

The Twentieth Session of the Scientific Advisory Committee
on the Acid Deposition Monitoring Network in East Asia
23-24 September 2020, Virtual Meeting

REVISION OF THE TASK FORCES AND EXPERT GROUPS OF THE EANET

I. INTRODCUTION

1. During the Medium Term Plan for the Acid Deposition Monitoring Network in East Asia (2016-2020), four Task Forces (TF) and one Expert Group (EG) were established to support the EANET's monitoring activities. The TFs are: Task Force on Monitoring for Dry Deposition, Task Force on Soil & Vegetation Monitoring, Task Force on Monitoring Instrumentation, Task Force on Research Coordination. The EG is the Expert Group on revision of the Technical Manuals for Dry Deposition Flux Estimation and Air Concentration Monitoring. TFs support the implementation of specific objectives, such as to provide advice on future directions of monitoring and research activities, as well as to provide inputs for reporting outcomes to the Scientific Advisory Committee (SAC). The EGs are ad hoc groups that have been established to prepare or revise the EANET's Technical Manuals based on recommendations made by the TFs. EGs will be dismissed after completion of their tasks.
2. It is crucial to review the roles of the TFs and EGs in order to optimize their function and continuity. For example, the Task force on Monitoring Instrumentation held its last meeting in 2009 to discuss the outcomes from the low-cost monitoring methodology project, the current review of acid deposition monitoring, and the subjects for future improvements. However, as of 2020, no further meeting was held, nor any activity was led by the Task force on Monitoring Instrumentation. Therefore, it is proposed in this document to revise the tasks of the TFs and EGs to further strengthen and optimize the role of these SAC subsidiary bodies.
3. In the proposed activities in the Medium Term Plan (2021-2025), consideration of selection of activities may be made based on the current social and environmental needs of Participating Countries. Considerations are also given by taking into account that the problems of the atmospheric environment have greatly changed over the years. In line with that, the role of TFs and EGs need to be adjusted accordingly.

II. PROPOSAL FOR THE REVISION OF TASK FORCES AND EXPERT GROUPS OF EANET IN THE NEXT MTP (2021-2025)

4. Taking into account the activities in the current MTP (2016-2020) and in the next MTP (2021-2025), the revision of the TFs and EGs is proposed as follows. The relationship between Scientific Advisory Committee (SAC), TFs, and EGs is also shown in the below Table.

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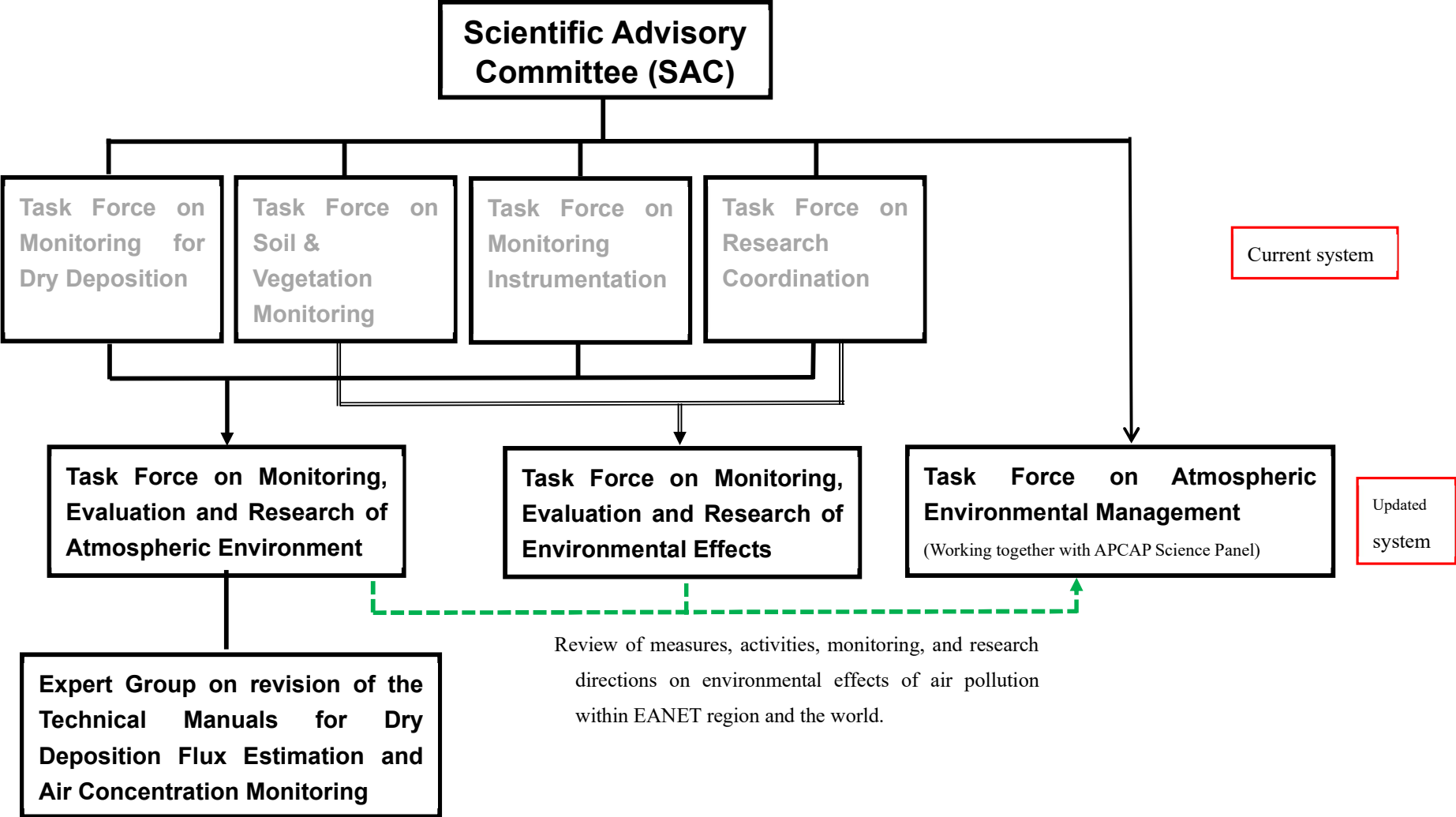
REVISION OF TASK FORCES AND EXPERT GROUPS OF THE EANET			
The Current MTP (2016-2020)	The next MTP (2021-2025)	Terms of Reference (TOR) of TF in the next MTP (2021-2025)	Expected outcomes
Task Force on Monitoring for Dry Deposition	<p>The proposed new name of the TF is suggested in order to accommodate the general atmospheric monitoring, atmospheric deposition evaluation methods, and research directions.</p> <p>(1) Task Force on Monitoring, Evaluation and Research of Atmospheric Environment</p>	<p>(1) Discussion on the development, improvement and future direction of the atmospheric monitoring method will be conducted, and advice on the expansion of atmospheric monitoring data and monitoring accuracy management will be given.</p> <p>(2) Discussion and assessment of the atmospheric monitoring data evaluation methods (atmospheric deposition estimation, trend analysis, etc.) will be developed and improved.</p> <p>(3) Discussion and assessment of the results of air pollution monitoring data analysis and research trends will be reviewed in the EANET region as well as in the world, and the future direction of EANET (including monitoring items/methods, atmospheric models, and analysis combined with emission inventory) will be proposed.</p>	<p>Based on the examination results of (1) and (2), a revised version of the air concentration monitoring technical manual and the dry deposition estimation technical manual will be prepared in 2022.</p> <p>By using the method developed and improved by (2), the evaluation results of the air pollution situation in East Asia will be reported as PRSAD5 (2026) and these results will be published as an academic paper to obtain scientific evaluation of EANET.</p> <p>(3) By 2025, the future direction of EANET based on the global trends in the relevant field will be summarized and reported to SAC and to the Task Force on Atmospheric Environmental Management (APCAP Science Panel).</p>
Task Force on Soil &	The proposed new name below is	(1) To suggest the elaboration of the	(1) Preparation and/or revision of technical

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Vegetation Monitoring	<p>suggested in order to enable the TF to discuss monitoring on total environmental effects, evaluation methods, and research directions.</p> <p>(2) Task Force on Monitoring, Evaluation and Research of Environmental Effects</p>	<p>monitoring methods for evaluation of effects on ecosystems and human health risk, taking account of land-use change with economic development and elaborating monitoring targets and assessment scales. To recommend monitoring methods for atmospheric environment, if necessary.</p> <p>(2) To evaluate the EANET and relevant data for the specific subjects, namely, “Recovery of ecosystems from acidification (also important as validation of relevant measures/policies in the region and each country)”, “Loads of atmospheric nitrogen to ecosystems and its cycle”, and “Effects of ozone and PM on trees/crops”.</p> <p>(3) To evaluate human health risk using the EANET and relevant data.</p> <p>(4) To review measures, activities, monitoring, and research directions on environmental effects of air pollution</p>	<p>documents (manuals, guidelines, etc.) for monitoring on evaluation of effects on ecosystems and human health risk (until 2025, if necessary)</p> <p>(2) (together with (3))</p> <p>(3) Report of the evaluation results on ecological effects and human health risk to PRSAD5 (to be prepared in 2026) based on the EANET and relevant data. Publication of these results as scientific papers, obtaining scientific evaluation of the EANET.</p> <p>(4) Compilation of the future direction of the EANET taking account directions on these study fields in the world (until 2025) and report it to SAC and the Task Force on Atmospheric Environmental Management (APCAP Science Panel)</p>

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		within the EANET region and the world. (including the subjects, such as evaluation of human health risk, effects of ozone and PM, and nitrogen loads). To propose the future direction of the EANET based on the review.	
Task Force on Monitoring Instrumentation	Proposed to combine with the new TF (1)		
Task Force on Research Coordination	Proposed to combine with the new TF (1) and (2)		
Expert Group on revision of the Technical Manuals for Dry Deposition Flux Estimation and Air Concentration Monitoring	The activity will continue until 2023 when the revised manual is expected to be published. After that, the EG will resume the activity as needed.		
	The following TF is newly established to coordinate overall directions of atmospheric environmental management. (3) Task Force on Atmospheric Environmental Management	(1) To investigate (and propose) evaluation methods of emission inventories. (2) To investigate future scenarios on acid deposition and air pollution. (3) To investigate co-benefit/co-control approaches with climate change.	(1) Preparation and revision of technical documents (manuals, guidelines, etc.) for atmospheric environmental management. (2) Preparation of the manual for emission inventories (3) Report of the investigated results to

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	Working together with APCAP Science Panel because of their similar objectives	(4) To investigate (and propose) evaluation methods of policy effects.	<p>PRSAD5 (to be prepared in 2026). Publication of these results as scientific papers, obtaining scientific evaluation of the EANET.</p> <p>(4) Descriptions on the future direction of the EANET including air pollution measures in PRSAD5 taking account of reports from other TFs, and dissemination of the EANET direction using the report.</p>

Inter-linkages Between the Task Forces and Expert Groups



- **Current activities of Task Forces and Expert Groups**

The Scientific Advisory Committee (SAC) of the EANET established Task Forces (TF) and Expert Groups (EG) as substructures in order to implement activities described in the Medium Term Plan (MTP). The outlines of the four TFs and one EG are currently established as follows:

1. Task Force on Monitoring for Dry Deposition

Chair: Prof. Fang Meng (CRAES, China)

Member: Nomination from 1 person from each country, 14 members including Chair

TOR:

- ① To further develop and elaborate the strategy for dry deposition evaluation in the region
- ② To discuss future directions of dry deposition evaluation and provide guidance on relevant activities based on the strategy
- ③ To develop the Technical Manuals for Air Concentration Monitoring and Dry Deposition Flux Estimation

Recent activities:

In 2015, a dry deposition monitoring strategy paper (2016-2020) was prepared and an Expert Group was proposed to suggest to SAC15 the revision of the Air Concentration Monitoring Technical Manual and Dry Deposition Estimation Technical Manual.

The 5th meeting will be held in July 2020 to discuss the dry deposition monitoring strategy paper (2021-2025). The final draft of the strategy paper will be submitted and adopted at SAC20 in 2020.

2. Task Force on Soil & Vegetation Monitoring

Chair: Prof. Wilfredo M. Carandang (University of the Philippines Los Baños, Philippines)

Member: Experts from China, Japan, Malaysia, Philippines, Republic of Korea, and Russia (in total 9 members including the Chair)

TOR:

- ① To revise the technical documents on soil and vegetation monitoring as necessary
- ② To assess the impacts of acid deposition and relevant air pollutants on soil and vegetation based on available data and other information for the EANET periodic reports
- ③ To improve methodologies mentioned in the Technical Manual for Soil and Vegetation Monitoring and the Sub-Manual on Forest Vegetation Monitoring for EANET

- ④ To recommend activities for future directions of soil, vegetation and related ecosystems monitoring
- ⑤ To develop guidelines and methods for future monitoring
- ⑥ To identify future research activities for soil and vegetation

Recent activities:

The 6th meeting members, in November, prepared the final draft of the revised strategy paper (including specific works for the period from 2021 to 2025) and it will be submitted to SAC20 for adoption. The strategy paper suggested ecological-effect monitoring, including effects of air pollutants (such as ozone and PM), effects on inland water, and effects on forest catchments. Back-to-back with the meeting above, the workshop on regional impact assessment was held in cooperation with ICP Forests under CLRTAP and the knowledge on the emission reduction based on impact assessments in Europe and possible future assessments in East Asia were shared among the participants.

3. Task Force on Monitoring Instrumentation

Chair: Not decided yet (after the previous Chair passed away)

Member: One expert nominated from each country (in total 14 members including the Chair)

TOR:

- ① To review acid deposition monitoring instrumentation and laboratory equipment including their operation
- ② To recommend suitable less expensive monitoring methodologies for EANET
- ③ To review current QA/QC procedures and recommend improvements
- ④ To develop monitoring manuals and guidelines in cooperation with other subsidiary groups under SAC

Recent activities:

The 2nd meeting participants, in 2009, discussed the outcomes from the low-cost monitoring methodology project, the current review of acid deposition monitoring, and subjects for future improvements. The meeting outcomes were reported at SAC9.

No further meeting was held since then.

4. Task Force on Research Coordination

Chair: Dr. Sergey Gromov (IGCE, Russia)

Member: Experts from Japan, Malaysia, Philippines, Republic of Korea, Thailand, Russia, and Viet Nam (in total 10 members including the Chair)

TOR:

- ① To propose the future directions of research activities for the network
- ② To review the outcomes of EANET research activities
- ③ To review the reports of EANET Research Fellowship program
- ④ To identify potential international collaborative researches for EANET

Recent activities:

The 8th meeting was held in 2016 and the participants discussed reports from EANET research fellows and EANET Science Bulletin (Vol. 4). The meeting outcomes were reported at SAC16.

5. Expert Group on revision of the Technical Manuals for Dry Deposition Flux Estimation and Air Concentration Monitoring

Chair: Dr. Patcharawadee Suwanathada (PCD, Thailand)

Member: Experts from China, Japan, Philippines, Republic of Korea, and Viet Nam (in total 6 members including the Chair)

TOR:

- ① To review the current Technical Manual on Dry Deposition Flux Estimation in East Asia and Technical Manual for Air Concentration Monitoring in East Asia
- ② Identification of elaborated methods of dry deposition flux estimation and air concentration monitoring methods in East Asia
- ③ Preparation of the revised version of Technical Manual on Dry Deposition Flux Estimation in East Asia and Technical Manual for Air Concentration Monitoring in East Asia

Recent activities:

The establishment of an expert group was approved by SAC in 2016, and the Chair and the Members were nominated in 2018. After that, the NC reviewed the existing manual and examined the points to be improved.

The first meeting was held in April 2020, where the NC reviewed the existing manuals and reported the results of consideration of improvements and examined the methods to be included in the manuals. The outcome of the meeting will be reported to the Dry Deposition Monitoring Task Force.