The Medium-Term Plan for the EANET (2026-2030) was approved by the Twenty-seventh Session of the Intergovernmental Meeting on Acid Deposition Monitoring Network in East Asia, held on 27-28 November 2025.

THE MEDIUM-TERM PLAN FOR THE EANET (2026-2030)

Towards the Improvement of Atmospheric Environment in East Asia

EANET

Acid Deposition Monitoring
Network in East Asia

November 2025

Acronyms and Abbreviations

AI	Artificial Intelligence
EANET	Acid Deposition Monitoring Network in East Asia
GDP	Gross Domestic Product
IG	Intergovernmental Meeting on the EANET
IG26	Twenty-sixth Session of the Intergovernmental Meeting on the EANET
IG27	Twenty-seventh Session of the Intergovernmental Meeting on the EANET
LCS	Low-Cost Sensors
MTP	Medium-Term Plan
NC	Network Center for the EANET
NFP	National Focal Point
NH_3	Ammonia
PFH	Project Fund Holder
PM	Particulate Matter
PM2.5	Particulate Matter (2.5 micrometers or less)
PRMS	Partnership and Resource Mobilization Strategy
PRSAD4	Fourth Periodic Report on the State of Acid Deposition in East Asia
QA	Quality Assurance
QC	Quality Control
RAPAP	Regional Action Programme on Air Pollution
SAC	Scientific Advisory Committee
SAC24	Twenty-fourth Session of the Scientific Advisory Committee
SAC25	Twenty-fifth Session of the Scientific Advisory Committee
SDG	Sustainable Development Goal
SO_2	Sulfur Dioxide
STM25	Twenty-fifth Session of the Senior Technical Managers Meeting
UNEA	United Nations Environment Assembly
UNEP	United Nations Environment Programme
UNESCAP	United Nations Economic and Social Commission for Asia and the Pacific
UNSDG	United Nations Sustainable Development Goals
WG	Working Group Meeting

Contents

I. OVERVIEW

1. **EANET was established in 2001 against the backdrop of increasing risks related to excess atmospheric deposition[1] of acidic substances in the 1990s in the region resulting from rapid industrialization.** As an intergovernmental initiative, EANET, with 13 Participating Countries, aimed to create a common understanding on the state of acid deposition in the East Asia region[2], provide useful inputs for decision making at various levels, and promote cooperation among countries. EANET's 13 Participating Countries include Cambodia, China, Indonesia, Japan, Lao PDR, Malaysia, Mongolia, Myanmar, Philippines, Republic of Korea, Russia, Thailand, and Viet Nam.

2. **For over 20 years, EANET has fostered a reputable coordinated regional monitoring system using standardized methodologies and a scientific exchange platform** and has contributed gradually to solving acid deposition problems in the region. In recognition of the emerging challenges on atmospheric deposition, in 2021, in a landmark decision, the Participating Countries agreed to expand the scope of EANET to also include atmospheric environment related substances, such as fine particulate matter ($PM_{2.5}$) and surface ozone, among others.

3. **EANET's work programme is guided by its Medium-Term Plans (MTPs). The development of the Fifth MTP of the EANET (2026-2030) was informed by the following meetings and key documents:**
   - In 2024: the Informal Meeting on Initial Preparation of MTP; Working Group Meeting (WG2024); Twenty-fifth Session of the Senior Technical Managers Meeting (STM25) and Task Forces (TFs) meetings; Twenty-fourth Session of the Scientific Advisory Committee (SAC24) Meeting; and IG26.
   - In 2025: the Consultation Meeting on the Zero Draft MTP in 2025 (CM-MTP2025); Working Group Meeting on the First Draft MTP for the EANET (WG-MTP2025); Working Group Meeting in 2025 (WG2025); Twenty-fifth Session of the Scientific Advisory Committee (SAC25) Meeting; and Twenty-seventh Intergovernmental Meeting on the EANET (IG27).
   - Mid-term Review of the MTP (2021-2025)
   - The Fourth Periodic Report on the State of Acid Deposition in East Asia (PRSAD4)

4. **The purpose of the MTP is to define the strategic outcomes and priority actions for EANET's work programme for the next five years in line with the EANET Instrument[3] and its Annex[4]. The Fifth MTP (2026-2030) is the first MTP that substantially addresses EANET's expanded scope with wider atmospheric environment pollutants which was adopted in 2021 at IG23.**

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[1] Atmospheric deposition, including the acid deposition which contains higher than normal acidity, is the transfer process of air pollutants to the Earth's surface.

[2] Item 2 of the Instrument for Strengthening the Acid Deposition Monitoring Network in East Asia mentions that: "The objectives and scope of this Instrument are: a) to create a common understanding of the state of acid deposition problems in East Asia".

[3] https://www.eanet.asia/wp-content/uploads/2023/03/Instrument-for-Strengthening-the-EANET-adopted-at-IG12-in-2010.pdf

[4] https://www.eanet.asia/wp-content/uploads/2023/03/Supplementary-Document-Annex-to-EANET-Instrument-adopted-at-IG23-in-2021.pdf

II. FRAMEWORK OF ACTIVITIES

Key and emerging challenges and needs to be addressed in the MTP 2026-2030

5. **Many countries in the region continue to experience high levels of air pollution, such as fine particulate matter ($PM_{2.5}$) and surface ozone.**[5] Poor air quality has affected human health, ecosystems, and economic productivity. Air pollution remains the leading environmental risk factor for ill health in the region.[6] Inaction on air pollution is also an economic burden, with estimates on the cost of inaction in Southeast Asia equivalent to between 1.6% and 2.1% of national GDP by 2030.[7] There is also evidence that air pollution is affecting crop production in many key agricultural areas, including those in East and South-East Asia.[8]

6. **Nonetheless, there has been some progress made by countries** in taking key actions to significantly improve air quality.[9] Parts of East and Southeast Asia have seen progress in reducing levels of $PM_{2.5}$ and SO_2.[10] Monitoring trends of acidic substances illustrate a decreasing trend in deposition of non-sea-salt sulfate in Northeast Asia. In terms of long-term impacts on ecosystems, inland water chemistry in some lakes/streams suggests recovery from acidification.[11]

7. **Critical to the recognition of these achievements is the improvement of Participating Countries monitoring capacity.**[12] According to the UN Sustainable Development Goals (SDG) Extended Report 2024, since 2011, there has been a six-fold increase in air quality monitoring in cities across the globe. **The work of EANET for the last two decades on monitoring using standardized methodologies and capacity building has contributed to this positive trend in data availability.**

8. **However, there is scope for further work on monitoring – especially on monitoring air pollutants of concern and geographic areas with limited coverage.** A recent study in 2024 found that around 36% of countries globally are not currently monitoring air pollution.[13] Major gaps in monitoring persist, especially in the Global South. Attention has also expanded to cover emerging issues such as nitrogen cycle to the complete removal process of air pollutants or atmospheric deposition, in addition to acidification deposition..[14] **Fine particulate matter and surface ozone** are among the pollutants that have been observed to be elevated or with increasing trend in some countries in the region. These pollutants are part of EANET's expanded scope.

9. Recognizing these challenges and in line with EANET's expanded scope, the **priority of EANET during MTP (2026-2030) includes $PM_{2.5}$, PM (inorganic ions), surface ozone, NOx, NH_3 and VOCs** (indicated by dark blue color in Table 1).
    - Fine particulate matter ($PM_{2.5}$) is the pollutant that causes the largest health impacts globally and in the region.
    - Surface ozone (O_3) is a secondary pollutant formed by chemical reactions between nitrogen oxides and Volatile Organic Compounds in the presence of sunlight. Aside from health impacts, it has also been shown to affect food security by reducing crop productivity, among others.
    - Inorganic ions are important for $PM_{2.5}$ component.
    - Volatile organic compounds (VOCs) and nitrogen oxides (NOx) are important precursors of surface ozone and secondary $PM_{2.5}$.

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[5] State of Global Air 2024 and Fourth Periodic Report on the State of Acid Deposition in East Asia (PRSAD4) in 2021
[6] https://www.who.int/news-room/fact-sheets/detail/ambient-(outdoor)-air-quality-and-health
[7] https://iiasa.ac.at/policy-briefs/oct-2023/cost-of-inaction-tackling-air-pollution-in-asean-region
[8] https://library.wmo.int/records/item/68653-the-impacts-of-particulate-matter-on-crop-yield-mechanisms-quantification-and-options-for-mitigation
[9] https://www.unep.org/topics/air/multi-level-air-quality-management/actions-air-quality-report-update
[10] https://unstats.un.org/sdgs/report/2024/extended-report/Extended-Report_Goal-11.pdf
[11] Fourth Periodic Report on the State of Acid Deposition in East Asia (PRSAD4) in 2021
[12] https://unstats.un.org/sdgs/report/2024/extended-report/Extended-Report_Goal-11.pdf
[13] https://documents.openaq.org/reports/Open+Air+Quality+Data-The+Global+Landscape+2024.pdf
[14] Fourth Periodic Report on the State of Acid Deposition in East Asia (PRSAD4) in 2021

- Ammonia (NH_3) is an important precursor of $PM_{2.5}$ and an important species in the nitrogen cycle.

It is noted that the types of activities (for example: item 4 Monitoring and Reporting, item 5 Assessment, item 6 Research Activities, etc.) to be undertaken for each of the priority parameters will be informed by the EANET Instrument and Annex.

Table 1. Increased focus of the MTP (2026-2030) based on the Annex to the Instrument

Atmospheric Environment-related Substances		Item 4 Monitoring and Reporting	Item 5 Assessment	Item 6 Research Activities	Item 7 Education and Training	Item 8 Public Awareness	Item 9 Exchange of Information
SO_2		√	√	*	√	√	√
NO_X		√	√	*	√	√	√
NH_3		√	√	*	√	√	√
PM	PM2.5	√	√	*	√	√	√
	PM10	√	√	*	√	√	√
	TSP	√	√	*	√	√	√
	DSS[a]	√	√	*	√	√	√
	PM (inorganic ions)	√	√	*	√	√	√
	PM (metallic elements)	-	-	*	√	√	√
	PM (organic aerosols)	-	-	*	√	√	√
Precipitation Chemistry (ions, pH, EC)		√	√	*	√	√	√
Surface Ozone		√	√	*	√	√	√
CO		-	-	*	√	√	√
VOCs		-	-	*	√	√	√

Legend of the symbols:
[√: Applicable]
[-: Not applicable]
[*: Partly applicable]: see Item 3, para 4[15]
[a: Dust and Sand Storms (DSS) are suspended dust and sand caused by dust and sandstorms.]
Items in blue are priority of EANET during MTP (2026-2030)

10. Another challenge that needs to be addressed as outlined in the UNSDG Extended Report 2024 is the limited monitoring capabilities in low and middle income countries.[16,17] This is also linked with the resource constraints at the national level for air quality monitoring.[18] To enhance air quality monitoring capacity, it is essential to maintain current equipment, upgrade and replace outdated monitoring equipment. Innovative technologies such as satellite observations and low-cost sensors (LCS) can also strengthen monitoring capabilities. However, considering the limitations of these new technologies, and the diverse needs and resources of Participating Countries (PCs), EANET will not use them as official data and will promote the exchange of methodologies and practical experiences through capacity building, knowledge sharing, and project-level activities, including via the South-South cooperation platform[19]. Additionally, developing robust digital infrastructure, supported by modern

[15] "On research activities (Item 6 of the Instrument), scientific research activities related to emission inventories, modeling, and human health effects shall include only methodological research and capacity building of the research activities." https://www.eanet.asia/wp-content/uploads/2023/03/Supplementary-Document-Annex-to-EANET-Instrument-adopted-at-IG23-in-2021.pdf
[16] https://unstats.un.org/sdgs/report/2024/extended-report/Extended-Report_Goal-11.pdf
[17] https://pmc.ncbi.nlm.nih.gov/articles/PMC10680116/#sec3
[18] https://documents.openaq.org/reports/Open+Air+Quality+Data-The+Global+Landscape+2024.pdf
[19] According to the United Nations Department of Economic and Social Affairs (UN DESA): « South-South cooperation refers to the technical cooperation among developing countries in the Global South" (https://www.un.org/pl/desa/what-%E2%80%98south-south-cooperation%E2%80%99-and-why-does-it-matter?)

data science and technologies such as AI—are effective for ensuring data quality and promoting data application, and sharing information and knowledge.

11. Together with increasing monitoring capacity is the **need to integrate and assess data and knowledge to support policy-relevant decision making and ensure their accessibility to key stakeholders**. This would enable governments and other organizations to develop appropriate interventions to address air pollution and atmospheric deposition. PCs are encouraged to integrate their existing official ground sites' monitoring data into the EANET database on a voluntary basis.

12. **One opportunity to maximize EANET's potential contribution to the global environmental agenda on sustainable nitrogen management**. There is increasing global attention to nitrogen pollution and the nitrogen cycle.[20] One of the main drivers of nitrogen pollution has been the rising consumption of nitrogen-based fertilizer, the primary source of NH_3, which doubled between 1978 and 2014 globally. NOx emitted from fuel combustion contributes to the formation of surface ozone. NOx emissions may cause the acidification of precipitation, which can damage buildings and change chemical properties of soil and inland water, harming plants and other living organisms. Strengthening efforts to obtain and assess data on atmospheric deposition of NOx, NH_3, and their ionic species, as well as their ecological effects, within the EANET scope, could contribute to the global discussion on "sustainable nitrogen management" as part of a regional air quality monitoring network.

13. **Increasing the understanding of the impacts of meteorological conditions on air pollution**, such as warmer temperatures, changing winds, increasing wildfires in new places and new precipitation patterns alter the formation, duration and dispersion of air pollution, could also be further explored.

14. As a regional air quality monitoring network, EANET will gradually implement sustainable air quality monitoring approaches that contribute to air quality management in the region, while also proactively addressing common global issues. This will further increase EANET's presence and become an important cornerstone for realizing the sustainable development of the EANET. To make EANET a sustainable monitoring system, strengthening efforts in understanding NO_X management will be among the components positioned in EANET's work for this MTP.

15. The **important role of regional and international cooperation to address air pollution** has been also recognized – both at the global level during the Sixth Session of the United Nations Environment Assembly (UNEA-6) in February 2024 with the adoption of a resolution on *Promoting regional cooperation on air pollution to improve air quality globally*[21] and at the regional level with the adoption of the United Nations Economic and Social Commission for Asia and the Pacific's (UNESCAP)'s Asia Pacific Regional Action Programme on Air Pollution (RAPAP) in December 2022. **EANET, as one of the long-standing regional cooperation networks on monitoring of atmospheric deposition, has an opportunity to share its best practices and lessons learned and strengthen partnerships with other regional mechanisms in Asia or in other regions worldwide.**

16. In summary, the challenges and needs identified by the Participating Countries[22] for the next five years include: enhanced capacity building, technical support, and financial assistance to strengthen their air quality monitoring and management efforts. Key priorities include among others improving emission inventories methodology, upgrading monitoring networks, increasing capacity in information and methodology exchange of new technologies such as AI, low-cost sensors and satellite, and enhancing data analysis capabilities to better assess pollution trends. There is also a strong demand for policy development support, particularly in formulating and implementing effective air pollution control measures. Additionally, some countries highlight the importance of raising public awareness and enhancing international cooperation and multi-stakeholder engagement to drive action.

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[20] https://www.unep.org/interactives/beat-nitrogen-pollution/

[21] UNEP/EA.6/Res.10 - Promoting regional cooperation on air pollution to improve air quality globally https://www.unep.org/environmentassembly/unea6/outcomes (Accessed: July 2024).

[22] These were informed by the series of meetings outlined in paragraph 3.

Theory of Change for the Medium-Term Plan for the EANET (2026-2030)

17. Based on EANET's previous activities and to address the identified challenges and priorities, **EANET's participating countries selected three outcomes for EANET for the coming five years (2026-2030):**

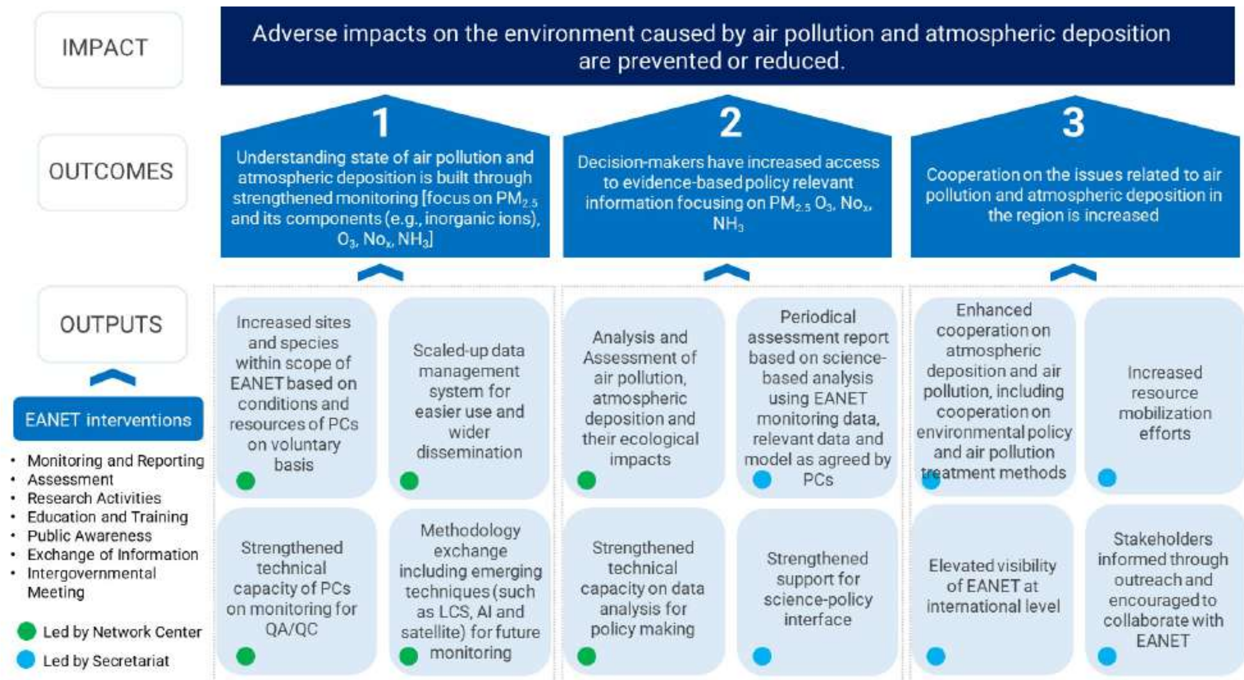
Outcomes of the MTP for the EANET (2026-2030)

1. **Outcome 1.** Understanding on the state of air pollution in the priority areas and atmospheric deposition in East Asia is built through strengthened monitoring, particularly focusing on the following pollutants: $PM_{2.5}$ and its components (e.g., inorganic ions), surface ozone (O_3), nitrogen oxides (NO_x), ammonia (NH_3)
2. **Outcome 2**. Decision-makers at local, national and regional levels have increased access to evidence-based policy relevant information
3. **Outcome 3.** Cooperation on the issues related to air pollution in the priority areas and atmospheric deposition in East Asia is increased

18. To achieve these three outcomes and considering the needs and strengths of EANET, three key areas of work were identified, which include the activities carried out since before:
1) Strengthening the monitoring and source apportionment methodology capacity for $PM_{2.5}$, and methodological research and capacity building for VOCs, that will contribute to supporting the control measures for reducing ozone and $PM_{2.5}$;
2) Strengthening the utilization and analysis of monitoring data for environmental assessments by using EANET monitoring data from existing EANET monitoring networks in each country;
3) Carrying out innovative technologies' methodology and practical experience exchanges such as satellite observations, LCS and AI to enhance monitoring capabilities of PCs

19. These key areas of work are integrated into the detailed activities and outputs described in **Section III**. Figure 1 illustrates the Theory of Change for EANET MTP 2026-2030. It shows the pathway and considers the relationship between the activities, outputs and outcomes to achieve the overall desired impact.

Figure 1. Theory of Change for the Medium-Term Plan for the EANET (2026-2030)



III. EANET CORE ACTIVITIES AND BUDGET

CORE ACTIVITIES

20. Core Activities consist of activities that all Participating Counties consider indispensable, priority, and essential for achieving EANET objectives, and beneficial for all Participating Countries directly and indirectly. Core Activities are financed by the Core Budget provided by the voluntary financial contribution from the Participating Countries.

21. **Outcome 1. Increased understanding on the state of air pollution and atmospheric deposition in East Asia is built through strengthened monitoring.** This will involve monitoring of air pollution and atmospheric deposition and data management including dissemination, especially focusing on $PM_{2.5}$ and its components, O_3, NOx, and NH_3; conducting qualified monitoring of air pollution and atmospheric deposition through providing technical guidance, maintenance of the monitoring instrument, improvements of the methods, guidelines, conducting quality assurance and quality control (QA/QC) activities, and capacity building; and developing the future strategy of sustainable monitoring system.

Outputs

- **Output 1.1** Increased ground monitoring sites and species in the scope of EANET monitoring based on the conditions and resources of PCs on a voluntary basis especially focusing on $PM_{2.5}$ and its components, O_3, NO_x, and NH_3; Maintenance of current equipment, upgrade and replacement of outdated equipment under available budget and resources.
- **Output 1.2** Scaled-up data management system for easier use and wider dissemination
- **Output 1.3** Strengthened technical capacity of PCs on monitoring for QA/QC especially for O_3, VOCs and $PM_{2.5}$ components
- **Output 1.4** Methodologies exchange (such as low-cost sensor and satellite) including emerging techniques for future monitoring

22. The features of EANET activities under Outcome 1 in the MTP (2026-2030) are as follows:

- **Monitoring activities,** EANET participating countries conduct sustainable air pollution monitoring—including NOx, NH_3, $PM_{2.5}$, O_3—to generate continuous datasets that clarify pollution status, mechanisms, and ecological impacts. In addition, to ensure sustainable EANET monitoring, activities related to replacement, maintenance or updates for equipment will be conducted within available budget resources.

- **QA/QC activities,** unified QA/QC methodologies and inter-laboratory comparisons are implemented, including O_3 calibration and manual updates, to ensure consistent and reliable data across the network.

- **Data reporting activities,** monitoring results are compiled, verified, and published annually in the EANET Data Report, reflecting updated targets and indicators.

- **Data sharing activities,** capacity-building programs, including technical missions and training, support monitoring personnel and enhance regional sharing of skills and monitoring expertise.

- **Updating methodology activities,** exchanging information on new monitoring technologies and scientific advancements through workshops, leading to periodic updates of protocols.

23. **Outcome 2. Decision-makers at local, national and regional levels have increased access to evidence-based policy relevant information.** This will focus on the promotion of data analysis and assessment, especially focusing on $PM_{2.5}$, O_3, NO_x and NH_3: collecting and analyzing data from the monitoring of air pollution and atmospheric deposition, assessing the status of the atmospheric environment in East Asia, and sharing the results to relevant stakeholders to encourage the utilization of data for policy formulation to tackle air pollution and atmospheric deposition issues. To achieve this objective, specific research activities may be promoted.

Outputs

- **Output 2.1** Annual analysis and assessment results of air pollution, particularly O_3 and $PM_{2.5}$, atmospheric deposition especially for NO_x and NH_3, and their ecological impacts based on the EANET ground monitoring data
- **Output 2.2** Periodical assessment report based on science-based analysis using EANET ground monitoring data, relevant data and model as agreed by all PCs, especially focusing on $PM_{2.5}$, O_3, NO_x and NH_3
- **Output 2.3** Strengthened support for science policy interface
- **Output 2.4** Strengthened technical capacity of Participating Countries on data analysis for policy making

24. EANET activities under Outcome 2 in the MTP (2026-2030) are as follows:

- **Analysis and assessment activities,** in the previous MTP (2021-2025), EANET analysis and assessment was focused on acid deposition only. In the new MTP (2026-2030), the main target will be shifted from acid deposition to air pollution and atmospheric deposition. More efforts will be reallocated, with particular focus on O_3 and $PM_{2.5}$ and atmospheric deposition, especially for NO_x and NH_3, while the analysis and assessment of acidic substances deposition will be continued from the previous MTP as parts of the overall atmospheric deposition work. In preparation of the periodic analysis and assessment report, the newly introduced activities will play a more central role in the MTP (2026-2030).

- **Science and policy interface activities,** the regular maintenance of the Data Report/Download System in the EANET website will be conducted, in continuation from the previous MTP (2021-

2025). For convenience of users and improved analysis and assessment, the function of visualization of monitoring data will be added to the Data Report/Download System.

25. **Outcome 3. Cooperation on the issues related to air pollution and atmospheric deposition in the region is increased.** This will focus on enhancing cooperation on air pollution and atmospheric deposition in the region through EANET's intergovernmental processes, strategic partnerships with key institutions and agencies working on common interest areas; resource mobilization and outreach and promotion of EANET's work.

Outputs

Output 3.1 Enhanced cooperation with national and international institutions on air pollution and atmospheric deposition, including cooperation on environmental policy, planning, and regulation, and its enforcement and air pollution treatment methods

Output 3.2 Elevated visibility of EANET at the international level

Output 3.3 Increased resource mobilization efforts

Output 3.4 Stakeholders informed through outreach and encouraged to collaborate with EANET

26. EANET activities under Outcome 3 in the MTP (2026-2030) are as follows:

- **Enhanced cooperation and intergovernmental process**: This includes support for delivery of intergovernmental process to advance EANET's work through the IG, SAC/TFs and other subsidiary bodies and strategic partnerships with national and international organizations on air pollution and atmospheric deposition. This will also include carrying out cooperation with national entities and international institutions on environmental policy, planning, and regulations, and enforcement of regulations and carrying out cooperation on air pollution treatment methods for cement, steel industry, mobile sources, open burning of agricultural crop residues, etc.

- **Resource mobilization:** Enhanced resource mobilization efforts including regular mapping of funding opportunities and donor interests aligned with EANET and development of proposals which contribute to the delivery of the MTP outcomes. This includes the implementation of the Partnership and Resource Mobilization Strategy.

- **Communication and outreach:** Outreach and promotion of EANET's work and achievements at national, regional, and global events and through communication products such as regular newsletter and articles, op-eds, updated website. This also includes mobilizing strategic advocates to increase EANET visibility at selected international fora (through statements and speaking engagements to increase EANET's visibility).

CORE BUDGET

27. EANET's core operations have been primarily supported with the voluntary contributions of financial and human resources from Participating Countries. In accordance with Item 14 of the Instrument and the respective national laws and regulations, the Participating Countries are encouraged to make voluntary financial contributions to the Core Budget of the Secretariat and the Network Center, considering their economic and financial circumstances and limit of their respective budgetary appropriations. Participating Countries and Partner organizations may also provide financial contributions to the Core Budget or financial and/or in-kind contribution to selected Core Activities. The amount of financial contribution from each Participating Country to the Core Budget will be derived from the UN assessment scale for the first year of the MTP and will be effective during the entire five years of the relevant MTP.

IV. EANET PROJECT FUND ACTIVITIES

28. EANET Project Activities were introduced in the MTP (2021-2025) to bring flexibility and the possibility to engage new types of activities. This could include activities in the scope of the EANET as outlined in the Annex to the Instrument and guided by the outcomes of the MTP (2026-2030). The EANET Project Activities are guided by the EANET Project Fund and Project Guidelines (revised in 2024).

29. An initial list of potential Project Activities is outlined in **Table 2**. This initial list is based on informal consultations with selected development organizations, Participating Countries, and includes previously approved EANET project plans. The project activities could be initiated as pilot demonstration activities, as appropriate.

Table 2. Initial list of potential project activities in MTP (2026-2030)

Outcome	Potential project activities
Outcome 1	1. Updating and applying air quality monitoring and data analysis methodologies through pilot project at city/community level *(EPP 2025-01)* • Literature reviews and workshops to integrate the latest scientific advancements of air quality monitoring • Updating air quality monitoring protocols to elaborate methodologies for assessment of air pollution • Building awareness of new monitoring technologies of air pollutants among PCs • Comprehensive $PM_{2.5}$ composition measurements and source apportionment of $PM_{2.5}$ 2. Additional data collection for atmospheric and ecological monitoring through pilot project at city/community level by using EANET ground site data • Gathering extended datasets of atmospheric and ecological monitoring to understand the flow of NOx, NH_3, and their ionic species in ecosystems from catchment scale to regional scale, collaborating with national/international research projects and initiatives 3. Investigating the impact of precipitation on particulate matter components: Enhancing monitoring and data analysis in EANET *(EPP 2025-02)* 4. Capacity building and experience exchange on use of satellite observations, LCS and artificial intelligence to enhance and supplement monitoring capabilities *(EPP 2024-11)* 5. Regional and national capacity building program on air quality monitoring and ecological impact assessment in EANET *(EPP 2025-08)* 6. Atmospheric deposition monitoring for protection of cultural sites and historical landmarks 7. Supplementary technical support for sustainability of monitoring sites – *depending on PC request and needs*
Outcome 2	1. Methodology of advanced analysis of air pollution and atmospheric deposition through pilot project at city/community level for scientific understanding such as: • Analysis of $PM_{2.5}$ component data for understanding chemical characteristics and emission sources of $PM_{2.5}$ • Analysis of O_3-NOx-VOCs sensitivity for understanding causes of ozone increases • Analysis of status, trend and characteristics of open biomass burning • Integrated analysis of NOx, NH_3, and their ionic species, including air concentration, atmospheric deposition, and the flow in ecosystems 2. Additional survey and assessment for science- and evidence-based policy consideration through pilot project at city/community level such as: • Assessment of the state of NOx and NH3 for nitrogen management • The survey focuses on the current and potential co-benefits of air pollution control, including multiple atmospheric pollutants, as well as social, economic, energy, and technological developments. • Assessment of effects of air pollution control measures on PM2.5 and O3 using air quality models and emission scenarios including future projection • Survey on demands on outputs from EANET and potential new directions in perspective of policy consideration

Outcome	Potential project activities
	3. Data-Driven Prediction and Cause Analysis of Acid Deposition Research • Complete multi-source data integration, design the LSTM-RF model framework with SHAP interpretability analysis module, and submit a technical proposal report. • Predict spatiotemporal characteristics of acid deposition using the LSTM-RF model, conduct cause analysis through SHAP module, and deliver a regional case study report along with an open-source Python prediction toolkit (including API documentation). • Simulate various emission reduction scenarios using the LSTM-RF model, quantitatively evaluate improvement effects on acid deposition parameters, and formulate a differentiated control strategy recommendation report for East Asia to support precision governance decision-making. 4. Assessment of acid rain impacts on peat fire risks and policy guidance, such as: • Analysis of acid-driven changes in peat soil conditions increasing fire likelihood and severity (e.g., weakened vegetation, reduced peat accumulation, and microbial shifts) • Evaluation of ecosystem vulnerability and recovery delays under acidification • Development of short- and long-term policy recommendations to mitigate transboundary haze risks driven by forest fires in Southeast Asia
Outcome 3	1. Regional cooperation and capacity building on the development and enforcement of air quality policy and regulations 2. Regional cooperation and methodology exchange on air pollution treatment methods for key emission sectors/ sources (which could include major industries such as cement and steel; mobile emission sources; open burning of agricultural crop residues, etc.) 3. Capacity building programme on air pollutant emissions inventory development and development of methodology and guidelines for national emission inventory for Southeast Asia *(EPP 2025-06)* 4. Capacity building and experience exchange on use of artificial intelligence (AI) for air quality monitoring information and communication systems 5. Integrating Southeast Asian perspectives into the EANET Capacity Building Program: This proposes to include the Asian Institute of Technology in cooperation with the Pollution Control Department of the Ministry of Natural Resources and Environment of Thailand, as one of the host institutions supporting the training of EANET Participating Countries on air quality management *(EPP 2024-09)*

V. EANET PARTNERSHIP AND RESOURCE MOBILIZATION STRATEGY (PRMS)

30. **OBJECTIVE:** The EANET Partnership and Resource Mobilization strategy aims to assist the EANET Secretariat, the Network and Participating Countries to mobilize adequate financial resources and facilitate strategic partnerships to support the achievement of EANET's outcomes in MTP (2026-2030) in line with the EANET Instrument and its Annex.

31. **STRENGTHS AND CHALLENGES OF EANET**: Mobilizing resources to support the implementation of activities has always been a priority in EANET. In 2001, when EANET was established, its initial activities have been supported by the generous contribution of a few Participating Countries. Eventually, most of the PCs have provided voluntary financial contributions to support their activities.

32. **EANET became one of the few intergovernmental networks working on atmospheric environment globally that finances its own activities.** The monitoring activities, impact assessment, scientific research, and capacity building activities of the EANET have contributed to improving the capacity of national governments and experts in the region to better understand atmospheric environmental challenges and develop appropriate policies.

33. While EANET is one of the only few intergovernmental organizations that are wholly financed by the Participating Countries, it also shows the **challenges in terms of continued financing** its myriad of activities and projects and needs to increase efforts to diversify its funding sources.[23] Supplementary information on the trend on EANET voluntary and in-kind contributions to the Core Activities and contributions to the EANET Project Fund are included in **Annex 4**. There are opportunities to engage in strategic partnerships for co-financing and co-delivery of EANET activities.

34. **GUIDING PRINCIPLES**: The strategy calls for consideration for these principles during its implementation:

- Apply spirit of solidarity and partnership, in accordance with respective needs, capabilities and situation
- Promote increased efficiency and effectiveness and building synergies
- Fostering innovation and supporting capacity strengthening and awareness raising
- EANET cooperation agencies should be selected in the interests of and with the consent of all the participating countries.
- Relevant important cooperation documents, such as MOUs, agreements, concept note, joint statements etc., developed with cooperation agencies or are planned for joint public release should have a prior consent from the participating countries and should be within EANET's scope.

35. **STRATEGIC GOALS**: Specific activities to achieve the following strategic goals will be developed together with indicators to monitor the implementation of the PRMS:

- **Goal 1: Mobilize partners as strategic advocates to achieve EANET MTP (2026-2030) outcomes and help diversify the donor base through new funding streams**
  - To identify and mobilize key EANET partners to broaden donor base through partner's networks and engagement and advocating for EANET's visibility in key international events fora.
  - To enhance efforts in mobilizing co-financing and other modes of project financing EANET.

- **Goal 2: Strengthen capacity for resource mobilization and explore strategic partnerships with a view to increasing resources to deliver the EANET MTP (2026-2030) outcomes**
  - To strengthen institutional capacities for effective resource mobilization, including strengthening capacities of relevant agencies to make the case for including air quality and

[23] Over the past four years (2021-2024), the Secretariat and the Network Center secured an average of 75% and 78% of the approved budget, respectively. In comparison, during the (2016-2020) Medium-Term Plan for the EANET, the Secretariat and the Network Center secured an average of 96% and 88% of the approved budget, respectively.

atmospheric deposition monitoring and policy action in discussions with donors and relevant organizations.
    - To initiate enabling conditions for potential engagement of the private sector in delivery of EANET's work.
    - To strengthen strategic partnerships with EANET traditional partners, such as Participating Countries and EANET subsidiary bodies to sustain current levels of contributions.

- **Goal 3: Promote South-South cooperation**
    - To identify, facilitate and increase South-South cooperation to enhance technical, technological, scientific and financial cooperation.
    - To promote exchange of experience and good practice in resource mobilization for air quality management, including sustainable monitoring activities.
    - To raise public awareness and promote exchange of experiences and good practices on the importance of sustained air quality and atmospheric deposition in support of resource mobilization.

36. **MONITORING:** Implementation period of the PRMS will be aligned with the MTP (2026-2030). Implementation of the PRMS will be monitored on an annual basis through a review of the progress update as part of the Secretariat and Network Center's annual progress reporting to the IG. The Secretariat and the Network Center will be responsible for monitoring relevant developments, which may require elements of the strategy to be adjusted.

37. **ROLES AND RESPONSIBILITIES IN THE PRMS:** The key roles in resource mobilization include:
    - Participating Countries: PCs are encouraged to make voluntary financial contributions, taking into account their economic and financial circumstances, in accordance with the responsive national laws and regulations and within the limit of their respective budgetary appropriations. They can also be strategic advocates for EANET and help identify and discuss with new donors that can support EANET activities.
    - Secretariat: As tasked to carry out necessary administrative arrangement and cooperation in the EANET, the Secretariat will coordinate partnership development and resource mobilization activities and engage in advocacy and resource mobilization efforts.
    - Network Center: As tasked to handle scientific and technical matters of the EANET activities and facilitate cooperation, NC will facilitate in implementation of scientific and technical partnerships for EANET and provide technical assistance in the co-creation of joint project proposals.
    - SAC: As scientific and technical experts from the Participating Countries, SAC members may advise on potential scientific and technical strategic cooperation opportunities for EANET. SAC members could also serve as strategic advocates at the national and international level.

      Project Fund Holder (PFH): In line with the Project Fund and Project Guidelines and other relevant rules and procedures of the EANET, the PFH as the entity should be responsible for holding and managing the EANET Project Fund.

38. **ANNUAL PRIORITIES – ACTIVITIES FOR THE WORK PROGRAMME AND BUDGET 2026**

Output	Activity	Lead Organization	Indicator
Output 3.1	improve air quality monitoring as part of the EANET with cooperation from other organizations e.g. new sites, additional air pollutants based on the Annex and conditions and resources of PCs.	NC (SEC)	Strategic partnerships confirmed/ announced
	Explore cooperation with EANET PCs and other organizations to organize EANET events (key meetings and project meetings) back-to-back with related air quality-related or co-organize events where possible, for example with regional and national awareness workshops, to optimize spending on EANET events	SEC	Number of events organized back-to-back or co-organized, and EANET Core Budget saved

Output	Activity	Lead Organization	Indicator
Output 3.3	Develop mapping of funding opportunities and donor interests aligned with EANET, including calendar of funding opportunities	SEC	Calendar of funding opportunities
	Discuss with NFPs to explore collaboration with existing national institutions in the EANET PCs including bilateral development agencies to support EANET activities and/or co-develop EANET projects*	SEC (NFPs)	Number of identified collaboration opportunities with EANET national institutions Number of co-developed EANET projects
	Explore cooperation with bilateral (within PCs and beyond)/ multilateral development agencies and international organizations to support ongoing and planned projects on air quality in the EANET region and identify concrete joint activities to supplement their work	SEC (NC)	Number of co-developed EANET projects and activities

VI. MONITORING AND EVALUATION OF THE MTP (2026-2030)

39. For the last two MTPs (2016-2020) and (2021-2025), EANET has undertaken evaluation processes which have promoted learning, accountability and supported decision-making. The Evaluation of the MTP for the EANET (2026-2030) will be reviewed by the IG in 2030. It will be conducted in accordance with UNEP's Evaluation Policy, and in close consultation with Participating Countries, the Secretariat and the Network Center.[24] The Evaluation of the MTP (2026-2030) will be undertaken in the first half of 2030, by an evaluator externally commissioned through an open selection process.

[24] UNEP Evaluation Office (2022). UNEP Evaluation Policy (Revised October 2022). https://wedocs.unep.org/20.500.11822/41114

ANNEXES

- **Annex 1.** Supplementary information – Milestones for each activity under EANET MTP 2026-2030
- **Annex 2.** Schedule of Monitoring on the Implementation

Annex 1. Supplementary information – Milestones for each activity under EANET MTP 2026-2030

Outcome 1			
Output	**No.**	**Activities**	**Milestones (M) (as appropriate)**
Output 1.1 Increased ground monitoring sites and species in the scope of EANET monitoring based on the conditions and resources of PCs on a voluntary basis especially focusing on $PM_{2.5}$ and its components, O_3, NOx, and NH_3	1	Sustainable monitoring of air pollution and atmospheric deposition including O_3, NOx, NH_3, and $PM_{2.5}$ components in EANET participating countries. In addition, conduct outdated equipment upgrades and replacement, maintenance of current equipment under available budget resources.	Air Pollutant Monitoring and Mechanisms in EANET Countries: Continuous and reliable datasets of species (e.g., sulfur dioxide, nitrogen oxides, ammonia) by gained from EANET existing sites to clarify the status of air pollution and atmospheric deposition and its ecological impacts in EANET participating countries (while scientifically reviewing necessary items, such as deletion or addition, in each country). Continuous and reliable datasets based on the data from EANET sites of air pollutants including O_3, NO_x, NH_3, and $PM_{2.5}$ components to clarify the status and mechanism of air pollution (e.g. Photochemical oxidation and Haze) in EANET participating countries within the scope of the EANET.
			Spatiotemporal distribution of atmospheric deposition of NO_x, NH_3 and their ionic species in the region based on the EANET monitoring data
			Datasets on the ecological impacts of SO_2, NO_x, NH_3 and their ionic species in forest catchments based on data from the EANET sites
			Maintenance of the sustainable monitoring network includes repairing equipment, replacing parts, and providing some consumables for monitoring. However, in principle, installation of monitoring equipment is not included, especially for high-priced equipment that exceeds the budget provided by financial contributions from participating countries.
Output 1.2 Scale-up data management system for easier use and wider dissemination	2	Implementation of quality assurance and quality control (QA/QC) activities of air pollution and atmospheric deposition monitoring	Elaboration of uniform methodologies and protocols across EANET participating countries to ensure consistency and comparability of data
			Update guidelines and manuals for QA/QC of atmospheric and ecological monitoring operations.
			Implementation of inter-lab comparison project in EANET participating laboratories to evaluate the QA/QC process.
			Establishment of O3 calibration system traceable to the international standard.
Output 1.3 Strengthened technical capacity of PCs on monitoring for QA/QC especially for O3, VOCs and PM2.5 components	3	Develop and deliver capacity building programs to enhance the skills and knowledge of personnel involved in monitoring activities	Implementation of personal individual training in NC to increase technical skills and knowledge among personnel in areas such as instrument operation, data analysis, QA/QC, and reporting. In addition, capacity building for the VOCs monitoring and analysis, and methodological research on impact of air pollution on human health will be also added.
			Coordination of training outcomes, including participant feedback and post-training evaluations to assess skill enhancement
			Implementation of technical mission to EANET participating countries to support sustainable monitoring activities.
Output 1.4 Methodologies exchange (such as low-cost sensor and satellite) including emerging techniques for future monitoring	4	Compilation, verification, summarization, and publication of EANET monitoring data	Annual publication of Data Report with updated content based on monitoring targets
	5	Continuously exchange information on new technology to monitoring by workshops to understand the latest scientific advancements and innovations	Updated monitoring protocols and methodologies for all relevant people who in charge of monitoring activities.
			Build better understanding on new monitoring technologies among PCs

Outcome 2			
Outputs	**No.**	**Activities**	**Milestones (M) (as appropriate)**
Output 2.1 Annual analysis and assessment results of air pollution, particularly O_3 and PM2.5, atmospheric deposition especially for NOx and NH_3, and their ecological impacts based on the EANET ground monitoring data	6	Conduct annual analysis and assessment of the state of air pollution and atmospheric deposition, including O_3, PM2.5, NO_x and NH_3 and their ecological impacts based on the EANET data and methodological research activities agreed by all PCs.	Analysis and assessment results of the EANET data under SAC/TFs including current states, trends, and statistical analysis
			(M1) Assessment results of current status and long-term trends of deposition and air concentration of atmospheric environment-related substances
			(M2) Assessment results of recovery from acidification based on catchment-scale analysis and existing monitoring data on deposition, soil/vegetation and inland water
			(M3) Assessment results of atmospheric deposition of NO_x and NH_3 and their ionic species, and its potential impacts on ecosystems
			(M4) Regional assessment on deposition, air concentration of atmospheric environment-related substances, and ecological impacts
Output 2.2 Periodical assessment report based on science-based analysis using EANET ground monitoring data, relevant data and model as agreed by all PCs, especially focusing on PM2.5, O_3, NOx and NH_3	7	Development of periodic analysis and assessment report for the MTP (2021-2025) on the current and long-term status of air pollution, atmospheric deposition, and impact on plants and ecosystem in the EANET region based on EANET data and methodological research activities agreed by all PCs.	The Fifth Periodic Report for the MTP (2021-2025): I. Regional Assessment, II. National Assessment and III. Executive Summary
	8	Preparation of periodic analysis and assessment reports for the MTP (2026-2030) on the current and long-term status of air pollution and atmospheric deposition, focusing on PM2.5, O_3, NO_x and NH_3, and their potential impacts on plants and ecosystems, and impact of metrological condition variation on air pollution in the EANET region (2029-2030) based on the EANET data and methodological research activities agreed by all PCs.	Establishment of Drafting Committee (DC), lead authors, formats and contents on the Sixth Periodic Report for the MTP (2026-2030)
Output 2.3 Strengthened support for science policy interface	9	Contribution to "Science-Policy Dialogue" led by partners (such as NEACAP, etc) to communicate synthesized and policy-relevant scientific knowledge from EANET to decision-makers to inform policymaking.	Key messages from EANET assessments reflected in Science-Policy Dialogue led by partners
	10	Provide evidence-based policy advice using EANET data and information to Participating Countries (based on needs/ requests)	Air quality management policy advice provided to participating countries based on request
Output 2.4 Strengthened technical capacity of Participating Countries on data analysis for policy making	11	Upgrading and maintaining Data Report/Download System in the EANET website to enable easy access	Improved Data Report/Download System in the EANET website such as for instruction pages and follow-up services for sustainable and active access

Outcome 3			
Output	**No.**	**Activities**	**Milestones (as appropriate)**
Output 3.1 Enhanced cooperation with national and international institutions on air pollution and atmospheric deposition	12	Intergovernmental process to advance EANET's work through the IG, SAC and other subsidiary bodies	1 session per year for the IG and SAC (and 1 Working Group Meeting if decided by IG); and some TFs/EG meetings held
	13	Establish and carry out cooperation with national entities and international institutions on environmental policy, planning, and regulations, and enforcement of regulations	Cooperation agreements or partnerships with national or international entities on air quality management policy developed
	14	Carry out technical exchange on air pollution treatment method of cement, steel industry, mobile sources, carry out research on open burning of agricultural crop residues, etc.	At least 2 technical exchanges addressing air pollution in one priority sector is conducted
Output 3.2 Elevated visibility of EANET international level	15	Organize EANET regional awareness workshop	Regional and/or national workshops on air quality, including webinars, and to be implemented and reported in line with EANET communication and media plan
	16	Statement/s delivered by EANET during relevant international or intergovernmental forums such as UN Environment Assembly, Forum of Ministers and Environment Authorities of Asia Pacific, Asia Pacific Forum on Sustainable Development, ESCAP Committee on Environment and Development	EANET's official statement at the UN Environment Assembly (UNEA) or equivalent forum is delivered and documented
	17	Outreach and promotion of EANET's work and achievements at national, regional, and global events	EANET presented at a major regional or global environmental events
Output 3.3 Increased resource mobilization efforts	18	Regular mapping of funding opportunities and donor interests aligned with EANET, including calendar of funding opportunities	A calendar of donor funding opportunities aligned with EANET priorities is prepared and circulated
	19	Jointly develop at least two proposals to contribute to delivery of outcomes in the MTP (2026-2030)	2 fully developed project proposals aligned with MTP (2026–2030) are submitted
Output 3.4 Stakeholders informed through outreach and are encouraged to collaborate with EANET	20	Up-to-date and wide online presence of EANET through regularly updated EANET newsletter, website, and social media platforms	Periodic issues of the EANET Newsletter and updates on EANET's website and social media platforms with tracked engagement are published
	21	Increased visibility through Op-eds written by the Chairperson or EANET Champions (such as National Focal Points) on EANET projects, cooperation, or success stories	At least 1 Op-ed by the Chairperson or a National Focal Point in a regional or national media outlet is published
	22	Organize at least one national awareness workshop	At least 1 national awareness workshop in a Participating Country with a final report is organized

Annex 2. Schedule of Monitoring on the Implementation of the MTP (2026-2030)

Year	Month	Event/Activity	Deliverables
2026	January	Distribution of the MTP document to NFPs, SAC/TFs members.	Start implementation of the activities according to the plan
2026	October	Twenty-sixth Session of the Scientific Advisory Committee (SAC26)	Review of the draft of the Report on Implementation of the MTP for the EANET (2021-2025) from scientific and technical viewpoints. Discussion on the progress of implementation of the scientific activities
2026	November	Twenty-eighth Session of the Intergovernmental Meeting (IG28)	Review of draft Report on Implementation of the MTP for the EANET (2021-2025) for possible adoption. Updates on the activities will be given in the Report on the Progress of EANET by the Secretariat and NC for adoption as appropriate
2027	October	Twenty-seventh Session of the Scientific Advisory Committee (SAC27)	Discussion on the progress of implementation of the scientific activities
2027	November	Twenty-ninth Session of the Intergovernmental Meeting (IG29)	Updates on the activities will be given in the Report on the Progress of EANET by the Secretariat and NC
2028	October	Twenty-eighth Session of the Scientific Advisory Committee (SAC28)	Discussion on the progress of implementation of scientific activities
2028	November	Thirtieth Session of the Intergovernmental Meeting (IG30)	Adoption of the revised draft of the Mid-Term Review Report of Implementation of the MTP for the EANET (2026-2030)
2029	October	Twenty-ninth Session of the Scientific Advisory Committee (SAC29)	Discussion on the progress of implementation of scientific activities Discussion on the next MTP from scientific and technical viewpoints
2029	November	Thirty-first Session of the Intergovernmental Meeting (IG31)	Updates on the activities will be given in the Report on the Progress of EANET by the Secretariat and NC Discussion on the next MTP
2030	October	Thirtieth Session of the Scientific Advisory Committee (SAC30)	Discussion on the next MTP from scientific and technical viewpoints
2030	November	Thirty-second Session of the Intergovernmental Meeting (IG32)	Discussion on the next MTP to be adopted by the IG