

The Twentieth Session of the Scientific Advisory Committee
on the Acid Deposition Monitoring Network in East Asia
23-24 September 2020, 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 Twentieth Session of the SAC (SAC20) from 23-24 September 2020 virtually. The Session was organized by the Secretariat and the Network Center (NC) for the EANET.
2. The Session was attended by 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 NC. The List of Participants is attached as Annex 1.

II. Opening of the Session [Agenda Item 1]

3. Mr. Tomi Haryadi, Coordinator, Secretariat for the EANET, delivered the Welcome Remarks. He mentioned that the EANET is currently finalizing the Medium Term Plan (MTP) for the EANET from 2021 to 2025. Several discussions have been conducted with the Participating Countries to propose activities for the next MTP. The final draft MTP will be submitted to the 22nd Session of the Intergovernmental Meeting on the EANET (IG22) in November 2020. During this process, the role of SAC members to provide guidance and recommendations on the activities to be implemented is highly appreciated. In the discussion of the SAC20, the SAC members will discuss and review the Preliminary 2nd Draft MTP (2021-2025) from technical and scientific viewpoints.
4. Dr. Shiro Hatakeyama, Director General of Asia Center for Air Pollution Research (ACAP), delivered the Introductory Remarks. In his speech, Dr. Hatakeyama highlighted a recent increase of the monitoring sites for PM_{2.5} and the addition of new sites in China and Indonesia in 2019 as outputs from great efforts of the Participating Countries and NC. Regarding the preparation of the next MTP, he suggested that the Session should have a clearer picture; what is our goal or target, what kind of activities need to be undertaken, and what is our expected outcome. He also informed the Session that the Drafting Committee (DC) has already been launched for the Fourth Periodic Report on the State of Acid Deposition in East Asia (PR SAD4) according to the decision of the last SAC Session.

III. Election of the Officers [Agenda Item 2]

5. The Secretariat introduced the system of a 3-year fixed-term bureau of officers and re-election of the officers of the SAC. The 3-year fixed term of the SAC bureau of officers from the Fifteenth Session to the Seventeenth Session of the SAC (SAC15-SAC17) was implemented by means of re-election. The Session decided a 3-year (2018-2020) fixed-term

appointment for the SAC bureau of officers composed of one Chairperson, two Vice-chairpersons, and a Rapporteur. The elected bureau members were as follows: Dr. Le Ngoc Cau, Director, Center of Environmental Research, IMHEN, MoNRE, Viet Nam as the Chairperson, Prof. Fan Meng, Director, Institute for Atmospheric Environment, Chinese Research Academy of Environmental Sciences, China, and Prof. Wilfredo M. Carandang, University of the Philippines Los Baños, Philippines, as Vice-Chairpersons, and Mr. Eka Suharguniyawan, Head, Atmospheric Chemistry Composition Analysis, Meteorological Climatological and Geophysical Agency, Indonesia as the Rapporteur of the Session. Unfortunately, Mr. Eka Suharguniyawan was not able to join the SAC20. In this regard, the Secretariat requested Dr. Gantuya Ganbat, Senior Officer of the National Committee on Reducing Environmental Pollution, Ministry of Environment and Tourism of Mongolia, to serve as the Rapporteur of the Session.

IV. Adoption of the Agenda [Agenda Item 3]

6. The Session considered and adopted the Provisional Agenda (EANET/SAC 20/3/1), the Annotated Provisional Agenda (EANET/SAC 20/3/2), and the Draft Program (EANET/SAC 20/3/3) as proposed.

V. Review on the Draft Report on the Progress of the EANET since the Nineteenth Session of the Scientific Advisory Committee (SAC19) and the Draft Financial Report in 2019 [Agenda Item 4]

7. The Secretariat and the NC presented the Draft Report on the Progress of the EANET since the Nineteenth Session of the Scientific Advisory Committee (SAC19) (EANET/SAC 20/4/1), including the Draft Financial Reports in 2019 of the Secretariat and the NC (EANET/SAC 20/4/2). The presentations also included the outcomes of the Twenty-first Session of the Intergovernmental Meeting (IG21) on the EANET.
8. The key points of the presentation of the Secretariat included:
 - Implementation of the EANET's activities since SAC19 managed by the Secretariat, including the organization of EANET meetings (IG21, SAC19), Working Group Meetings, and National Awareness Workshop in Myanmar and Malaysia, and the development of the communication materials. The Secretariat developed the Small-Scale Funding Agreement with the RRC.AP/AIT and the NC.
 - The total voluntary financial contribution received by the Secretariat in 2019 is US\$ 497,275. In addition, the total expenditures and commitments of the Secretariat in 2019 are US\$ 591,139. The grand-total expenditure of the Secretariat, including the expenses for a 1-year technical consultant (China in-kind contribution), is US\$ 680,558.
9. The key points of the presentation of the NC included:
 - Various activities have been implemented and ongoing, which include acid deposition monitoring including QA/QC activities, compilation, verification, evaluation, storage & provision of data and relevant information, Task Forces and Expert Groups established under the SAC, "technical support and capacity building activities, EANET research activities, and EANET meetings.

- The current status of the “Voluntary Financial Contribution to the NC from the Participating Countries in 2020” was reported.
10. The Session was invited to make comments on the presentation and provide guidance.
 11. Major discussions included:
 - No comment.
 12. The Session acknowledged the Draft Report on the Progress of the EANET since the SAC19 and the Draft Financial Reports in 2019.

VI. Consideration of the Draft of the Medium Term Plan for the EANET (2021-2025) from Scientific and Technical Viewpoints [Agenda Item 5]

- 1) Findings from the Survey Matrix of Categorization of EANET Activities for Further Development of Medium Term Plan for the EANET (2021-2025) (EANET/SAC 20/5/1);
 - 2) Preliminary 2nd Draft MTP for the EANET (2021-2025) (EANET/SAC 20/5/2);
 - 3) Revision of Task Forces and Expert Groups of the EANET (EANET/SAC 20/5/3);
 - 4) Consideration of Improvement of the EANET Reports (EANET/SAC 20/5/4);
 - 5) Consideration of Improvement of the EANET Technical Guidelines and Manuals (EANET/SAC 20/5/5).
13. The Secretariat presented the Findings from the Survey Matrix of Categorization of EANET Activities for Further Development of Medium Term Plan for the EANET (2021-2025).
 14. The key points of the presentation included:
 - Ten out of thirteen EANET Participating Countries have participated in the Survey Matrix. This represents a high participation rate of almost 77%. The overall aggregated findings show that the responding Participating Countries have considered 84% of all activities listed in the First Draft of the MTP for the EANET (2021-2025) as high-priority activities. The new proposed activities that have gathered the most opinions in favor of a high-priority implementation are monitoring activities such as the expansion of data collection for ozone and PM as well as the development of real-time air quality monitoring.
 15. The Secretariat presented the Preliminary 2nd Draft MTP for the EANET (2021-2025).
 16. The key points of the presentation included:
 - The MTP for the EANET (2021-2025) provides general guidance and a framework for the EANET operations in planning and implementing its activities for the coming five years from January 2021 to December 2025. The MTP has five objectives, among others: 1) Monitoring of air quality and acid deposition including related chemical substances such as ozone and PM with quality assurance and quality control (QA/QC); 2) Promotion of data utilization and dissemination; 3) Promotion of capacity building; 4) Enhancement of outreach activities; and 5) Enhancement of cooperation and collaboration.

17. The NC presented the Revision of Task Forces and Expert Groups of the EANET.
18. The key points of the presentation included:
 - Taking into account the activities in the current MTP (2016-2020) and in the next MTP (2021-2025), the revision of the Task Forces and Expert Groups was proposed as follows: existing four Task Forces will be reformed to two Task Forces, namely (1) Task Force on Monitoring, Evaluation and Research of Atmospheric Environment, and (2) Task Force on Monitoring, Evaluation, and Research of Environmental Effects. Additionally, (3) Task Force on Atmospheric Environmental Management will be newly established. “Expert Group on Revision of the Technical Manuals for Dry Deposition Flux Estimation and Air Concentration Monitoring” will be reset under the Task Force (1) above and continue until 2023 for revision of the manuals.
19. The NC presented the Consideration of Improvement of the EANET Reports.
20. The key points of the presentation included:
 - The EANET has been publishing many reports, such as Periodic Report on the State of Acid Deposition in East Asia (PRSAD), Report for Policy Makers (RPM), Fact sheets, EANET Science Bulletin, Data Report, and Report of the Inter-laboratory Comparison Project.
 - It was suggested that the objectives and contents of the respective reports be reconsidered and improved in the next MTP (2021-2025).
 - Following Japan’s proposal, it was suggested that RPM, Fact sheets, and PRSAD be combined to enrich the contents of PRSAD.
21. The NC presented the Consideration of Improvement of the EANET Technical Guidelines and Manuals.
22. The key points of the presentation included:
 - The Guidelines for Acid Deposition Monitoring in East Asia was published in 2000, and some descriptions are not consistent with the current monitoring status. Therefore, it was suggested that the Guidelines be revised as appropriate.
 - The Technical Manual for Air Concentration Monitoring in East Asia and the Technical Manual on Dry Deposition Flux Estimation in East Asia are under revision by the Expert Group on the revision of the Technical Manuals for Dry Deposition Flux Estimation and Air Concentration Monitoring to elaborate air concentration monitoring methods, and dry deposition flux estimation methods, respectively.
 - Other manuals and guidelines are useful but should be reviewed and revised timely for their effective utilization.
23. The Session was invited to make comments on the presentations and provide guidance.
24. Major discussions included:
 - A SAC member from Japan presented his opinion on the next MTP expected from science and policy views, which included:

- For the future EANET, development of a comprehensive system for managing and improving the atmospheric environment in East Asia, which should cover multi impacts, multi-scale, multi-species, and multi-functions;
 - As a direction of the next MTP, contributing to the improvement of the atmospheric environment in East Asia by the development and application of the management system; and as activities to be promoted in the next MTP, (1) Monitoring of air pollution-related climate change, (2) Monitoring of ecological impacts and data analysis, (3) Model analysis, (4) Assessment and its report, and (5) Capacity building related to atmospheric environment management.
- It was pointed out that new activities beyond the current scope, such as air pollution, POPs and climate change, were included in the Preliminary 2nd Draft MTP (2021-2025). Although SAC could support such activities from scientific viewpoints, it was pointed out that the EANET objectives were defined in the Instrument, if there are no boundaries for new activities, many of them could not be implemented due to limited resources in the Participating Countries.
 - It was suggested that detailed discussions, such as what activities should be included or excluded, could be made after approval of IG for the new scope.
 - It was suggested that reformation of Task Forces seemed to be a little early and the current Task Forces could be kept until approval of the new scope by the IG.
 - It was pointed out that some activities, such as urban air pollution and emission inventories, may need much more coordination with many ministries and industries within the countries. It was suggested that a new international convention would be necessary to fully cover the activities.
 - Since some Task Forces are not operative, reformation of the Task Forces is understandable as the future idea. It was suggested that SAC members consider how they could work efficiently, taking account of regional scale assessment.
 - It was suggested that satellite remote sensing could be utilized for the assessment of regional air pollution, since the technologies have been improved day by day.
 - It was informed that Participating Countries have proposed activities beyond the current scope during the Working Group Meeting in August 2019, showing evidence that Participating Countries would like to implement new activities. These activities were included in the Preliminary 2nd Draft MTP (2021-2025). The SAC members were requested to share their technical and scientific viewpoints on these activities.
 - It was mentioned that the activities of the Preliminary 2nd Draft MTP (2021-2025) were not discussed extensively, in particular concerning the development of emission inventory.
 - It was clarified that the Preliminary 2nd Draft MTP (2021-2025) will be discussed extensively in the next working group meeting and then will be presented in the next IG for approval.
 - Participating Countries agreed on the principal to expand the scope of EANET, however clarification is needed what to include in the next MTP, e.g., air pollution, impacts, emission inventory, climate change, etc. The activities scope is very wide, and the resources are limited. The boundaries of scope could be better to define.
25. The Secretariat presented the draft Recommendations from SAC20 to IG22. The Session was invited to make comments to modify the document.

26. Major discussion included:
- As for the scope expansion, it was suggested that “development of emission inventory” is too ambitious. It was proposed that the wording would be changed to “promoting analysis by using emission inventories and modelling”. It was suggested that existing emission inventories could be utilized for the analysis.
 - It was clarified that the scope expansion has been discussed in the previous SAC and IG sessions and agreed as the general consensus.
 - As for reformation of Task Forces, the new Task Force on Atmospheric Environmental Management is expected to work with Asia Pacific Clean Air Partnership (APCAP) Science Panel. The APCAP Science Panel consists of scientists from Asia and the Pacific region and Europe. Since activities of APCAP Science Panel are overlapped with the new Task Force, cooperation between two groups are good for cost efficiency. It was suggested that two separate groups may hold one session cooperatively for same objectives
 - As for redesign of the EANET reports, it was pointed out that PRSAD and RPM have different tasks and DC did not discuss to include RPM in PRSAD4. It was clarified that the idea would be reflected in PRSAD5.
27. The Session acknowledged the Findings from the Survey Matrix of Categorization of EANET Activities for Further Development of Medium Term Plan (2021-2025) for the EANET; Preliminary 2nd Draft MTP (2021-2025) for the EANET; Revision of Task Forces and Expert Groups of the EANET; Consideration of Improvement of the EANET Reports; and Consideration of Improvement of the EANET Guidelines and Technical Manuals.
28. Based on the discussion in the Agenda Item 5 above, the Session agreed to attach the “*Recommendations from SAC20 to IG22*” to the Report of the Session as Annex 2.

VII. Adoption of the EANET Data Report 2019 [Agenda Item 6]

29. The NC presented the Draft Data Report 2019 (EANET/SAC 20/6). The report included data on wet deposition, dry deposition, soil and vegetation, inland aquatic environment, and catchment-scale, from the monitoring activities carried out by the Participating Countries in 2019, which were submitted to the NC.
30. The key points of the presentations included:
- (i) Wet and dry deposition:
 - As for wet deposition monitoring, data from 61 sites were expected to be submitted to the Data Report 2019. However, since there is no submission from some sites, NC requested the countries to submit the data. Wet deposition of acidic and basic substances in 2019 were identified to decrease with decreasing precipitation amount in the comparison with the previous five years.
 - As for dry deposition (air concentration) monitoring, monitoring results in 41 sites by filter-pack method, 34 sites by automatic monitoring, and six sites by passive sampler were compiled in the Data Report 2019. Spatial distributions of gas and aerosol concentration in 2019 were introduced. Annual concentrations during 2000-2019 were identified with increasing and decreasing trends.

- (ii) Soil and vegetation, inland aquatic environment, and catchment-scale:
 - As for Soil and vegetation monitoring, observation of tree decline was conducted in China and Japan in 2019, while soil surveys were conducted in Indonesia. So far, no pronounced change has been observed in the forests' condition.
 - As for inland aquatic environment monitoring, the data of 16 sites from 9 countries were submitted in 2019. Phenomena suggesting recovery from acidification, such as an increase of pH and decline of SO_4^{2-} and/or NO_3^- concentrations, have been observed recently in some sites, including Jinyunshan Lake, Jiwozi River, and Ijira Lake, while acidification with an increase of SO_4^{2-} and/or NO_3^- concentrations was still observed in a few sites, such as at the Komarovka River.
 - As for catchment-scale monitoring, the regular monitoring has started in La Mesa Watershed, Philippines, in 2019. Recovery from acidification/nitrogen saturation seemed to be clear as the long-term trend in Lake Ijira catchment.
- 31. The Session was invited to review the monitoring data of the Participating Countries in 2019 for consideration and adoption at the Session.
- 32. Major discussion included:
 - (i) Wet and dry deposition:
 - Participant of Thailand informed that there are misspellings in the monitoring site name. The correct ones will be informed to the NC later.
 - (ii) Soil and vegetation, inland aquatic environment, and catchment-scale:
 - No comment.
- 33. The Session, in principle, adopted the Data Report 2019. Nevertheless, the Participating Countries which haven't done it so far still can submit their data to the NC.

VIII. Adoption of the Report on the Inter-laboratory Comparison Projects 2019 [Agenda Item 7]

- 34. The NC presented the Draft Report on the Inter-laboratory Comparison (ILC) Projects 2019 (EANET/SAC 20/7), which included the results of the wet deposition, dry deposition (filter pack method), soil, and inland aquatic environment ILC Projects carried out in 2019.
- 35. The key points of the presentation included:
 - For ILC on wet deposition, 33 participating laboratories submitted their analytical results of the artificial rainwater samples to the NC. 94.1% and 86.1% of submitted data met the Data Quality Objective (DQO) of EANET for large and small quantity samples. 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. The percentage of data within the DQO of each participating laboratory from 2010 to 2019 was introduced.
 - For ILC on dry deposition, 20 participating laboratories submitted their analytical results of the filter samples to the NC. 88.1% and 62.7% of submitted data met the DQO of EANET for large and small quantity samples. Most of the reported data showed a negative bias, which may be caused by the filter extraction process. The prepared values

for ILC2019 were based on 2017 monitoring data and were set up from most laboratories' realistic range.

- For ILC on soil, 13 participating laboratories submitted their analytical results of the soil samples to the NC. The coefficient of variations (CVs) of inter-laboratories precision for pH was small but became larger compared to 2017. CVs of within-laboratory precision were small enough in all properties, while CVs of inter-laboratory precisions were still relatively large for exchangeable cations.
 - For ILC on the inland aquatic environment, 23 participating laboratories submitted their analytical results of the artificial inland water samples to the NC. 89.8% of submitted data met the DQO of EANET. There was no flagged data in pH, EC, and NO_3^- in this project. However, as for the NH_4^+ , 35.0% of the data were flagged as E or X, although it was better than the previous projects.
36. The Session was invited to review, make comments, and provide guidance for consideration and adoption.
37. Major discussion included:
- (i) Wet and dry deposition:
 - No comment.
 - (ii) Soil and inland aquatic environment:
 - No comment.
38. The Session adopted the Report on the Inter-laboratory Comparison Projects 2019.

XI. Overview of the Updated National Monitoring Plans of the Participating Countries [Agenda Item 8]

39. The NC presented an overview of the National Monitoring Plans of the Participating Countries based on the latest information submitted from the Participating Countries (EANET/SAC 20/8).
40. The key points of the presentation included:
- The National QA/QC Managers are requested to prepare the NMPs every year using the electronic template available from the QA/QC Guidebook 2016.
 - The NMPs 2020 were finalized based on the discussions at the STM21. The monitoring data in 2020 will be verified by the NC, referring to the NMPs 2020 of each Participating Country.
 - According to the information on the NMPs 2020, the number of EANET monitoring sites is almost the same as the previous year. By nomination of the national site and the installation of monitoring instruments into existing monitoring sites, further increase of monitoring sites is expected.
41. The Session was invited to discuss the NMPs of the Participating Countries and provide necessary comments and guidance as appropriate.
42. Major discussion included:

- Although the Philippines had submitted a monitoring plan for Los Baños, it would be excluded for 2020 because the samplers for monitoring on wet deposition and dry deposition have not been installed at the site, yet. It was informed that the monitoring activities would be restarted at the site as soon as the samplers were installed, probably in 2021. The inland aquatic environment monitoring at Pandin Lake is also continuing.
43. The Session acknowledged the updates on the overview of the National Monitoring Plans of the Participating Countries.

X. Consideration of the Reports from the Chairpersons of the Task Forces of the Scientific Advisory Committee (SAC) [Agenda Item 9]

Task Force on Monitoring for Dry Deposition

44. The Secretariat of the Task Force on Monitoring for Dry Deposition (TFMDD) presented the Progress Report on the Activities of the Task Force on Monitoring for Dry Deposition (EANET/SAC 20/9/1).
45. The key points of the presentation included:
- The contents of technical manuals should follow the Guidelines for Acid Deposition Monitoring in East Asia, not the Strategy Paper.
 - A suitable method to estimate dry deposition flux in the EANET countries should be considered.
 - It was pointed out that the Strategy Paper should follow the TOR of the Task Force. If there is no change of TOR, we should keep consistent with the titles of documents. “dry deposition” is a keyword for this Task Force.
 - The updated “Strategy Paper on Future Direction of Monitoring for Dry Deposition of EANET (2021-2025)” includes six activities to be implemented to achieve the objectives of the Strategy on Monitoring for Dry Deposition from 2021 to 2025.
46. The Session was invited to make comments on the presentation and provide guidance.
47. Major discussion included:
- No comment.

Task Force on Soil and Vegetation Monitoring

48. The Chairperson of the Task Force on Soil and Vegetation Monitoring (TFSV) presented the Progress Report on the Activities of the Task Force on Soil and Vegetation Monitoring (EANET/SAC 20/9/2).
49. The key points of the presentation included:
- The updated “*Strategy Paper for Future Direction of EANET on Monitoring of Effects on Agricultural Crops, Forest and Inland Water by Acidifying Species and Related Chemical Substances*”, which was discussed at the 6th Meeting of TFSV in November 2019, was presented for consideration and adoption at SAC20.

- Concluding remarks of the “*Workshop on the regional impact assessment of atmospheric deposition and air pollution on forest ecosystems*”, which was held in cooperation with ICP Forests, UNECE, were reported with critical load exceedance maps, and the importance of regional impact assessment was highlighted.
 - Publication of a review paper on tree and forest decline was introduced as one of the outputs from the activities in line with the strategy paper.
 - Other relevant scientific activities by Task Force members, such as contributions to Asian Air Pollution Workshop and IUFRO World Congress 2019, were introduced as contributions to the strategy.
50. The Session was invited to make comments on the presentation and provide guidance.
51. Major discussion included:
- No comment.
52. The Session acknowledged the Report of the Task Forces of the SAC and adopted the updated strategy papers as proposed. The Session also approved the revision of the Guidelines for Acid Deposition Monitoring in East Asia, and the next Session of SAC will review the revised draft.

XI. Consideration of the Progress of Development of the Fourth Periodic Report on the State of Acid Deposition in East Asia (PRSAD4) [Agenda Item 10]

53. The NC made a presentation on the Progress of Development of the Fourth Periodic Report on the State of Acid Deposition in East Asia (PRSAD4) (EANET/SAC 20/10).
54. The key points of the presentation included:
- Progress of preparation of PRSAD4 was reported, mainly for outcomes from the 1st Meeting of Drafting Committee (DC1).
 - PRSAD4 will consist of three parts, namely Part 1; Regional Assessment; Part 2, National Assessment; and Part 3 Executive Summary. The Regional Assessment may include: Chapter 1 Introduction, Chapter 2 Data Quality, Chapter 3 Wet and Dry Deposition of Acidic Substances in East Asia, Chapter 4 Gas and Aerosol Pollution in East Asia, Chapter 5 Impacts on Ecosystems in East Asia, Chapter 6 Cross-cutting Studies on Atmospheric Environment in EANET Region, and Chapter 7 Summary and Recommendations for Future Activities.
 - According to the implementation plan of PRSAD4, the 1st Lead Authors Meeting will be held in October 2020. It is expected that the final draft of PRSAD4 will be prepared by August 2021 for adoption at SAC21 in October 2021.
 - Three options of the unit system in EANET were introduced. As for the unit system of PRSAD4, discussion will be made in the 1st LA meeting.
55. The Session was invited to make comments on the presentation and provide guidance.
56. Major discussion included:
- No comment.

57. The Session acknowledged the Progress of Development of the Fourth Periodic Report on the State of Acid Deposition in East Asia (PRSAD4).

XII. Updates on Relevant Scientific Activities [Agenda Item 11]

1) Progress of the Joint Research Activities on Model Inter-Comparison Study in Asia (MICS-Asia)

58. The Asia Center for Air Pollution Research (ACAP) made a presentation on the Progress of the Joint Research Activities on Model Inter-Comparison Study in Asia (MICS-Asia) (EANET/SAC 20/11/1).
59. The key points of the presentation included:
- The project structure of MICS-Asia Phase III and the performance of participants' models were reviewed. Furthermore, a publication status of scientific papers in the Special Issue of MICS-Asia Phase III was introduced.
 - Current ideas related to the work plan on MICS-Asia Phase IV, such as major targets, new working groups, research themes, framework or system of model inter-comparison procedures, and other considerable activities, were reviewed.
 - Finally, schedules for the rest of this year were introduced, including the regular MICS-Asia Workshop to discuss a draft work plan on Phase IV and actual activities next year.
60. The Session was invited to make comments on the presentation and provide guidance.
61. Major discussion included:
- No comment.
62. The Session acknowledged the Progress of the Joint Research Activities on Model Inter-Comparison Study in Asia (MICS-Asia)

2) Progress of Catchment Studies in the EANET

63. The NC made a presentation on the Progress of Catchment Studies in the EANET (EANET/SAC 20/11/2)
64. The key points of the presentation included:
- Scientists from the NC have been conducting catchment studies as one of the activities in line with the "Strategy Paper for Future Direction of EANET on Monitoring of Effects on Agricultural Crops, Forest and Inland Water by Acidifying Species and Related Chemical Substances", which was drafted by TFSV and adopted at the SAC14.
 - Major recent outputs, such as publication of scientific papers, were reported as the progress.
 - Three subjects, namely "recovery from acidification", "loads of atmospheric nitrogen to ecosystems and its cycle", and "relationship with climate change", were pointed out for future catchment analysis.
 - It was pointed out that field surveys at the Kajikawa site be continued for at least the next five years from the scientific views above and as the core site in the EANET.

65. The Session was invited to make comments on the presentation and provide guidance.

66. Major discussion included:

- No comment.

67. The Session acknowledged the Progress of the Catchment Studies in the EANET.

XIII. Consideration of the Draft Work Programme and Budget of the EANET in 2021 from Scientific and Technical Viewpoints [Agenda Item 12]

68. The Secretariat made a presentation on the Draft Work Programme and Budget of the EANET in 2021 (EANET/SAC 20/12).

69. The key points of the presentation included:

- Draft Work Programme and Budget of the EANET in 2021 will be in line with the MTP for the EANET (2021-2025). The activities will consist of the core activities and project activities. Arrangements of the Work Programme and Budget in 2021 and the draft MTP will be further developed for consideration of the Working Group Meeting-Session 2 (20-22 October 2020) and IG22 (25-26 November 2020).

70. The Session was invited to make comments, suggestions, and recommendations from scientific and technical viewpoints for consideration and approval at the IG22.

71. Major discussion included:

- No comment.

72. The Session considered and acknowledged the Draft Work Programme and Budget of the EANET in 2021.

XIV. Consideration and Adoption of the Report of the Session [Agenda Item 13]

73. The Report of the Session (EANET/SAC 20/13) was considered and adopted.

XV. Closing of the Session [Agenda Item 14]

74. The Session also appreciated the efforts made by the Chairperson, Vice-Chairpersons, and the Rapporteur.

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

Annex 1

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Recommendations from SAC20 to IG22

I. Reconsideration of MTP

According to the document Findings of the Survey Matrix of the Categorization of Activities for Further Development of the MTP (2021-2025) for the EANET and Consideration of the Draft of the Medium Term Plan (MTP) for EANET (2021-2025), the Session recommended;

1. Expansion of the scope of EANET activity

To coordinate the expansion of the scope of EANET by new activities from acid deposition to air pollution such as areas and/or phenomena where significant seasonal pollution is regionally observed, promoting analysis by using emission inventories and modelling, and strategic outreach activities etc. proposed by the participating countries.

2. Establishment of the Project Activity

Coordinate with UNEP and other relevant organizations to find a flexible mechanism for expanding activities by using the Project Activity.

3. Development of comprehensive system for atmospheric environment

For the future EANET, as a direction of the next MTP, development of comprehensive system for managing and improving atmospheric environment in East Asia, which should cover multi impacts, multi scale, multi species, and multi functions.

4. To be promoted activities in the next MTP

As activities to be promoted in the next MTP, (1) Monitoring of air pollution related climate change, (2) Monitoring of ecological impacts and data analysis, (3) Model analysis, (4) Assessment and its report, and (5) Capacity building related to atmospheric environment management.

II. Reconsideration of function of Task Forces and Expert Groups (Proposal for Reformation of Task Forces and Expert Groups of the EANET)

According to the Procedures for Establishing Task Forces and Expert Groups under the Scientific Advisory Committee of EANET (EANET/SAC 8/14 Annex 2), the Session recommended reformation of the existing four Task Forces in EANET to the following three Task Forces in the Medium Term Plan (2021 – 2025).

1. Task Force on Monitoring, Evaluation and Research of Atmospheric Environment

(reforming Task Force on Monitoring for Dry deposition, Task Force on Monitoring Instrumentation, and Task Force on Research Coordination)

To coordinate all matters related to the development, improvement and future direction of the atmospheric monitoring and their data evaluation including precipitation, gaseous and particulate component. To provide recommendation on research direction of atmospheric environment related to the scope of EANET.

**2. Task Force on Monitoring, Evaluation and Research of Environmental Effects
(reforming Task Force on Soil and Vegetation Monitoring and Task Force on Research Coordination)**

To coordinate all matters related to elaboration of the monitoring methods for evaluation of effects on ecosystems and human health risk, recommendation for the atmospheric monitoring from the viewpoint of environment effects, evaluation of the EANET and relevant data for the specific subjects. It should be considered that the additional budget, expert in the field and domestic system to access the related data in the country are needed for the new task especially for the human health issue.

**3. Task Force on Atmospheric Environmental Management
(proposed new Task Force)**

To coordinate all matters related to development and maintenance of emission inventories, evaluation of acid deposition and air pollution based on future control scenarios, co-benefit/co-control approaches to mitigate both air pollution and climate change, and investigation (and proposal) of methods to evaluate policy effects, working together with APCAP Science Panel because of their similar objectives.

The existing Expert Group on revision of the Technical Manuals for Dry Deposition Flux Estimation and Air Concentration Monitoring will be reset under the Task Force on Monitoring, Evaluation and Research of Atmospheric Environment above.

The detailed Terms of References (TOR), Chairpersons, and memberships of the new Task Forces will be discussed in the next session of SAC after being approved by IG22 for this reformation.

III. Reconsideration of objects and outreach of EANET Reports (Reorganization of the EANET Reports)

The Session agreed to recommend to IG22 to issue the following reports in the next Medium Term Plan.

1. Periodic Report on the State of Acid Deposition in East Asia (PRSAD)

PRSAD is continued to be published once five years as a core activity.

2. **Report for Policy Makers (RPM)**

RPM will be integrated into PRSAD.

3. **Factsheet**

Factsheet will be integrated into PRSAD.

4. **EANET Science Bulletin**

The Science Bulletin is not published, but some contents of Science Bulletin such as summary of science papers will be uploaded on the website of EANET.

5. **Data Report**

This report will be published annually to disseminate wet and dry deposition monitoring, soil and vegetation monitoring, Inland aquatic monitoring and catchment-scale monitoring data at EANET sites, as a core activity.

6. **Report of the Inter-laboratory Comparison Project**

This report will be published annually to disseminate quality assurance/quality control (QA/QC) activities in EANET participating countries as a core activity.

IV. Consideration of function of EANET Technical Guidelines and Manuals (Reorganization of the EANET Guidelines and Manuals)

The Session agreed to recommend to IG22 to issue the following reports to be included in the next Medium Term Plan.

1. Guidelines for Acid Deposition Monitoring in East Asia was published in 2000, and some descriptions are not consistent with the current monitoring status. The Task Force on Monitoring for Dry Deposition is proposed to revise the guideline.

2. Technical Manual for Air Concentration Monitoring in East Asia and Technical Manual on Dry Deposition Flux Estimation in East Asia are under revision by the Expert Group on revision of the Technical Manuals for Dry Deposition Flux Estimation and Air Concentration Monitoring in order to elaborate air concentration monitoring methods, and dry deposition flux estimation methods respectively.

3. Other technical manuals and guidelines are useful, but should be reviewed and revised timely for their effective utilization.

The Session also acknowledged that SAC will propose IG to issue the other manuals and technical documents when it is necessary to revise of those documents in the next Medium Term Plan.