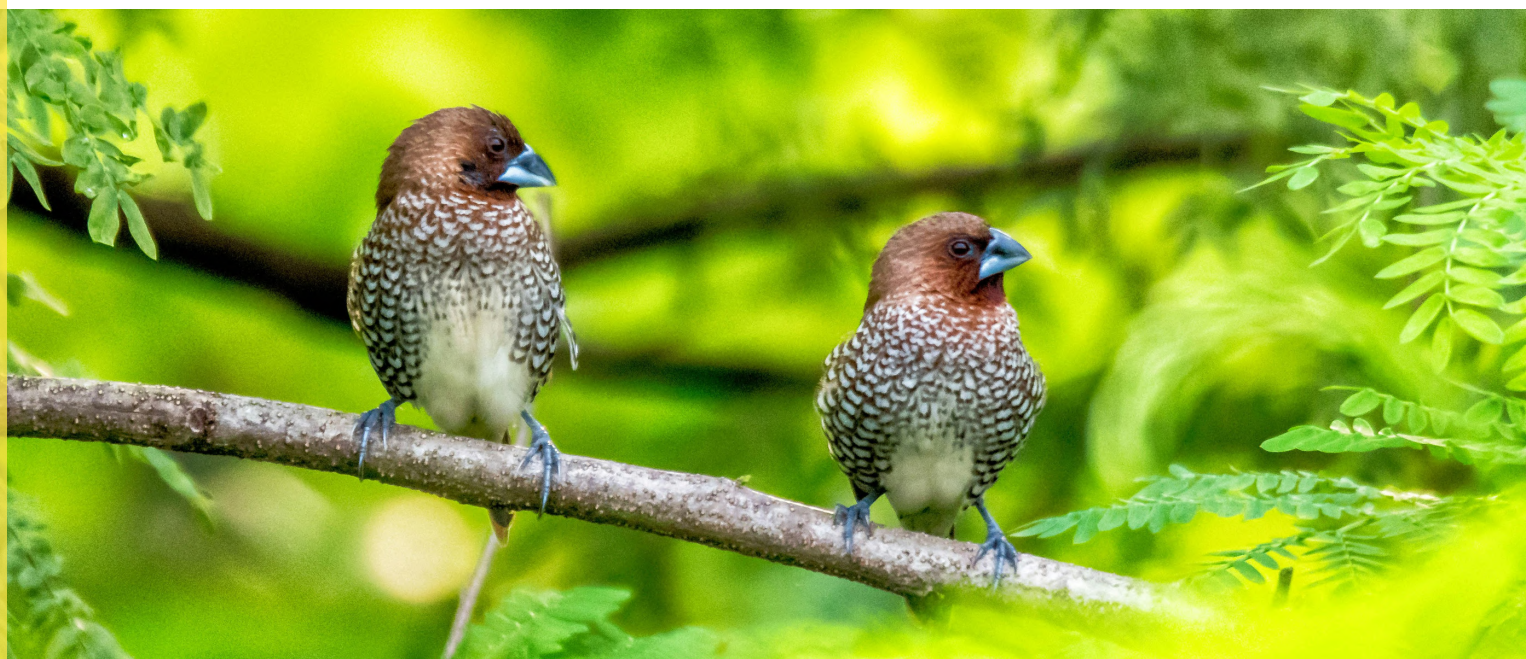


EANET NEWSLETTER



ACID DEPOSITION AND AIR QUALITY MANAGEMENT
FROM DATA TO POLICY



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REGIONAL COOPERATION FOR CLEAN AIR

In the first half of 2025, EANET continued its efforts to promote regional cooperation on acid deposition and air pollution through monitoring, capacity building, and information sharing. Participating Countries are working closely to prepare the next Medium-Term Plan (2026–2030), aiming to strengthen the EANET's impact through enhanced collaboration, scientific exchange, and policy support. Capacity development and outreach activities also advanced throughout the year, supporting national and regional efforts to improve air quality.

Curious about what took place in the past months and what is coming next? Discover more inside!



By Prof. Meng Fan

Deputy Director General, in charge of the Network Center for EANET

Bridging Science and Policy: EANET's Path Forward in Addressing Air Pollution and Environmental Challenges

Since its establishment in 2001, EANET has played a vital role in promoting coordinated regional monitoring of acid deposition and air pollution across East Asia. With the active participation of 13 countries, EANET has steadily built a valuable long-term dataset, fostered scientific collaboration and knowledge sharing, and significantly contributed to our understanding and mitigation of atmospheric environmental challenges.

Air pollution—including fine particulate matter, surface ozone, and other pollutants—continues to adversely affect the health of millions of people and ecosystems throughout the region. While progress has been made, with reductions in key pollutants such as SO₂ and PM_{2.5}, significant challenges remain. At the same time, other atmospheric environmental issues are gaining attention, such as the complex interactions and co-benefits between air pollution and climate change, and the nitrogen cycle, which is closely related to acid deposition. Gaps also persist between data, scientific understanding, and policy implementation. To address these challenges, monitoring and research efforts must be further expanded.

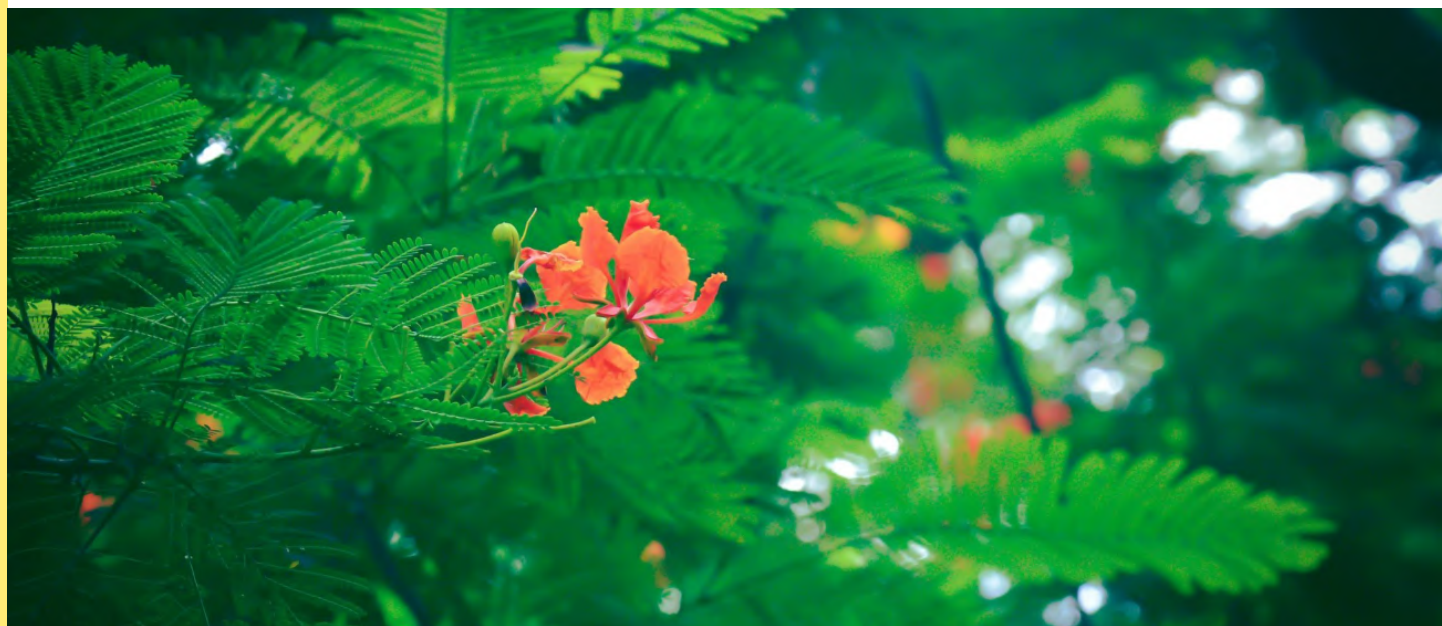
In 2021, EANET broadened its scope to place greater emphasis on air quality issues. Currently, the network is developing its next Medium-Term Plan (MTP) for the period 2026–2030. The EANET network has the opportunity—and responsibility—to address the air quality problem which threatens to human health and ecosystem. This new MTP also presents a great opportunity to consider a wider range of environmental issues related to air pollution such as climate issue and nitrogen cycle. It is also a timely chance to refine our strategies, prioritize key activities, and leverage innovative technologies to enhance sustainable monitoring capacity. These efforts will enable more effective use of EANET's capabilities and data, and promote co-benefits through strengthened regional collaboration and action.

Collaboration remains the cornerstone of EANET's mission. By enhancing regional cooperation and sharing best practices, EANET can improve data accessibility and policy integration. We believe that with determined action and innovative approaches, EANET will continue to make meaningful contributions—toward a healthier, more resilient future for East Asia.





The Working Group Meeting on the First Draft of the MTP (2026–2030)



EANET held its Working Group Meeting (WG-MTP2025) virtually to discuss the First Draft of its Medium-Term Plan (MTP) for (2026–2030) on 10 and 11 June 2025, gathering over 50 representatives from the EANET 13 Participating Countries, the United Nations Environment Programme ([UNEP](#)), the Secretariat and the Network Center for the EANET.

In his opening remarks, Dr. Mushtaq Memon, Regional Coordinator for Chemicals and Pollution Action, United Nations Environment Programme, Regional Office for Asia and the Pacific, emphasized the significance of the Medium-Term Plan (2026–2030) for guiding EANET's future activities, promoting regional cooperation on air pollution, and encouraging active participation to enhance air quality and partnerships across Asia. He noted its alignment with international frameworks such as the UNEA-6 resolution on [Promoting regional cooperation on air pollution to improve air quality globally](#).

Prof. Meng Fan Deputy Director General, Asia Center for Air Pollution Research ([ACAP](#)), highlighted EANET's key role in regional air pollution monitoring since 2001, emphasized the importance of its expanded scope to address broader environmental challenges, and called for continued cooperation, technological innovation, and integration of science into policy to strengthen its impact.

The meeting's discussions focused on the three proposed outcomes of the First Draft MTP: (1) improved understanding of air pollution and atmospheric deposition, (2) better access to evidence-based policy information, and (3) enhanced regional cooperation. Countries acknowledged the improved quality of the draft since [the Consultation Meeting on the Zero Draft of the MTP \(2026–2030\)](#), held in April 2025, and offered suggestions for further clarification and streamlining.

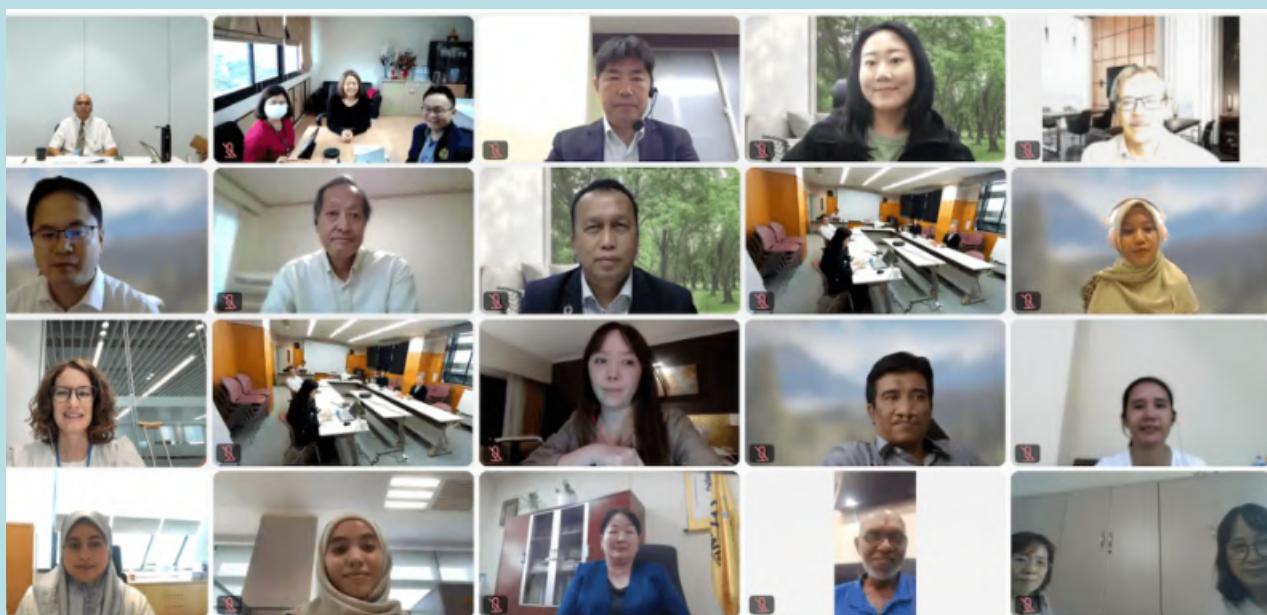


Among other topics, participants discussed how new technologies could support existing ground monitoring. The scope of activities was reviewed to ensure consistency with the EANET Instrument and its Annex and the allocated budget considered. The need for clear definitions was emphasized, with agreement that further consultations during the Working Group Meeting in 2025 (WG2025) on August 7–8 would refine these areas.

The Secretariat outlined the timeline for finalizing the MTP, including a follow-up consultation during the Working Group meeting in 2025 (WG2025) on 7 and 8 August 2025, and submission to the Twenty-fifth Scientific Advisory Committee meeting (SAC25) in October, and for consideration and possible adoption at the Twenty-seventh Intergovernmental Meeting (IG27) on the EANET in November 2025.

The IG27 will be hosted by Thailand on 27–28 November, and will be held in Bangkok during the same week as UNEP's Clean Air Week from 24 to 28 November 2025, further highlighting regional efforts to improve air quality. As EANET moves toward its next five-year phase, the meeting reaffirmed the Network's crucial role in driving cooperation, scientific exchange, and informed policy action across East Asia.

[Read the Meeting Report](#)



Screenshot of some participants at the WG-MTP2025 online meeting on 10 June 2025



The Consultation Meeting on the Zero Draft of the Medium-Term Plan (2026–2030) for the EANET



The Consultation Meeting on the Zero Draft of the Medium-Term Plan (MTP) (2026–2030) for the EANET took place virtually on 24–25 April 2025. The development of EANET's next Medium-Term Plan for 2026–2030 is an important milestone and provides an opportunity to make EANET even more impactful and relevant in the region. The next five years of EANET's work will also lead towards the 2030 deadline for achieving the Sustainable Development Goals (SDGs).

Over 70 representatives from the Participating Countries, the Secretariat for the EANET hosted by the United Nations Environment Programme (UNEP), and from the Asia Center for Air Pollution Research (ACAP) serving as the Network Center (NC) for the EANET, joined to discuss and review the Zero Draft of the MTP and provide strategic input.

Dr. Mushtaq Memon, Regional Coordinator for Chemicals and Pollution Action, [UNEP](#), Regional Office for Asia and the Pacific, opened the session by highlighting EANET's progress in tackling acid deposition and air pollution, including its 2021 scope expansion to cover other atmospheric substances. He emphasized the network's growing regional and global recognition, particularly through [recent UN resolutions](#), and encouraged feedback on the Zero Draft Medium-Term Plan, reaffirming UNEP's ongoing support.

Dr. Toshimasa Ohara, Director General of the Asia Center for Air Pollution Research ([ACAP](#)), followed with remarks stressing the complexity of managing PM_{2.5} and ozone pollution, which varies by country and requires knowledge-sharing and multilateral cooperation. He pointed to rising pollutant concentrations as evidence that national efforts alone are insufficient and welcomed the Intergovernmental Panel on Climate Change ([IPCC](#))'s work on Short-Lived Climate Forcers.



He underlined the importance of co-benefits, nitrogen management, and strategic planning for EANET's future, expressing optimism for meaningful discussions ahead.



Screenshot from some participants at the CM-MTP2025 meeting

The Secretariat and Network Center for the EANET presented the Zero Draft Medium-Term Plan, outlining proposed scientific, technical, and intergovernmental activities.

Key discussions focused on the Draft's conceptual framework, existing Core and new activities, potential Project Activities, and indicative budgets. Participants, including EANET National Focal Points and Scientific Advisory Committee members, provided feedback and guidance to support the development of the First Draft MTP to be presented during the next working group meeting in June.

They discussed air pollution components to prioritize, in line with the EANET's defined scope included in the [Annex to the Instrument](#).

They also stressed the importance of strengthening monitoring systems, exploring new and cost-efficient technologies as well as expanding capacity-building initiatives.

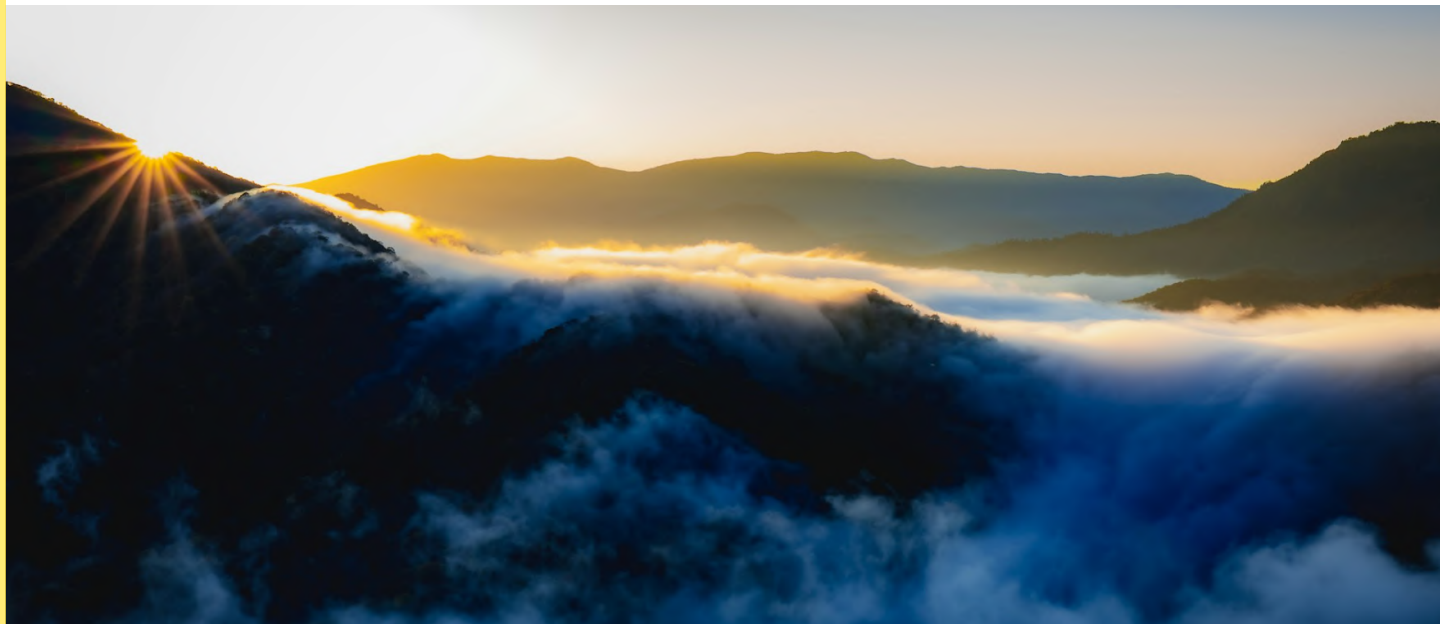
The First Draft of the MTP (2026-2030) will be discussed at The Working Group Meeting on the Draft of the MTP (2026-2030) (WG-MTP2025), to be organized online on 10-11 June 2025. The final draft of the EANET MTP (2026-2030) will be deliberated for adoption at the 27th Intergovernmental Meeting (IG27) in November 2025.

The meeting concluded with a shared appreciation for the participants' contributions and reaffirmed commitment to improving air quality in East Asia through collaborative action.

[Read the Meeting Report](#)



The Network Center for the EANET releases the Data Report 2023



Composed of data collected in 2023, comprising acid deposition and air pollution monitoring data endorsed by the Scientific Advisory Committee (SAC) end of 2024, the “Data Report 2023” and the “Report of the Inter-laboratory Comparison Project 2023” have been uploaded in open access on the EANET website.

In the context of the resolution on promoting regional cooperation on air pollution to improve air quality globally, adopted in UNEA-6 in March 2024, the importance of referring to high-quality data for air quality management has never been greater.

Covering, in 2024, the area of 13 countries, from Irkutsk (Russia) in the North to Lombok (Indonesia) in the South, Ochiishi (Japan) in the East, and Mandalay (Myanmar) in the West, the EANET’s total surface is extremely wide and diverse.

Since 1998 (during the preparatory phase activities of the Network), the EANET has deployed monitoring stations in urban, rural, and remote locations to monitor acid deposition and air pollution (in 2021, the EANET countries adopted an Annex defining monitored atmospheric environment-related substances). These monitoring sites gather high-quality data related to the deposition of major acidifying species and related chemical substances such as sulfate (SO_4^{2-}), nitrate (NO_3^-), hydrogen (H^+) in precipitation, sulfur dioxide (SO_2), nitrogen dioxide (NO_2), ozone (O_3), and particulate matter (PM) in ambient air.

Monitoring data are used to evaluate the state of acid deposition and air pollution as well as their impacts on ecosystems. Data on the atmospheric wet deposition of acidic components and other relevant pollutants have for example been used to understand the impacts of pollution on forest ecosystems, such as for the study led by EANET scientists in the dry evergreen forest of Sakaerat, in Nakhon Ratchasima Province, in northeastern Thailand.



Monitoring activities carried out in 2023 are presented in the Data Report 2023 (published in December 2024) and available in [open access online](#).

Over the years, EANET scientists and monitoring officers have improved the collective knowledge and skills of the Network, among others on the quality assurance and quality control (QA/QC) of the data.

The Report of the Inter-laboratory Comparison Project is conducted each year among the EANET analytical laboratories, based on the quality assurance/quality control (QA/QC) programs of the Network. The objectives of this project are to recognize the analytical precision and accuracy of the measurement in each participating laboratory, to give further opportunities to improve the quality of the analysis and to improve the reliability of analytical data through the assessment of suitable analytical methods and techniques.

EANET data is available for non-commercial use for scientists, researchers, students, mobile app developers, etc... and anyone who wishes to understand the state of acid deposition and air pollution in East Asia over the last two decades.

By widely sharing data, EANET aims to improve global knowledge on acid deposition and air pollution, as well as provide collaboration opportunities to improve public health and ecosystems' restoration.



Figure 1 – Location of acid deposition monitoring sites in 2019

How to access EANET Data?

The “Data Report 2023” and the “Report of the Inter-laboratory Comparison Project 2023” are available in open access online, for non-commercial use only.

Users may also access customized data, such as hourly, weekly, and bi-weekly data on wet and dry deposition monitoring, by registering on the [monitoring.portal](#).

[Download the “Data Report 2023” and the “Report of the Inter-laboratory Comparison Project 2023”](#)



EANET Data Featured in two Regional and Global Air Quality Management Platforms – the RAPAP and AQMx Platforms



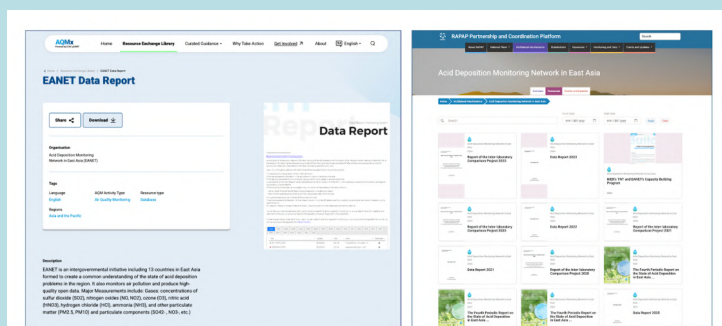
In 2022, ESCAP Member States adopted a Regional Action Programme on Air Pollution, and UNEP Member States in 2024, a resolution on Promoting Regional Cooperation on Air Pollution to Improve Air Quality Globally, which both include increased cooperation and knowledge-exchange on air quality through online cooperation platforms, among others. EANET's long-standing monitoring activities are being promoted in these multilateral platforms.

What is the RAPAP Partnership and Coordination Platform?

Adopted in 2022 at the 7th session of the United Nations Economic and Social Commission for Asia and the Pacific (ESCAP) Committee on Environment and Development (CED7), the Asia-Pacific Regional Action Programme on Air Pollution (RAPAP) aims to promote clean air for all in Asia and the Pacific through various action areas including air quality management, air quality monitoring and data sharing, best practices, capacity building and multilateral cooperation.

In the Ministerial Declaration of the CED7, one of the RAPAP's objective is: "To establish an open regional platform for the exchange of information and best practices on air pollution challenges and solutions, as may be deemed necessary and appropriate by members and associate members of ESCAP". The RAPAP Partnership and Coordination Platform was established following this Ministerial Declaration and formally launched during the Fifth Asia Pacific Clean Air Partnership (APCAP) Joint Forum in March 2025 in Yokohama, Japan.

Showcasing National Plans, multilateral mechanisms, stakeholders list, resources, live air quality data and events, the platform is a repository for air quality actions and tools in Asia and the Pacific.



Screenshots from the AQMx (left) and RAPAP (right) platforms

The [Live Air Quality Monitoring page](#) links to various regional and global platforms including from the European Space Agency (ESA), the Air Quality Index China (AQICN), and the National Institute of Environmental Research (NIER) Republic of Korea, among others.

What is AQMx?

The 6th edition of the United Nations Environment Assembly (UNEA-6) in February and March 2024 adopted a resolution on [Promoting Regional Cooperation on Air Pollution to Improve Air Quality Globally](#), which encourages Member States to continue their efforts to improve air quality by working on national air quality programmes and standards. Through this resolution, Member States requested UNEP's Executive Director to form an air quality cooperation network to raise awareness on air pollution's impacts and on the importance of mitigation actions, supporting capacity building and collaboration. It also referred to building an updated global online platform for information-sharing and communication on air quality.

Following this, the [Air Quality Management Exchange Platform – AQMx](#) – was developed by the [Climate and Clean Air Coalition \(CCAC\)](#), as a component of the CCAC Clean Air Flagship, in response to the need to build capacity on air quality management worldwide and to provide tools to support governments, in line with UNEA's resolution on Promoting Regional Cooperation on Air Pollution to Improve Air Quality Globally.

The platform is mainly composed of two parts: a Resources Exchange Library and the “[Curated Guidance](#)” section which aims to, in its first stage, provide a “top 10” list of actions for air quality managers to prepare a comprehensive air quality management planning.

How is EANET monitoring data promoted?

EANET data is shared in the [AQMx Resource Exchange Library](#), where users can access the EANET monitoring page and download the EANET Data Reports.

In the RAPAP Platform, EANET is presented in the [Multilateral Mechanism](#) section of the platform which includes an overview of the EANET and various resources such as EANET data and reports.

The launch of the RAPAP and AQMx platforms reflects growing regional and global efforts to strengthen cooperation on air pollution. By promoting long-standing efforts such as [EANET's monitoring activities](#) across multiple platforms, these frameworks not only enhance transparency and capacity building but also reinforce the collective commitment of countries to tackle air pollution and protect public health and the environment.

Access EANET Data on the [EANET Monitoring Data page](#).



Regional Action for Cleaner Air: ASEAN Policymakers and Experts Gather in Vientiane



Policymakers, experts, and development partners from across Southeast Asia gathered in Vientiane for a two-day Inter-ministerial Workshop to enhance regional cooperation on air pollution under the Clean Air for Sustainable ASEAN (CASA) Initiative. The event also served as EANET's National Awareness Workshop for the Lao People's Democratic Republic.

The Lao People's Democratic Republic joined the EANET in 2002, shortly after the EANET's inception as a formal intergovernmental initiative in January 2001. With its inclusion, EANET expanded to 13 Participating Countries, enabling Lao PDR to conduct harmonized acid deposition and atmospheric monitoring through the establishment of its first monitoring station in Vientiane, and contribute its data as part of the EANET network. In May 2023, Vientiane hosted a national stakeholder workshop to celebrate two decades of EANET, raise awareness among Lao government agencies and NGOs, and discuss capacity-building in areas like QA/QC, ambient data analysis, and haze management. Recently, Lao PDR also participated in the EANET's technical training activities including through support from the Network Center experts at the Asia Center for Air Pollution Research (ACAP) on wet-sampler maintenance, ion-chromatography guidance, and PM2.5 monitoring during technical missions in December 2023.

The Inter-ministerial Workshop to Address Air Pollution allowed EANET to better understand the challenges faced by Lao PDR on air pollution and to strengthen relations between EANET and Lao PDR.

Organized by the United Nations Economic and Social Commission for Asia and the Pacific (ESCAP) with support from the ASEAN-Korea Cooperation Fund, the workshop brought together representatives from the Association of Southeast Asian Nations (ASEAN), the Lao Ministries of Natural Resources and Environment, and of Agriculture and Forestry, the ASEAN Secretariat, the Secretariat for the EANET, and key United Nations representatives including from the United Nations Environment Programme (UNEP), the World Health Organization (WHO), the United Nations Development Programme (UNDP), the United Nations Children's Fund (UNICEF), and the United Nations Office for Disaster Risk Reduction (UNDRR). Over 50 participants joined both in person and online.

The workshop focused on knowledge exchange on best practices in air quality monitoring, policy development, and the use of emerging technologies such as artificial intelligence.



It began with introductory presentations by the Ministry of Natural Resources and Environment (Natural Resources and Environment Research Institute) and by the Ministry of Agriculture and Forestry (Department of agriculture extension and cooperative) of Lao PDR, and continued with country presentations from Brunei, Cambodia, Indonesia, Malaysia, and Thailand on their progress and challenges in tackling air pollution. This was followed by interventions by United Nations representatives and regional partners including presentations by ESCAP, EANET Secretariat, and UNICEF. Session 5, entitled “Good Practices of How to Use Digital Technology for Air Pollution,” included presentations by the Korea Environmental Professional Engineers Association (KEPEA), the Center for Earth System Modeling and Prediction (CEMC) from the China Meteorological Administration (CMA), and the College of Science, University of the Philippines Diliman. A roundtable discussion then explored how to enhance regional cooperation and align local and central actions for cleaner air.

On the second day, participants visited a CASA-supported Air Quality Monitoring Station in Vientiane to see real-time air quality data systems in action.

Through presentations, roundtable discussions, and the site visit, participants explored practical tools to address the region’s growing air pollution challenges. Two core priorities emerged from the discussions: enhancing technical capacity to leverage digital tools for synthesizing air quality data, and building communication strategies to improve the public access to information and raise awareness on air pollution issues.

These insights will inform future CASA activities and ESCAP programming, as well as the EANET discussions for the preparation of the draft Medium-Term Plan (2026–2030) on the EANET.

[Access more information and the workshop’s presentations.](#)



Group photo at the Inter-Ministerial Workshop for Promoting Capacity Building to Address Air Pollution through Regional Cooperation in Vientiane on 28 April 2025

Photo credits: featured image by Pascal Mueller (2019); group photo: all rights reserved to ESCAP.



Understanding Air Pollution and its Sources, Weather, Climate, and Topography in Malaysia: Insights from the EANET Awareness Workshop in 2024



The EANET National Stakeholder Awareness Workshop “Understanding Air Pollution and Its Sources, Weather, Climate, and Topography in Malaysia,” took place on 26 November 2024 at the Universiti Kebangsaan, Malaysia. Over 65 participants (in-person and online) gathered to discuss air quality management in Malaysia. The audience included academics, researchers, professors, and representatives from various government agencies focused on environmental conservation and sustainable development.

Co-hosted by the Universiti Kebangsaan Malaysia, the workshop aimed to understand Malaysia’s specific air quality and environmental challenges, support the implementation of related projects in collaboration with the EANET, and foster the development of new initiatives to combat air pollution and acid deposition. These efforts align with EANET’s the broader goal of addressing acid deposition and air pollution more effectively.

The workshop was inaugurated with Ms. Roslinda Binti Ulang, Undersecretary of the Ministry of Natural Resources and Environmental Sustainability (NRES) Malaysia, and Malaysia’s National Focal Point for EANET, delivering the Opening Remarks. She welcomed participants and reflected on Malaysia’s 28 years of active participation in EANET. She reaffirmed the Ministry’s commitment to tackling air pollution and acid deposition, underscoring its dedication to environmental sustainability.

Following this, Mr. Bert Fabian, Coordinator of the Secretariat for the EANET, introduced EANET’s expanded scope, which includes broader air quality monitoring activities. He provided insights into EANET’s organizational structure, data-sharing protocols, and funding mechanisms while setting the stage for the expert presentations.

The Awareness Workshop brought together experts who shared insights on air quality management in Malaysia and in the wider region.



Opening remarks by Ms. Roslinda Binti Ulang, Undersecretary of the Ministry of Natural Resources and Environmental Sustainability and Malaysia's National Focal Point for EANET

Prof. Meng Fan, Deputy Director General of the Network Center for the EANET at the Asia Center for Air Pollution Research, provided a regional perspective on environmental challenges and collaborative solutions in his presentation on “Air Quality and Acid Deposition in EANET.”

Ms. Norazlinda Ismail, Principal Assistant Director at the Department of Environment, Ministry of Natural Resources and Environmental Sustainability, Malaysia, highlighted national strategies and initiatives in air quality management. Prof.

Dr. Mohd Talib Latif, Chairman of the Department of Earth Sciences and Environment at Universiti Kebangsaan Malaysia and the President of Malaysian Association for Aerosols and Air Quality Research (MAAQR), explored the complex interplay between pollution sources, weather, and climate in shaping Malaysia's air quality.

Dr. Ahmad Fairudz Jamaluddin, Director of the Atmospheric Science and Cloud Seeding Division at the Malaysian Meteorological Department, discussed key monitoring practices and trends related to acid deposition, global greenhouse gases, and the background aerosol monitoring network in Malaysia.

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Additionally, Dr. Noor Zaitun Yahaya, President of the Clean Air Forum Society of Malaysia (MyCAS) and Senior Lecturer at Universiti Malaysia Terengganu, introduced innovative AI-based methods for acid deposition analysis in Malaysia.

The EANET National Stakeholder Awareness Workshop in Malaysia served as an important platform for knowledge sharing and collaboration. By bringing together experts and stakeholders, the event fostered discussions on actionable strategies to improve air quality management. The insights shared during the workshop contribute to ongoing efforts in environmental sustainability and air pollution mitigation in Malaysia and beyond.

Malaysia currently serves as the Chair of the Bureau of the Intergovernmental Meeting (IG) on the EANET since November 2024, until a new Chair is elected in November 2025. [Find out more about the next EANET events in 2025.](#)

Useful Resources

Download the panelists' presentations:

- [Air Quality and Acid Deposition in EANET](#) by Prof. Meng Fan
- [Air Quality Management in Malaysia](#) by Ms. Norazlinda Ismail
- [Understanding the Sources of Air Pollution and the Influence of Weather and Climate on Malaysia's Air Quality](#) by Prof. Mohd Talib Latif
- [Acid Deposition, Global Greenhouse Gases, and Background Aerosol Monitoring Network in Malaysia](#) by Dr. Ahmad Fairudz Jamaluddin
- [Novel Method with AI Technique for Malaysia Acid Deposition Analysis](#) by Dr. Noor Zaitun Yahaya



NIER and EANET Wrap Up Session 1 of the 2025 Training on Air Quality Management

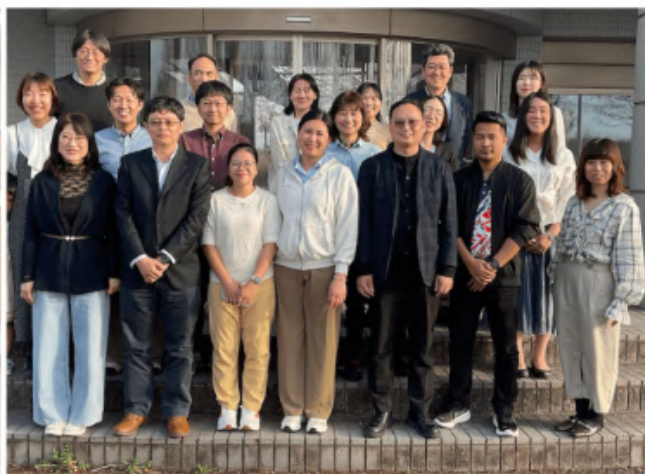


Four government officials and researchers from Cambodia, Lao PDR, Malaysia, and Mongolia completed an intensive, capacity-building program on acid deposition and air quality management. Co-organized by EANET and the National Institute of Environmental Research (NIER), Republic of Korea, the Technical and Training (INT) program aimed to strengthen technical expertise among EANET Participating Countries.

The first part of the program began in Japan from April 14 to 18, 2025. At the National Institute for Environmental Studies (NIES) in Tsukuba, trainees were introduced to advanced research facilities, including the atmospheric chamber and lidar system. Lectures covered various topics such as oceanic observation networks, Fourier-transformed infrared spectrometry (FTS), and chemical ionization mass spectrometry (CI-MS).

"Visiting the Niigata Monitoring Site and the Niigata Prefecture office provides an excellent opportunity to learn about local air quality monitoring and environmental management practices. The monitoring site offers hands-on experience in collecting and analyzing real-time air quality data, while the Prefecture office provides insight into how data is used to inform policy decisions and pollution control strategies at the regional level. This combined knowledge will be valuable for improving air quality management and implementing effective environmental policies in my country."

— A comment from a trainee



Participants in Japan during the Session 1 of the TNT training in April 2025

At the Asia Center for Air Pollution Research (ACAP), participants studied topics including the ecological effects of atmospheric deposition, QA/QC activities in EANET, and the Inter-laboratory Comparison Project. Training also covered monitoring of soil, vegetation, and aquatic environments, and included a site visit to the Niigata city monitoring station to observe practical applications in air quality monitoring.

From April 21 to May 2, 2025, the training continued in the Republic of Korea. At NIER in Incheon, participants were introduced to the institute's mission and work on environmental protection and public health. Visits to key institutions included Seoul National University (SNU), the Ulsan National Institute of Science and Technology (UNIST), the National Air Emission Inventory Research Center (NAIR), the Han River Environmental Research Center, and the Jeju Island Air Quality Research Center.

"The cruise ship tour on the Bukhan River was a memorable experience, allowing me to enjoy the natural scenery, observe the habitat of black birds, and learn how the river's water quality is measured."

— A comment from a trainee

At SNU, trainees received instruction in air filter sampling and analysis techniques. At UNIST, the focus was on international research collaboration and satellite monitoring validation. At NAIR, they learned how air emissions data from various sources is compiled to support environmental policy and compliance. The Jeju center visit introduced trainees to remote sensing and high-precision instruments for monitoring air pollutants such as particulate matter, ozone, and sulfur compounds.

"The National Air Emission Inventory and Research Center (NAIR) of Korea is highly valuable for my capacity building because it leads in the systematic collection, analysis, and management of national air emissions data, which directly supports evidence-based air quality policies. As a professional in Air Quality, Noise, and Vibration, learning from NAIR's advanced emission inventory system, modeling tools, and data validation methods would significantly enhance my technical skills and support the development of more accurate and effective air quality strategies in my country."

— A comment from a trainee



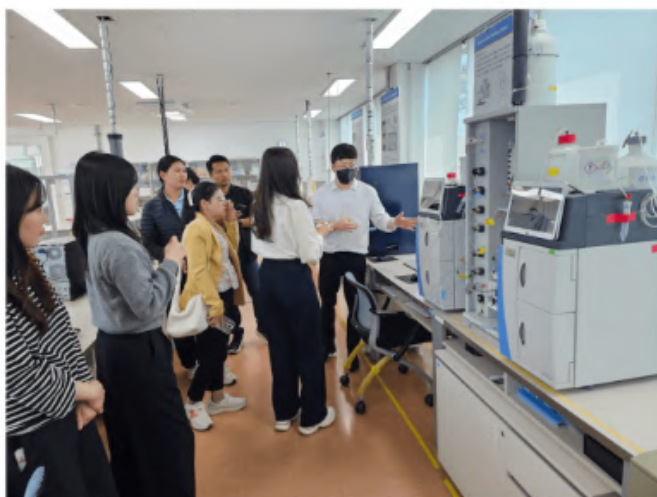
According to post-training feedback, all participants found the program in both Japan and the Republic of Korea to be highly valuable. It is expected that the experience and knowledge gained will be shared with colleagues through seminars, lectures, or study meetings in their home countries, contributing to capacity building in air quality management across the EANET region.

The 2025 TNT and EANET Capacity Building Program was approved as a Project Activity at the Twenty-sixth Session of the Intergovernmental Meeting on the EANET in November 2024. It was co-funded by the EANET Project Fund and the Republic of Korea, representing a continued commitment to regional cooperation in environmental protection.

Find more about the [EANET Project Fund](#).

View more photos on [Flickr](#)

"The discussion on the challenges faced by each country regarding the main sources of environmental pollution is an important matter, as it provides participants with the opportunity to share their views, experiences, and suggestions based on their respective national contexts. This allows for a deeper understanding of regional pollution issues and paves the way for more effective collaboration and solutions through platforms such as EANET."
— A comment from a trainee



Participants in Republic of Korea during the Session 1 of the TNT training in April-May 2025



Considering Volatile Organic Compounds Emission Inventories and Their Policy Implications: Insights from the EANET Workshop in 2024



The Network Center for the EANET organized a virtual workshop on the Emission Inventory of Volatile Organic Compounds (VOCs) and its Application for Policy Consideration on December 4, 2024. The workshop consisted of two sessions: expert lectures and participant presentations. The first session covered key topics such as the importance of developing an emission inventory for atmospheric environmental management, methodologies to estimate VOCs' emissions from stationary sources, the transportation sector, and biogenic sources.

It also included air quality modeling of VOCs and control measures for VOCs. Participants shared the status of VOCs management in their respective countries and discussed ideas for EANET's involvement in addressing VOCs' issues. Approximately 60 participants attended the workshop.

Dr. Jun-ichi Kurokawa, from the Asia Center for Air Pollution Research serving as the Network Center for the EANET, delivered a lecture on the introduction of emission inventories, focusing on their roles in managing atmospheric environmental issues and the basic methodology to develop an emission inventory, particularly for Volatile Organic Compounds (VOCs) emissions from stationary sources.

The presentation began by highlighting the necessity and framework of air quality management, emphasizing the importance of VOCs and emission inventories. For methodologies, general procedures to develop emission inventories were explained, following the process flow of the development from defining the scope and structure to create emission tables and gridded data.

Next, the methodology for estimating VOCs emissions from stationary sources was presented.



This included details of sector categories, examples of fugitive emissions characteristics of VOCs sources, collecting and setting activity data, emission factors, removal efficiencies, speciation to components, and calculating emissions to create final products. References for methodologies to develop emission inventories were also introduced.

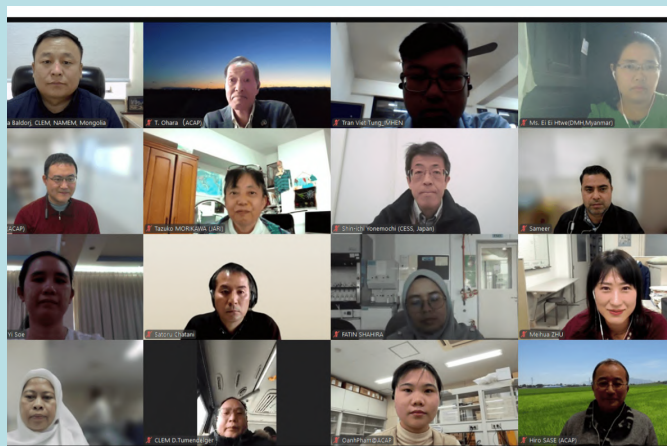
Dr. Tazuko Morikawa from the [Japan Automobile Research Institute](#) delivered a lecture on the methodology for estimating emissions from road transport. The lecture began with an overview of global changes in passenger cars and heavy-duty vehicles, including electrification targets for passenger cars aimed at mitigating both climate change and air pollution. Next, the necessary information for developing emission inventories for the road transport sector was detailed. This included characteristics of gasoline and diesel vehicles, methods for calculating tail pipe emissions, the definition and estimation of evaporative emission from gasoline vehicles (which are particularly important for VOCs), and component species of VOCs in emissions from the road transport sector. Finally, bioethanol-blended fuels originally introduced to mitigate climate change were discussed due to their impact on air pollutants emissions.

Dr. Justin Sentian, from [Universiti Malaysia Sabah](#), Malaysia, delivered a lecture on VOCs emissions from biogenic sources. Biogenic VOCs (BVOCs) are organic compounds emitted by plants and other biological sources. Although these are natural sources, the importance of BVOCs was highlighted due to their strong impact on the formation of ozone and secondary PM_{2.5}.

Understanding the contribution of BVOCs is essential for developing effective policies to control anthropogenic VOCs emissions. The lecture also covered the recent status of BVOCs emissions and case studies for Southeast Asia, including future simulations under different climate scenarios. Since BVOCs emissions are significantly influenced by temperature, climate change impacts BVOCs emissions, which in turn affects ozone and PM_{2.5} concentrations.

Dr. Satoru Chatani from the [National Institute for Environmental Studies](#) presented a lecture on the air quality modeling of anthropogenic VOCs. The lecture began by introducing the necessities and roles of air quality simulations for VOCs, which help understand complex physical and chemical processes, including non-linear relationships among NO_x, VOCs, and ozone. Next, the treatment of VOCs and their photochemical reactions was explained, including popular chemical modules and VOCs speciation used in air quality models. Application methodologies of air quality models to analyze VOCs issues were then introduced, covering validations and evaluations of simulated results based on monitoring data. This highlighted the importance of monitoring of VOCs and their components. It was emphasized that air quality modeling is essential for developing effective strategies to suppress ambient concentrations of secondary pollutants.

Dr. Shinichi Yonemochi from the [Center for Environmental Science in Saitama](#) delivered a lecture on control measures of VOCs using the case of Saitama Prefecture of Japan. The lecture began with an overview of the current and historical backgrounds of Saitama Prefecture focusing on the status of ozone pollution.



Screenshot of some participants during the Workshop

Regulations of VOCs in Saitama Prefecture, including legal measures and voluntary actions by companies to reduce VOCs were explained.

Next, trends in VOCs emissions from major sources in Saitama Prefecture were presented to demonstrate the effects of these regulations. Examples of actual control measures were introduced, including VOCs' emission control techniques, VOC measuring instruments, and experiences using them in various applications such as for outdoor painting and the cleaning process for printing machines.

During the second session, participants exchanged information on VOCs related issues in their countries, including the general status of air quality, specific topics such as the management of the petrochemical industry, and the progress and challenges in developing VOCs emission inventories.

As in previous workshops, many countries identified the continuous enhancement of national emission inventories as a challenge and expressed the desire for additional EANET projects focusing on capacity-building activities. Suggestions included not only webinars but also on-site training courses for major source categories of the emission inventory. The Network Center for the EANET, as the workshop organizer, will assess potential future activities through the EANET Project Fund.

Find out more about the [EANET Project Fund](#).

Useful Resources

- [Outline and Program](#)
- Panelists and Participants' Presentations:
 - [Introduction of Emission Inventory and VOCs Emissions From Stationary Sources](#) (by Dr. Jun-ichi Kurokawa)
 - [VOCs Emissions from Road Transport](#) (by Dr. Tazuko Morikawa)
 - [NMVOCs Emissions from Biogenic Sources](#) (by Dr. Justin Sentian)
 - [Air Quality Modeling of NMVOCs](#) (by Dr. Satoru Chatani)
 - [Control Measures of VOCs: Case Study of Saitama Prefecture of Japan](#) (by Dr. Shinichi Yonemochi)
 - [Presentations from Participants](#)



Highlights of the EANET Online Seminar on Particulate Matter and Haze in Southeast Asia



The EANET Online Seminar for Particulate Matter Problems including Haze in Southeast Asia took place on 20 December 2024. Organized by the Network Center for the EANET, it gathered 88 participants, from the EANET Participating Countries and beyond, to discuss the various effects of PM/Haze pollution on ecosystems and human health.

Prof. Fan Meng, Deputy Director General, of the Asia Center for Air Pollution Research, ACAP (the Network Center for the EANET), delivered the Opening Remarks. He highlighted the need for integrated approaches to address shared challenges, particularly in cooperation between EANET and the ASEAN Agreement on Transboundary Haze Pollution (AATHP).

Mr. Bert Fabian, Coordinator of the Secretariat for the EANET delivered the Welcome Remarks. He emphasized the importance of understanding pollution sources, meteorological influences, and the need for collaborative efforts among scientists, government officials, and intergovernmental bodies like ASEAN to mitigate this problem.

Mr. Wiraditma Prananta, from the Environment Division at the ASEAN Secretariat highlighted ASEAN's commitment to addressing transboundary haze pollution through the Second ASEAN Haze-Free Roadmap 2023–2030.

He outlined the historical impacts of haze pollution, ASEAN's adoption of the ASEAN Agreement on Transboundary Haze Pollution (AATHP), and the development of successive haze-free roadmaps, with the current one aiming to eliminate haze by 2030 through strategies such as sustainable land management and enhanced monitoring. The roadmap emphasizes regional and subregional activities, sustainable peatland management, and a haze knowledge portal while addressing challenges such as resource mobilization and root causes of fires. Mr. Wiraditma Prananta concluded with a call for collaboration among stakeholders to achieve a haze-free region and improve environmental and air quality standards by 2030.



Panelists from the EANET Online Seminar on Particulate Matter and Haze in Southeast Asia



Mr. Zhong-Yi Chia, from the [ASEAN Specialized Meteorological Centre \(ASMC\)](#), explained the small haze dispersion modeling efforts at ASMC, focusing on the integration of fire hotspot emissions, weather forecasts, and observational data to predict haze spread. He highlighted the challenges of modeling in the tropical region, such as thick cloud cover, transient weather phenomena, and limited ground observation coverage, while detailing the use of tools such as the United Kingdom's Met Office's [Numerical Atmospheric-dispersion Modelling Environment \(NAME\)](#) model and wildfire emission estimations based on fire radiative power and land cover maps.

Dr. Eric Zusman, from the Integrated Sustainability Centre, [Institute for Global Environment Strategies \(IGES\)](#), focused on addressing haze pollution in Southeast Asia, emphasizing the need for multi-level and multi-stakeholder solutions, particularly through the implementation of a roadmap running from 2023 to 2030. The roadmap includes nine strategies targeting PM_{2.5} pollution and haze episodes, aligning with the [World Health Organization's air pollution standards](#) and promoting evidence-based, integrated approaches tied to climate, biodiversity, and development goals. Key challenges to implementing solutions, such as open burning restrictions, stem from social, institutional, economic, and technological barriers. He advocated for enabling environments, awareness programs, and innovative governance models to overcome these barriers, leveraging both cooperative and competitive frameworks for scaling effective solutions.

Dr. Jan Eiof Jonson from the Meteorological Synthesizing Centre-West of [EMEP](#) (MSC-W of EMEP), Norwegian Meteorological Institute, focused on the Convention on Long-Range Transboundary Air Pollution under the United Nations Economic Commission for Europe (UNECE), addressing environmental challenges such as acid deposition, air pollution, and wildfire impacts.

He highlighted the establishment of monitoring centers across Europe and North America to track emissions, pollutants such as PM_{2.5}, and their transboundary effects. Pollution reduction trends, driven by legislation, are noted, though discrepancies in reporting and uncertainties remain. Satellite data and emission datasets including the Global Fire Assimilation System ([GFAS](#)) and [FINN v2.5](#) are utilized for monitoring wildfire emissions and assessing their effects on air quality and climate. Key challenges include differences in emission estimates, injection heights, fire radiative power, and regional variability. He stressed the need for global collaboration and further refinement in modeling to support effective policy development, particularly in Europe.

Dr. Toshimasa Ohara, Director General of ACAP, delivered the Closing Remarks. He emphasized the importance and common challenge for all countries in Southeast Asia to gain a better understanding of the status of PM health pollution and to explore the best solutions to reduce it. He concluded by expressing hope that this workshop would be a good opportunity to strengthen collaboration between EANET and the ASEAN.

[Find out more on EANET Project Fund and EANET Projects.](#)

Useful Resources:

- Watch the recording on [YouTube](#)
- Read the Panelists' Presentations:
 - [Session 1-1 by Mr. Prananta](#)
 - [Session 1-2 by Mr. Chia](#)
 - [Session 1-3 by Dr. Zusman](#)
 - [Session 2 by Dr. Jonson](#)

2025 Calendar of EANET Key Meeting



AUGUST

7-8 AUG, online meeting

The Working Group Meeting in 2025 (WG2025) on the EANET

SEPTEMBER

2-3 SEPT, Manila, Philippines

The Twenty-sixth Senior Technical Managers' Meeting (STM26) on the EANET

OCTOBER

20-22 OCT, Vientiane, Lao PDR

The Twenty-fifth Scientific Advisory Committee (SAC25) meeting on the EANET

NOVEMBER

27-28 NOV, Bangkok, Thailand

The Twenty-seventh Session of the Intergovernmental Meeting (IG27) on the EANET

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