



AGENDA ITEM 8/2

Consideration of the Activities of the Task Force on Monitoring and Assessment of Environmental Effects - Major outputs from the 3rd Meeting of TFEE (TFEE3) in 2026 -

The Chair and the Secretariat of TFEE

**The Twenty-sixth Session of the Scientific Advisory Committee (SAC26)
on the Acid Deposition Monitoring Network in East Asia
20-22 October 2026, Kuala Lumpur, Malaysia**

TFEE3 set two workstreams for 2026–2030

II. Major Outputs from TFEE3 in 2026

July 1, 2026

3rd Meeting of TFEE | Online

01 Update the Strategy Paper on ecosystem impacts

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

02 Human health information exchange plan

Methodological exchange, capacity building, emerging issues, and international cooperation for 2026–2030.

Strategy Paper: Why the Strategy Paper Is Being Updated

BACKGROUND

Current paper adopted at SAC20 (2020)

The strategy paper guides EANET ecological monitoring and research, building on work by the former Task Force on Soil and Vegetation Monitoring.

A five-year action annex

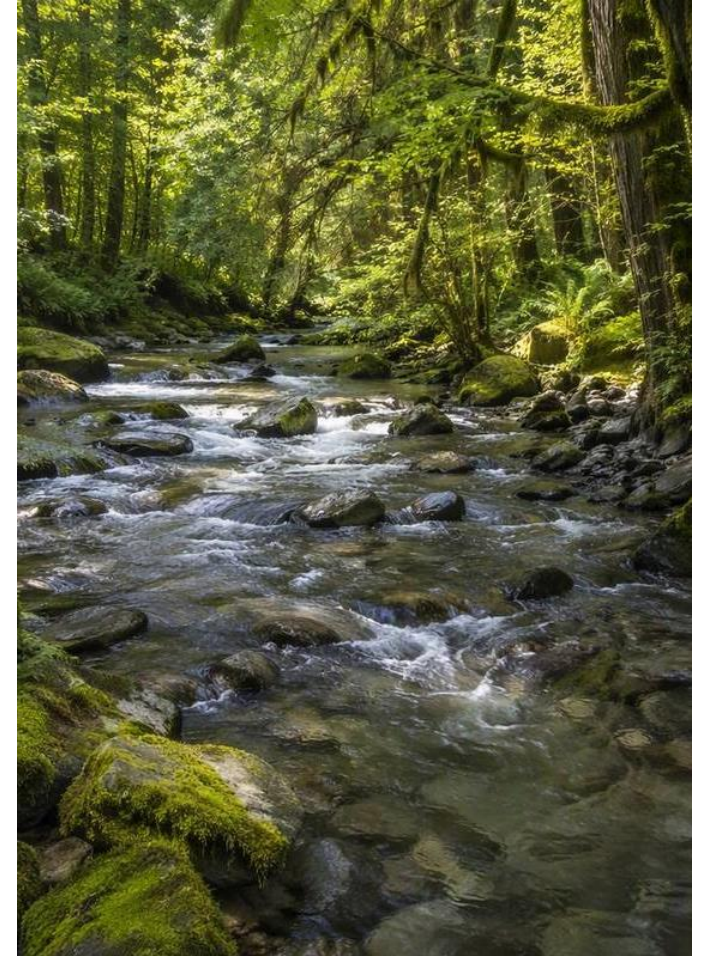
It set specific activities for 2021–2025, implemented by scientists from the Network Center and the Participating Countries.

TFEE now carries the work forward

TFEE took over those activities, using the paper as its reference document.

Time to update

TFEE is expected to refresh the paper — above all, the specific activities for 2026–2030.



Strategy Paper: What Changed in the Draft

DRAFT UPDATE · EANET/TFEE 3/5/1

In line with the SAC14 recommendation, **the long-term direction remains largely unchanged**, while the annex activities have been updated.

Introduction Aligned with the new MTP (2026–2030)

Para 10 Objectives of inland aquatic environment monitoring (IAEM)

Para 14 Catchment-scale analysis in the IAEM Technical Manual

Para 22 Inclusion of VOC

Para 24 Inclusion of LCS

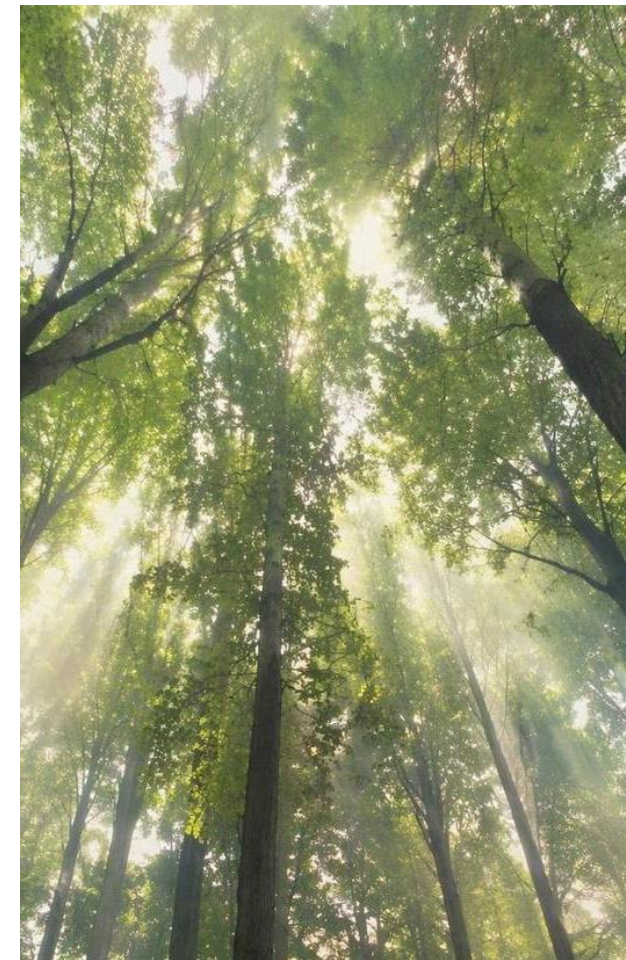
Para 33 Regular catchment monitoring in the La Mesa Watershed, Philippines

Paras 34 & 35 Reactive nitrogen monitoring in forest areas

Para 40 Catchment analysis in Russia

Section IV Collaboration with relevant networks / organizations

Section VI Acknowledgements



Strategy Paper: Proposed Specific Activities in the Annex

2026–2030 ACTIVITIES

Three activities are proposed for 2026–2030, in line with the recommendations of the Medium-Term Plan (2026–2030).

1



Atmospheric Nr Deposition

Strengthen efforts to obtain and assess data on atmospheric reactive nitrogen (Nr) deposition.

2



Ozone & PM in Forests

Accumulate scientific knowledge on ozone and particulate matter in forest areas.

3



Ecosystem Recovery

Confirm ecosystem recovery from acidification and eutrophication.

Strategy Paper: Proposed Specific Activities in the Annex-1

i. Strengthening efforts to obtain and assess data on atmospheric Nr. deposition

- Efforts for total nitrogen deposition
- NC's technical support (from 2026)
- Importance of NH₃ in rural and forest areas
- Project-based activities (2027 - 2029)
- Cooperation with other regional networks (2029/2030)

i. Strengthening efforts to obtain and assess data on atmospheric Nr deposition

2. Total nitrogen deposition, defined as the sum of wet and dry deposition, will be assessed particularly at rural and remote EANET sites. Air concentration data for gaseous and particulate pollutants obtained using the filter-pack method can be applied to estimate dry deposition fluxes by the inferential method. Efforts should be made to obtain meteorological data, with as high a time resolution as possible, in the vicinity of EANET sites to calculate deposition velocities.
3. The NC should provide technical support to experts in the Participating Countries (PCs) to implement flux estimation. If the budget is available, the NC's technical missions will be dispatched to the PCs for this purpose.
Implementation target years: from 2026 onward
4. NH₃, an important precursor of PM_{2.5}, is emitted in significant amounts from agricultural areas and tends to remain in the gas phase as emissions of SO₂ and NO_x have decreased. In addition, NH₃ undergoes bidirectional exchange (both deposition and emission) in forest ecosystems. Thus, the behavior of NH₃ in rural and forest areas has not yet been sufficiently clarified. Monitoring of NH₃ air concentrations in these areas should therefore be further promoted for sustainable nitrogen management.
5. To obtain additional NH₃ data in rural and forest areas where electricity is unavailable, passive samplers can be utilized. Project-based activities led by the NC, in cooperation with voluntary PCs, will be considered for conducting passive NH₃ sampling. Methodological studies, including comparisons with other observational techniques, such as the filter-pack method and the denuder method, as well as assessments using satellite observations, should be implemented in collaboration with external researchers.
Implementation target years: from 2027 to 2029 (through the launch of an EANET Project or other external research projects)
6. Atmospheric Nr data in rural and forest areas should be shared with other regional networks, such as ICP Forests, to gain broader perspectives on the global issue of sustainable nitrogen management. Online or hybrid workshops, as well as collaborative research papers, should be developed using the accumulated data.
Implementation target years: 2029/2030

Strategy Paper: Proposed Specific Activities in the Annex-2

- ii. Compilation of scientific knowledge on air pollutants, including acidifying species, ozone, and PM, in agricultural and forest areas
- Necessity of scientific knowledge on the impacts of air pollutants
 - Ozone as currently the most serious phytotoxic stressor
 - Emissions of PM from forest fires
 - An online seminar on effects of air pollutants (2028/2029)

ii. Compilation of scientific knowledge on air pollutants, including acidifying species, ozone, and PM, in agricultural and forest areas

7. Effects of air pollutants on agricultural crops and forest trees remain a major concern for the EANET Participating Countries. Scientific knowledge on the impacts of air pollutants, including acidifying species, ozone, and PM, on agricultural crops and forest ecosystems needs to be further consolidated. In addition, linkages between individual plant responses at the stand scale and broader ecosystem responses at the catchment scale should also be taken into consideration.

8. Ozone is currently the most serious phytotoxic stressor at present. In fact, the recently updated ozone air quality standard in Japan aims to address effects on vegetation in addition to impacts on human health. Information on ozone concentrations and their effects on crops and trees in rural and forest areas will be accumulated as extensively as possible. Combined effects of ozone and nitrogen deposition should also be considered.

9. Forest fires emit substantial amounts of PM into the atmosphere, which is closely linked to air quality and climate change. Satellite observations, low-cost sensors (LCS), and simulation modeling are useful tools for evaluating regional PM conditions, including haze events.

10. An online seminar on effects of air pollutants, including acidifying species, ozone, and PM, will be planned to share the latest scientific knowledge. Implementation target years: 2028/2029.

Strategy Paper: Proposed Specific Activities in the Annex-3

iii. Confirmation of ecosystem recovery from acidification and eutrophication

- Investigation of phenomena suggesting ecosystem recovery associated with reductions in air pollution and atmospheric deposition
- Technical/scientific cooperation for catchment-scale analysis (from 2026)
- Efforts for additional research grants (from 2026)

iii. Confirmation of ecosystem recovery from acidification and eutrophication

11. Phenomena suggesting ecosystem recovery associated with reductions in air pollution and atmospheric deposition should be continuously investigated. This is also important for validating relevant measures and policies in the region and in each country. Not only acidification, mainly due to sulfur deposition, but also eutrophication (or disruption of nitrogen biogeochemical cycles) caused by nitrogen deposition in forest ecosystems should be carefully assessed based on long-term data.
12. Regular catchment-scale monitoring at existing EANET sites will be continued by the respective countries. Long-term inland water data will also be assessed at the catchment scale. Technical and scientific cooperation among relevant countries is important for the continuous monitoring and assessment of the data obtained. Online technical meetings led by the NC may be held periodically to discuss technical issues related to field monitoring and data assessment.
Implementation target years: from 2026 onward, at least once a year.
13. Efforts should be made to obtain competitive research grants to further promote catchment analysis under changing meteorological conditions, such as increases in extreme weather events.
Implementation target years: from 2026 onward.

Human health: four supporting activities

II. Major Outputs from TFEE3 in 2026

04 Methodological exchange

Exposure assessment; health risk and health impact assessment; epidemiological approaches; case studies

05 Capacity building

Workshops, training sessions, and expert lectures

06 Emerging issues

PM2.5; surface ozone; biomass burning (haze); heat–air pollution interactions; vulnerable populations; risk communication

07 International cooperation

WHO, CLRTAP, US EPA, AIT, IIASA, HEI, and other relevant organizations and networks

Membership proposal

Dr. Xerxes Seposo — Associate Professor, Hokkaido University; participated in TFEE2 and is familiar with TFEE activities. TFEE3 agreed with the proposal and the Chairperson nominated him as the candidate.

SAC26 is invited to take two decisions

III. Action Required

01 Review

Review the report of TFEE3, including the nomination of a new member specializing in human health effects.

02 Consider for Adoption

Consider 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*” for adoption.

These decisions enable TFEE to begin the 2026–2030 work programme.
