included:

- The Network Center highlighted key core activities conducted in 2023 which included, among others, the preparation of the 2023 Summary of the National Monitoring Plans of the Participating Countries, the preparation of several technical manuals and guidelines, QA/QC activities such as the Inter-laboratory Comparison surveys, drafting the Data Report 2022, and participation and support to the Secretariat for the organization of the Regional Awareness Workshop and the National Stakeholders' workshops in Lao PDR and in the Philippines.
- The total voluntary financial contribution received by the NC in 2022 was US$ 504,603. In addition, the total expenditures and commitments of the NC for core budget activities in 2022 were US$ 465,188.
- The Network Center presented the Project Activities completed in 2022 and 2023 and highlighted the completion of research activities, capacity building, training, on various topics including LCS, VOCs, emission inventories, among others.
- The total implemented Project Budget Expenditure in 2022 for the Network Center was US$ 310,276.

10. The Session was invited to review, from the scientific and technical viewpoints, the Draft Report on the Progress of the EANET Core Activities since the SAC22, the Draft Financial Report of Core Activities of the Secretariat and the Network Center, the Draft Annual Report of the EANET Projects and EANET Project Fund, and the Draft EANET Project Completion Reports in 2022.

11. Major discussions included:

(i) A country highlighted that the SAC is a very important EANET meeting. As meeting virtually may limit the conduct of discussions, it was suggested to hold the next SAC meeting in 2024 in person.

(ii) The Secretariat clarified that there were no sufficient funds in 2023 to organize both the SAC and the IG meeting in person. As such, it was decided to conduct the IG meeting in person. The Secretariat suggested to the IG Bureau to use the Secretariat's surplus to fund the SAC meeting in person, but the Bureau did not support this suggestion. If the Participating Countries decide so at IG, the SAC could be conducted in person next year.

12. The Session acknowledged the Draft Report on the Progress of the EANET Core Activities since the SAC22, the Draft Financial Report of Core Activities of the Secretariat and the Network Center, the Draft Annual Report of the EANET Projects and EANET Project Fund, and the Draft EANET Project Completion Reports in 2022 and provided comments,

suggestions, and recommendations from the scientific and technical viewpoints for consideration and approval at the IG25 of EANET.

VI. Highlights of the Working Group Meeting in 2023 (WG2023) relevant for SAC23 [Agenda Item 5]

13. The Secretariat presented the Highlights of the Working Group Meeting of the EANET in 2023, held virtually from 22 to 23 August 2023, with a focus on discussion points relevant to SAC23 (EANET/SAC23/5).

14. The key points of the presentation included:

- The Secretariat highlighted the points of the discussions of the WG2023 meeting relevant to the SAC23 Session.

15. The Session was invited to review and discuss the Working Group Meeting 2023 Highlights of the Working Group Meeting in 2023 (WG2023) relevant for SAC23 for consideration at the Session.

16. Major discussions included:

(i) A country suggested that capacity building activities should be conducted as part of the core activities. It was raised that including capacity building under core activities would also mean that the funding would be from the Core Budget, which would need further consideration from Participating Countries on how to distribute the available budget.
(ii) A country informed agreeing with the discussion point related to climate change related substances in the next MTP.

17. The Session acknowledged the Working Group Meeting 2023 Highlights of the Working Group Meeting in 2023 (WG2023) relevant for SAC23.

VII. Consideration of the Revision of the Guidelines relevant to SAC23 [Agenda Item 6]

18. The Secretariat and the Network Center presented agenda item 6 “Consideration of the Revision of the Guidelines relevant to SAC23”.

19. The key points of the presentation included:

- The Secretariat presented both the draft revised Guidelines on the Administrative and Financial Management for the Secretariat and the Network Center (EANET/SAC23/6/1), and the draft revised EANET Project Fund and Project Guideline (EANET/SAC23/6/2), including the proposed modifications of Participating Countries, as discussed and proposed during the EANET Online Meeting on the Revision of Guidelines in 2023 (OM2023) held on 10 May 2023, and during the Working Group Meeting (WG2023) of EANET in 2023, organized online from 22-23 August 2023. The Secretariat focused the presentation on the aspects relevant to the SAC23.

- The Network Center supplemented the information on Data and Information Disclosure that include the suggestion to remove the time lag of one year on public disclosure of the verified raw data, meaning that the verified raw data is disclosed publicly outside of the EANET one additional year after adoption by SAC.

20. The Session was invited to review, discuss, make comments and suggestions, and make recommendations to the IG25 on the EANET, as appropriate.

21. Major discussions included:

On the revised Guidelines on the Administrative and Financial Management for the Secretariat and the Network Center:

(i) The Network Center clarified why the issue of the Data Disclosure was discussed. They reminded that it was raised by a Participating Country during the last SAC22 meeting. To better understand the background of the establishment of the time lag (meaning that the raw data is disclosed publicly one additional year after adoption by SAC), in 2003 the idea was for researchers in the EANET countries to have the advantage of accessing the raw data before researchers from other regions. Today however, this is no longer relevant. Researchers in the EANET countries are collaborating with researchers in the EU and the USA and this time lag is creating a disadvantage for all researchers globally. In the European and American monitoring networks, the usual process is to disclose the raw data immediately once approved. This is why the Network Center supports the suggestion to amend this time lag. Moreover, the Network Center would also like to use EANET data for outreach and contribution to international platforms such as IQ-Air, WMO etc. Disclosing the data faster would benefit all EANET countries by promoting the EANET globally, and indirectly this could improve collaboration and funding opportunities for the EANET Project Fund.

(ii) A country expressed concerns to have the EANET data published before their own national data's publication.

(iii) The Network Center clarified that in 2023, the NC is compiling 2022 data. If the time lag is removed, this data would be available on the website only end of 2023. This means that EANET data would be published after the countries' publication at the national level.

(iv) Several countries agreed that reducing the time lag would be a good suggestion as the EANET's current disclosure process is very slow.

(v) A country suggested that, although it is very important to make sure the QA/QC is correctly implemented, it would be good the meet the requirements from other international networks and even reduce in the future the time of release to less than one year.

(vi) A country reminded that we may need to keep in mind the initial considerations that were made when this decision of the time lag was made.

(vii) A country suggested to submit the removal of this time lag to IG, as it has already been discussed in SAC19 and SAC22.

(viii) Several countries seemed to agree to release the raw data, once approved by SAC, in November or December each year as there are no strong reasons anymore to keep the data time lag.

(ix) A country highlighted that this time lag decision was made in 2002 and that 20 years later, the rate of use of the data has drastically changed and should be reflected.

(x) The NC emphasized that the EANET monitoring data and activities' aim is to go beyond the EANET Region and have a global outreach.

(xi) A country expressed concerns that the process of QA/QC requires time to guarantee the quality of the data.

(xii) The NC clarified that the changing the time lag will not have any implication on the quality of the data, as this data will still be approved by the SAC and endorsed by IG as usual. The only change will be on the time of disclosure outside of the EANET, which currently is close to two years.

(xiii) It was also clarified that the SAC activity including the adoption of the Data Report is submitted to IG as a part of the SAC session report. If the Guideline is modified as proposed, all SAC reports would be submitted and endorsed by IG. The NC clarified that the Data Report, according to the current Guidelines, is only approved by the SAC and can be disclosed.

(xiv) A country highlighted that it is important to focus on the benefits of removing this time lag and on how the data will be effectively used.

(xv) A country suggested that it should be clarified in the proposed revised Guidelines that the verified raw data and Data Report will be disclosed only after the IG meeting.

<u>On the EANET Project Fund and Project Guidelines</u>:

(xvi) A country highlighted that since the EANET activities are conducted on a voluntarily basis, all activities should be approved by all the Participating Countries. Based on the Guideline, the basic principle of consensus should be reflected in the whole Guideline.

(xvii) A country mentioned it would be good to add guidance on the number of the Co-Financers (CF) and delineation. Co-Financers' contributions should not be overlapping.

(xviii) The NC suggested that the "Annex of the Report", mentioning "the recommendation from IG23" to have ACAP as Project Fund Holder, would need to be deleted or replaced, as it is no longer relevant. A country agreed to delete this Annex.

(xix) A country asked about the inclusion in the Guideline of rules when a project is not ended on time, or when there is excess funding, and on handling a possible extension period.

(xx) The Network Center clarified that in the case of a project extension, the IG would decide on the modification of a project plan. As the IG usually meets only once per year, this could be done by email communication with NFPs and SAC members, if necessary. However, this is not clearly written in the Guidelines.

(xxi) It was also clarified that even for multi-year projects, the IG will check the budget use year by year. In case there is unused budget, these funds could be brought back to the EANET Fund.

(xxii) A country asked about the existence of any recommendations on a limitation of budget for the activities in the current Guideline.

(xxiii) The Secretariat and the NC clarified that there is no budget limitation however the IG approves all budgets yearly. The Secretariat and the NC review the projects based on the EANET criteria described in the Guideline, and check also that the budget is relevant, after that the SAC and the IG decide on the soundness of the budget and project relevance.

22. The Session discussed the Revised Guidelines and provided comments, suggestions, and recommendations from the scientific and technical viewpoints for consideration and approval at the IG25 of EANET.

VIII. Updates on the Mid-Term Review of the MTP 2021-2025 [Agenda Item 7]

23. The Secretariat and the Evaluator, Mr. Frank Noij, presented agenda item 7 "Updates on the Mid-Term Review of the MTP 2021-2025" ((EANET/SAC23/7).

24. The key points of the presentation included:

- The Evaluator presented the Draft Mid-Term Review of the Implementation of the EANET MTP 2021-2025.

25. The Session was invited to review, discuss, make comments and suggestions, and make recommendations to the IG25 on the EANET, as appropriate.

26. Major discussions included:

(i) The NC, the Secretariat and various countries appreciated the draft Mid-Term Review prepared by the Evaluator.
(ii) The NC proposed to reorganize the findings in categories such as on the budget system, science and policy interlinkages, or outreach activities etc. and link these to the recommendations.
(iii) The NC also highlighted as the EANET is a non-political network, the SAC's role should be strongly supported. Similarly to how the IPCC is renowned globally, the SAC could learn from the IPCC and for EANET to adapt its practice. Recommendations from the Evaluator were welcome.
(iv) The Evaluator explained he based his results and the structure of his conclusion on the questions of the review. These conclusions show connections and interlinkages with many topics. As a general conclusion, the Evaluator considered that the EANET's role in air pollution monitoring needs to be further clarified, as it cannot easily mirror its current role on acid deposition. The question on the promotion of the scientific data is far more specific. On how to learn from the IPCC, and how to present data to a wider audience, the Evaluator suggested to prepare reports for targeted audiences. For instance, he found that The Report for Policy Makers is more accessible for the public than the PRSAD reports, which include technical language. The EANET needs different types of reports for the different audiences, the scientists, the policymakers, the general public. The reports could use the same data but should be written differently.

(v) A country suggested to involve more the national Technical Centers from the Participating Countries, mentioned in the recommendations from the Review, in the SAC meetings by inviting them to join on a voluntary basis.

(vi) The Evaluator highlighted that it is important to involve the Technical Centers as there are important technical capacities there, that could be expanded.

(vii) A country enquired about the linkages between monitoring and policy making in the EANET and suggested to, as part of the PRSAD5 discussions, invite policymakers to form a committee to contribute to the report drafting process.

(viii) The Evaluator suggested to improve the linkage between policymakers and scientists by first starting to measure it. He suggested to have bi-annual meetings with scientists and policymakers, to better understand their needs. On the PRSAD, he noted the country reports are very different among countries. While some only show data, others include a more detailed analysis.

27. The Session acknowledged the Updates on the Mid-Term Review of the MTP 2021-2025 and provided comments from scientific and technical viewpoints for the next draft for consideration at the IG25.

IX. Adoption of the EANET Data Report 2022 [Agenda Item 8]

28. The Network Center presented the Draft EANET Data Report 2022 (EANET/SAC23/8).

29. The key points of the presentations included:

(i) Wet deposition: Data from 60 sites were expected to be submitted for the Data Report 2022. It was informed that the Tanah Rata monitoring site in Malaysia was reactivated after being closed. As for pH, part of China, Indonesia, Japan, Philippines, Malaysia, and Russia had low pH sites. As for acidic substances, many sites demonstrated decreasing trends, while some sites demonstrated rapidly increasing trends.

(ii) Dry deposition: The data submission for the Data Report 2022 are expected for 51 sites using auto monitors, filter-pack (FP), and/or passive samplers. Three FP results from 3 sites: Mt. Sto Tomas in the Philippines, Ulaanbaatar and Terelj sites in Mongolia are pending the submissions, as informed by these two countries. The NC will update these results for the Data Report after receiving the data. In addition, the NC explained with special notes on monitoring status, when graphs for some components were shown in specific monitoring sites. Over 20 years of data show that SO_2 and PM (particulate matter components) seem to decrease, but on the other hand, O_3 seems to increase at some sites.

(iii) Soil and vegetation: Observation of the tree decline was conducted in China and Japan in 2022. No pronounced changes have been observed in vegetation conditions.

(iv) Inland aquatic environment: The inland aquatic environment monitoring data in 2022 were submitted from 15 sites from 8 countries. A decreasing trend in sulfate ion concentrations has been observed at some sites.

(v) Catchment-scale: Monitoring was conducted in two catchments: Japan and the Philippines. A decreasing trend in nitrate-ion concentrations has been observed at

the Japanese site, suggesting that is in the process of recovering from nitrogen saturation.

30. The Session reviewed the monitoring data of the Participating Countries in 2022 for consideration and adoption at the Session.

31. Major discussions included:

General:

(i) All Participating Countries' continuous work in submitting the monitoring data were appreciated as long-term monitoring is an essential mission of the EANET.

(ii) It was clarified that some data are missing as they were not reported due to equipment failure and lack of budget for maintenance in several sites. It was suggested to use backup systems to guarantee continuous monitoring and support from both scientific and policy makers' sides are necessary.

(iii) It was suggested to continue meetings such as the STM and the SAC in person to facilitate discussions on how to overcome maintenance-related issues.

Wet and dry deposition:

(iv) Japan pointed out that there may be an issue with the SO_2 data on slide 4 for Tokyo in 2021 and suggested to check it by comparing with other monitoring stations. Similarly, it was suggested to check the data from Niigata as it shows the opposite trend from Tokyo, in that same graph.

(v) The trends of O_3 concentrations in some sites were very evident, showing upward trends in Southeast Asia. The causes of increasing trends in some Southeast Asian countries should be carefully analyzed. It may require the collection of observation data in other Southeast Asian countries.

(vi) A country pointed out that when O_3 data is measured with automatic instruments, it is important to analyze with some indices of higher concentration levels, such as the annual 99th percentile value of daily maximum 8-hour concentration, etc.

(vii) The Secretariat acknowledged the important results showed from the monitoring in the EANET and suggested in the future to highlight these analytics with additional explanations in a simple language that could be easily understood by non-scientists and policymakers.

(viii) A country pointed out that it will be interesting to see the effects of the COVID-19 pandemic in the data results.

Soil and vegetation, inland aquatic environment, and catchment-scale:

(ix) It was clarified that soil sampling has been conducted every 3-5 years and this is also one of the reasons for the small amount of data presented in Data Report 2022.

(x) Malaysia informed the NC that the Forest Research Institute of Malaysia (FRIM) recently allocated some seed money to reactivate the soil and vegetation data collection and soil sampling and that the data would be sent soon to the NC.

32. The Session, in principle, adopted the Data Report 2022 with modifications. Nevertheless, the Participating Countries, which have not yet done it so far, can still submit their data to the NC.

X. Adoption of the Report on the Inter-laboratory Comparison Projects 2022 [Agenda Item 9]

33. The Network Center presented the Draft Report on the Inter-laboratory Comparison (ILC) Projects 2022 (EANET/SAC23/9), which included the results of the wet deposition, dry deposition (filter pack method), soil and vegetation, and inland aquatic environment ILC Projects carried out in 2022.

34. The key points of the presentations included:

Wet deposition:

- 32 participating laboratories submitted their analytical results of the artificial rainwater samples to the NC. 95.0% and 88.1% of submitted data met the Data Quality Objective (DQO) of EANET for high and low concentration samples, respectively. The percentage of data by each participating laboratory within the DQO from 1998 to 2022 was shown. After disclosing the setting values of artificial samples, the NC will request a re-analysis of flagged parameters to confirm the validity of the analytical procedure in the laboratory.

Dry deposition:

- The NC distributed 20 sets of ILC dry samples and received results from 19 laboratories. Overall, the NC explained that the results of Cl- quantification with small quantity did not meet the DQO in many laboratories.

Soil:

- Seven laboratories from 4 countries participated in the 24th ILC project on soil. There were both random and systematic errors for factors of variabilities in measurements. Ratio of outliers was higher than usual. Since there are no setting values for soil, it is necessary to increase the number of participating laboratories to effectively conduct the ILC comparison project.

Inland aquatic environment:

- 21 laboratories participated in the 23rd ILC project on inland aquatic environment, and 20 laboratories submitted their analytical data. The NC pointed out that the flagged data percentage of all the reported data was lower than the last attempt.

35. The Session was invited to review, make comments, and provide guidance for consideration and adoption at the Session.

36. Major discussions included:

(i) Reviewing the results of inter-laboratory comparison projects will be an important work for the new Task Force on Monitoring and Assessment on Atmospheric Environment.

(ii) We need more systematic improvement of the QA/QC. There are increasing or decreasing trends of air pollution in different countries. It was suggested that setting values of standard samples for the inter-laboratory comparison projects should take into account air pollution situations in the countries.

(iii) The NC informed that the setting values of standard samples in the past projects considered actual sample concentrations. However, it might not fully cover the range of the data in all Participating Countries. This would be taken into consideration in future projects.

37. The Session adopted the Report on the Inter-laboratory Comparison Projects 2022.

XI. Overview of the Updated National Monitoring Plans of the Participating Countries [Agenda Item 10]

38. The Network Center presented an overview of the National Monitoring Plans of the Participating Countries (EANET/SAC23/10) based on the latest information submitted by the Participating Countries.

39. The key points of the presentation included:
- The National Monitoring Plan (NMP) Summary is a fundamental document for EANET monitoring activities and every year, the Participating Countries are requested to review and submit the NMP after necessary revisions.
- The NMP 2023 were reported at the STM24 and re-submitted after the second revision process for finalization.
- The finalized NMPs in 2023 of each Participating Country were reported focusing on the number of monitoring sites for each category, the site classification, and methodology, especially monitoring O_3 and $PM_{2.5}$ and including revised points from the NMP 2022.

40. The Session was invited to discuss the National Monitoring Plans of the Participating Countries and provide necessary comments and guidance as appropriate.

41. Major discussions included:
(i) China pointed out that there may be an error in the dry measurement parameters for the two remote sites CNA013 and CNA14, both in the NMP Summary and in the 2022 Data Report, as the $PM_{2.5}$ and O_3 parameters may be wrong. It was suggested that the National Monitoring Plan of dry deposition in China in 2023 be rechecked, as well as the sites information in Table 4.4.1 in the Data Report of 2022.
(ii) The Secretariat noticed that many PCs were already monitoring air pollution, and that in 2023 the Philippines nominated 3 new automatic monitoring stations to be added to EANET. As such, the Secretariat, suggested for the consideration of the SAC, the possibility for PCs to nominate additional stations for PM and O_3 monitoring thereby improving the air quality monitoring capability of the EANET.
(iii) A country highlighted the important role the NC will play in helping the PCs to implement the expansion of scope.
(iv) A country highlighted the importance of the EANET's background monitoring data, especially for continental transport. Remote/background stations are key for research activities. It was also pointed out that urban sites are often influenced by local sources, so the background site monitoring is very important for the regional dimension of the EANET.

(v) A country pointed out that since the expansion of scope of the EANET, CO and VOCs are being measured for capacity building and other activities. As they are precursors of O_3 and $PM_{2.5}$, it is important to consider how in the future these pollutants may be monitored within the EANET network and to develop the capabilities and a technical manual to prepare the monitoring. It is expected that the VOCs project would contribute to this issue.

42. The Session acknowledged the updates on the overview of the National Monitoring Plans of the Participating Countries.

XII. Consideration of the Progress of the Task Forces and Expert Groups under the Scientific Advisory Committee (SAC) [Agenda Item 11]

43. The Network Center presented the Progress of the Task Forces (TF) and Expert Groups under the Scientific Advisory Committee (SAC) (EANET/SAC23/11).

44. The key points of the presentation included:
- The NC, as the Secretariat of the TFs, requested for NFPs to nominate the members of TFs.
- It was reported that the ten countries nominated members to TFs at the time of the SAC23 meeting.

45. The Session was invited to make comments, suggestions, and recommendations from scientific and technical viewpoints.

46. Major discussions included:

(i) Republic of Korea informed the session that are in the process of submitting a member(s) to the TF.
(ii) The nominations of TF were reviewed by SAC23 although some additional nominations might occur after the SAC23 meeting and would be circulated by email to all SAC and TF Members.

47. The Session acknowledged the nominated Task Force members and will be reported to IG25 of EANET.

XIII. Updates on the Research Activities of the EANET [Agenda Item 12]

48. The Network Center presented the Progress of the Studies on the Effects of Acid Deposition on Ecosystems (EANET/SAC23/12/1) and the Studies on Source Apportionment of $PM_{2.5}$ and Technical Demonstration of Low-Cost Sensors in EANET Countries (EANET/SAC23/12/2).

49. The key points of the presentations included:
Progress of the Studies on the Effects of Acid Deposition on Ecosystems
- The progress of Project 2023-01 was reported along with the outlook.

- The Sulfur buffer system in soil at the Kajikawa catchment has been clarified using the isotopic analysis. The paper was published in an international journal.
- Outreach activities such as an EANET webinar and the ACID RAIN conference have been conducted to share scientific results.
- It was pointed out that the EANET has a potential to contribute to discussion on the nitrogen cycle, currently a global issue, in terms of atmospheric deposition.

Source Apportionment of $PM_{2.5}$ and Technical Demonstration of Low-Cost Sensors in EANET Countries

- Quantitative evaluation results by using PM chemical composition data and receptor models showed significant sources of $PM_{2.5}$ in Japan and Thailand.
- Characteristics of organic components of $PM_{2.5}$ in Vietnam showed contributions of biomass burning sources.
- Parallel measurement tests of $PM_{2.5}$ and O_3 between LCS and the official monitor demonstrated the good correlation with the reference level monitor, but the slope of O_3 deviated from 1.

50. The Session was invited to make comments, suggestions, and recommendations from scientific and technical viewpoints.

51. Major discussions included:

(i) It was pointed out that there is an error on the legend of source apportionment results in Japan.

(ii) The NC clarified that the LCS sensors in Yangon, Myanmar, were first installed in the same site as the reference monitoring instrument for one week to compare the data, before being moved to other locations.

(iii) The NC clarified that the running time for the Potential Source Contribution Function (PSCF) model was set to 72 hours for the back trajectory.

(iv) It was suggested that Potential Source Contribution Function (PSCF) and back trajectory analysis should be excluded in the final report of Source Apportionment of $PM_{2.5}$.

(v) A country pointed out, on the source apportionment in Niigata, Japan, the very high contribution of pinene aerosol in autumn and spring. The NC explained that in the surrounding area there are no anthropogenic sources, only farm grounds and trees, and the sources of contributions of pinene need to be further investigated.

(vi) A new collaborative research project on nitrogen deposition in tropical forests in Thailand was presented as part of the project report on ecosystem impacts. It was clarified that this research project will focus on the bidirectional exchange of reactive nitrogen compounds between the atmosphere and the forest canopy. An observation tower constructed in the forest area by a previous research project allows intensive observation in the dry and rainy seasons. In the study area, PM and gaseous concentrations increase and pollutants remain in the atmosphere for a long time during the dry season.

52. The Session reviewed the Progress of the Studies on the Effects of Acid Deposition on Ecosystems and the Studies on Source Apportionment of $PM_{2.5}$ and Technical Demonstration of Low-Cost Sensors in EANET Countries and provided comments,

suggestions, and recommendations from the scientific and technical viewpoints for the next drafts of the reports.

XIV. Consideration of the Draft Work Programme and Budget of the EANET in 2024 from scientific and technical viewpoints [Agenda Item 13]

(1) Core Activities of the EANET in 2024

53. The Secretariat and the Network Center presented the Draft Work Programme and Budget of the EANET for the Core Activities of the EANET in 2024 (EANET/SAC23/13/1).

54. The key points of the presentation included:
- It was highlighted that the Core Activities of the EANET in 2024 reflect the expanded scope of the EANET and the related Project Fund activities.
- The estimated voluntary financial contributions in 2024 for the Secretariat are US$ 607,200, and US$ 548,799 for the Network Center.
- The estimated Available Cash Balance from the EANET Trust Fund in UNEP is US$ 96,172.
- In 2024, the Core Budget of the Secretariat is US$ 632,235 and the Network Center's Core Budget is US$ 647,738.
- The total estimated revenue of the Network Center in 2024 is US$ 655,325.
- The NC informed that they will hold the Senior Technical Manager (STM) meeting in person in 2024.
- The NC will continue to provide technical support to the PCs in line with the WPB.

55. The Session was invited to make comments, suggestions, and recommendations from scientific and technical viewpoints for consideration and approval at the IG25 of EANET.

56. Major discussions included:
(i) A country expressed concerns about the organization of face-to-face meetings as they are very expensive since the travel fees are constantly increasing.
(ii) The Secretariat explained being constantly trying to save costs. For in-person meetings, a good strategy could be to combine events to save travel costs, or to continue to organize hybrid meetings. Another solution could also be to fund events and meetings through the EANET Project Fund, via the participation of sponsors.
(iii) A country pointed out that the SAC or TF members could use the opportunity of academic workshops and events to meet during these times.

57. The Session acknowledged the Draft Work Programme and Budget of the EANET for the Core Activities of the EANET in 2024, and provided comments, suggestions, and recommendations from the scientific and technical viewpoints, for consideration and approval at the IG25 of EANET.

(2) Proposed Project Plans in 2024

58. The Secretariat and the NC presented the Draft Work Programme and Budget of the EANET for the Proposed Project Plans of the EANET in 2024 (EANET/SAC23/12/2).

59. The key points of the presentation included:

- It was highlighted that 2023 is the second year of implementation of the EANET Project Fund mechanism.
- Twelve project plans and/or concept notes were submitted for consideration and discussion to EANET NFPs at the Working Group Meeting on 24-25 August 2023 and these are to be reviewed by the SAC23 from the scientific perspective.
- The Proposed Projects include: (2024-01) Studies on the effects of atmospheric deposition on ecosystems, from a catchment scale to a regional scale as a methodological study (continued from 2023); (2024-02) Promoting VOCs related Capacity Building in the EANET; (2024-03) Methodology Study for Development of LCS Hybrid Air Quality Monitoring Network (HAQMN); (2024-04) $PM_{2.5}$ source apportionment in pilot cities in EANET for recommendations on feasible reduction policy; (2024-05) The collaboration of Technical and Training (TNT) and capacity building program for personnel of the Participating Countries on monitoring; (2024-06) Webinar for emission inventory of VOCs and its application for policy consideration; (2024-07) Seminar for Particulate Matter Problem including Haze in Southeast Asia; (2024-08) Next Generation Leadership Program in East Asia; (2024-09) Integrating Southeast Asian perspectives into the EANET Capacity Building Program; (2024-10) Stocktaking and Methodological Assessment of Emissions Inventories and Source Apportionment of Air Pollution in Southeast Asia; (2024-11) Webinars on the use of Space-Based Instruments for Air Quality Monitoring; and (2024-12) Seminar on Sustainable Nitrogen Management-sharing global movement.

60. The Session was invited to make comments, suggestions, and recommendations from scientific and technical viewpoints for consideration and approval at the IG25 of EANET

61. Major discussions included:

(i) A country appreciated the efforts made to promote EANET projects and inquired about the capacity of the NC and the Secretariat to implement so many projects.
(ii) The Secretariat clarified that the EANET Project Fund and Project Guideline aims at increasing partnerships between the EANET and outside of the Network. The EANET Project Fund allows implementation by partners, not only by the NC and the Secretariat.
(iii) The NC mentioned that all project plans are valuable however some do not have confirmed budget yet.
(iv) A country highlighted the Project Fund's very interesting collaborative aspects, including with other partners and experts outside the EANET.
(v) The NC pointed out that the most important aspect is that all PCs may participate and propose projects to the EANET Project Fund mechanism. The NC encourages the PCs to continue to propose projects in the future.
(vi) A country enquired about the capacity building programme and pointed out the challenge in tailoring the training for participants with diverse expertise and knowledge.
(vii) It was clarified that EANET training is very specific and regardless of the technical background of the trainees, their knowledge can be improved by being exposed to other topics on air quality management, outside of their usual expertise. In general, these

training have contributed to informing and involving participants more with EANET activities.

(viii) A country expressed interest in the project on the use of Space-Based Instruments for Air Quality Monitoring (2024-11) and suggested it would be good to explore collaboration opportunities with space agencies.

62. The Session acknowledged the Draft Work Programme and Budget of the EANET for the Proposed Project Plans of the EANET in 2024 and made comments and recommendations from scientific and technical viewpoints for consideration and approval at the IG25 of EANET.

XV. Other matters [Agenda Item 14]

63. The Chairperson invited participants to share announcements or updates, as part of agenda item 14: "Other matters".

64. Major discussions included:

(i) The Network Center informed participants about coming events including, the VOCS Workshop as part of the 2023 Better Air Quality (BAQ) Conference which will be held in Manila, Philippines in hybrid format on 14 November 2023; the EANET Seminar on the Effects of Acid Deposition and Air Pollution on Ecosystem and Human Health to be held on 31 October 2023 online; and the EANET Emission Inventory Webinar Workshop on Combustion Sources to be held on 11 December 2023 online.

(ii) The Secretariat informed participants that an EANET National Stakeholder Awareness Session as part of the CWCC Conference which will be held in Shanghai, China in hybrid format on 18 October 2023, co-organized with the Fudan University and the Ministry of Ecology and Environment, China.

XVI. Consideration and Adoption of the Report of the Session [Agenda item 15]

65. The Secretariat presented the draft Report of the Session. The Chairperson invited participants to review the draft Report of the Session.

66. The Report of the Session (EANET/SAC23/15) was considered and adopted.

XVII. Closing of the Session [Agenda Item 16]

67. The Session expressed its appreciation to the efforts made by the Chairperson, Vice-Chairpersons, and the Rapporteur in making the SAC23 Session fruitful and successful.

68. The Session was officially closed by the Chairperson, thanking all the participants for their valuable contributions.

Annex

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