

Consideration of the Relevant Scientific Activities of the EANET:

Methodological Study on PM_{2.5} Source Identification and Capacity Enhancement in EANET with Emphasis on Southeast Asia

SAC26

20-22 October 2026

Kuala Lumpur, Malaysia

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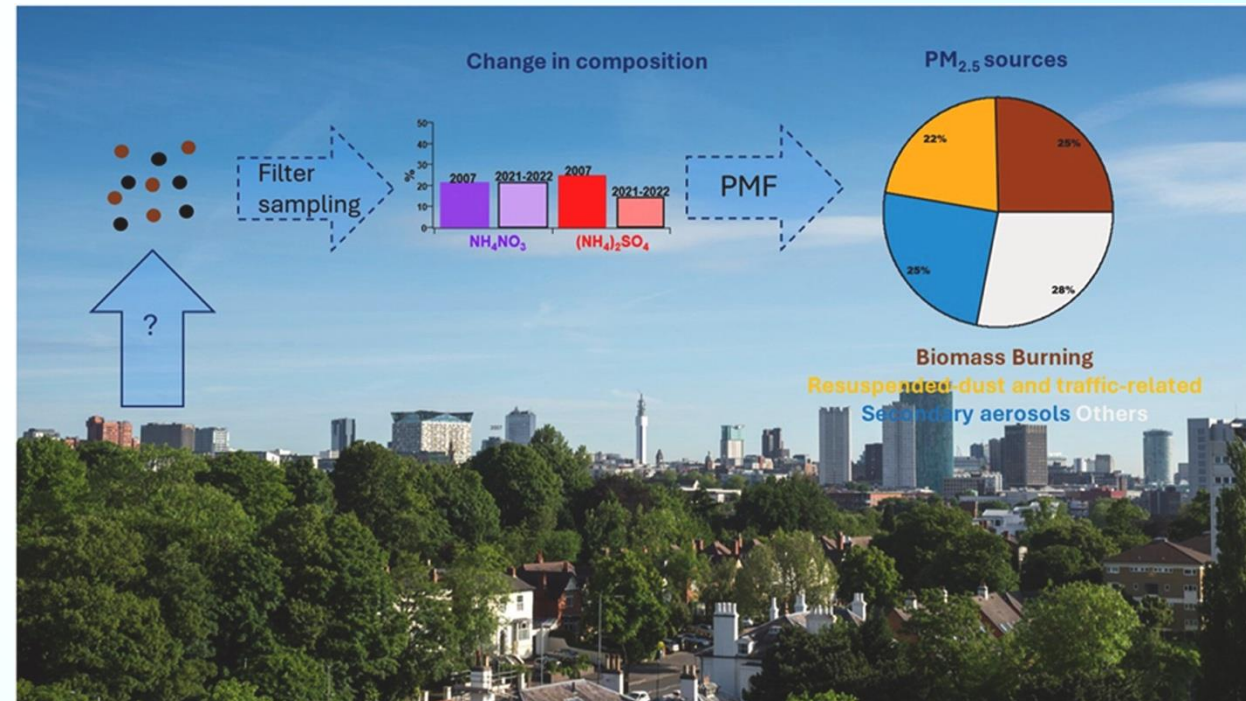
Network Center for the EANET

Outline of EANET Project 2026-06

Methodological Study on PM_{2.5} Source Identification and Capacity Enhancement in EANET with Emphasis on Southeast Asia

Project Outputs

- Standardized Methodologies for PM_{2.5} Component Measurement
- Information on sources of PM_{2.5}, including quantitative contributions from each source type and insights into seasonal and regional variation
- Skilled local stakeholders, equipped with the knowledge and technical abilities needed to monitor PM_{2.5} levels and conduct source apportionment independently
- Established local capacity for ongoing, independent monitoring of PM_{2.5} and analysis of its sources, enabling air quality management and policy support



Time schedule of EANET Project 2026-06

2026

2027

PM2.5 Source identification

Survey of reliable methodologies for measuring the components of PM2.5

PM2.5 source analysis

Identify potential PM2.5 in target cities
Compare other studies in East Asia

Developing technical materials

Develop technical documents for PM2.5 component measurement and source apportionment

Capacity building

Joint Capacity Building in Cambodia
Joint workshop on PM2.5 Source Information
(June 2026)

Local training or workshops on PM2.5 source identification
(2nd half of 2027)

Joint workshop on Air Pollution Policy Based on PM2.5 Source Information - Toward Policy Application and Capacity Building in East Asia -

(Purposes)

- Review the current status, challenges, and needs related to PM2.5 chemical composition measurement and PM2.5 source apportionment in East Asian countries;
- Discuss PM2.5 analysis approaches that are feasible under limited financial and human resource, including the use of low-cost sensors (LCS) and simplified analytical techniques;
- Share perspectives on capacity building, methodological standardization, and pathways for policy application of PM2.5 source apportionment, based on experiences from SATREPS and other related research projects.



**Joint Workshop on
Air Pollution Policy Based on
PM2.5 Source Information**
Toward Policy Application and Capacity Building in East Asia
Co-organized under the EANET Project (2026-06) and JICA SATREPS

 **Date & Time**
June 12, 2026 | 13:00–15:15 (UTC+7, Bangkok time)

 **Expected Participants**

- ◆ Researchers conducting PM2.5 source apportionment studies in East Asia
- ◆ Persons who involved in PM2.5 pollution countermeasures including policy officers, QA/QC managers, and technical staffs in East Asia

Joint workshop on Air Pollution Policy Based on PM2.5 Source Information

- Toward Policy Application and Capacity Building in East Asia -

Time/Duration	Agenda
13:00-13:10	Opening Remarks, Introduction ● Ms. Siwaporn Rungsiyanon, Asia Center for Air Pollution Research (ACAP) ● Mr. Ke Vongwatana, Ministry of Environment, Cambodia ● Dr. Mitsuhiro Hata, Air SATREPS Project Introducing the objectives of WS, and the linkage with the EANET Project and Air-SATREPS ● Dr. Keiichi Sato, ACAP
13:10-14:10	Session 1 Current Status of PM2.5 Monitoring and Source Apportionment in East Asia Overview of national practices in East Asian countries, including: - Integrated use of satellite data, ground observations, and modeling to understand pollution sources - Expansion of national monitoring networks despite technical and financial constraints - Application of tools such as Positive Matrix Factorization (PMF) to support policymaking Presenters: ● Prof. Yongjoo Choi, Hankuk University of Foreign Studies. Republic of Korea (Study in Thailand and Korea) ● Prof. Puji Lestari, Bandung Institute of Technology, Indonesia ● Prof. Mylene G. Cayetano, University of the Philippines in Diliman, Philippines

Joint workshop on Air Pollution Policy Based on PM2.5 Source Information

- Toward Policy Application and Capacity Building in East Asia -

Time/Duration	Agenda
14:15-15:00	Session 2 Case Study and Panel Discussion Case Study: Phnom Penh (Air-SATREPS) - Practical examples of PM2.5 chemical composition measurement and analysis in Cambodia - Policy applications using PM2.5 source information with a phased and scalable approach - Lessons learned from capacity building and institutional development Presenter: ● Dr. Moly Or Chanmoly, Air-SATREPS Project Interactive Online Polling • Q1: What is the highest-priority PM2.5 source in your country? • Q2: What data, human resources, and institutions are currently available? • Q3: What are the main barriers to effective PM2.5 pollution control? Panel Discussion: Based on the results of the online poll and country-specific situations, the panelists will discuss effective measures for controlling PM2.5 pollution. <u>Guiding questions in the panel discussion:</u> Q1 How can countries learn from each other's experiences, as shown in the online polling results, to improve their PM2.5 policies? Q2 How can we connect scientific findings on PM2.5 sources with real government decision-making? Q3 How can each country take step-by-step actions to reduce PM2.5 pollution in ways that match their actual capacity? Panelists: ● Prof. Yongjoo Choi, Hankuk University of Foreign Studies. Republic of Korea ● Prof. Puji Lestari, Bandung Institute of Technology, Indonesia ● Prof. Mylene G. Cayetano, University of the Philippines in Diliman, Philippines ● Dr. Moly Or Chanmoly, Air-SATREPS Project, Cambodia ● Mr. Yim Raksmeay, Ministry of Environment, Cambodia

Summary of the panel discussions in the Joint Workshop

- **Collecting dense monitoring data** is the first step. Combining in-situ measurement and satellite data is important. Reduce from large emission source is achieved in Korea.
- **Compare the sources in different cities and countries.** Indonesia government is collecting the information on sources. Not only monitoring data, cost effectiveness is an important option for the political action.
- Open burning and agricultural residues are traditional culture in southeast Asian countries. **Prioritized intervention is biomass burning.**
- Cooperation with other institutions are important for overcome the barriers to PM2.5 pollution measures.
- **Collect scientific evidence is important.** Introducing EV is feasible for reducing of transport sector in Cambodia. Open burning is traditional activity, and it is difficult to reduce.
- Regarding PM2.5 source, **high priority is transportation source in Phnom Penh and open burning in rural.** Household sources are also important and transboundary pollution are also in rural.

Capacity building of PM2.5 composition measurement in Cambodia collaborated with JICA SATREPS Project (June 2026)



Draft content of technical document for PM2.5 component measurement

- I. Introduction**
- II. Principles of PM2.5 Component Measurement**
- III. PM2.5 Sample Collection**
- IV. Measurement of Ionic Components**
- V. Measurement of Elemental Components**
- VI. Measurement of Carbonaceous Components**
- VII. Measurement of Organic Tracers**
- VIII. Supporting Measurements**
- IX. Data Quality Management**
- X. Data Management and Reporting**

Draft content of technical document for PM2.5 source apportionment

- I. Introduction**
- II. Fundamentals of PM2.5 Sources**
- III. Data Requirements**
- IV. Source Identification Using Chemical Indicators**
- V. Receptor Modeling Approaches**
- VI. PMF Analysis Procedure**
- VII. Integration with Other Approaches**
- VIII. Interpretation of Source Apportionment Results**
- IX. Application to Air Quality Management**

Action required

The Twenty-sixth Session of the Scientific Advisory Committee (SAC26) is invited to review the progress of methodological study on PM2.5 source identification and capacity enhancement in EANET with emphasis on Southeast Asia (EANET Project Activities 6 in 2026)..