



A focus on

VOLATILE ORGANIC COMPOUNDS AND LOW-COST SENSORS



Background

Due to rapid economic growth and industrialization, many countries in East Asia are still facing serious threats from air pollution and acid deposition, in a more global context where almost the entire global population (99%) breathes air that exceeds the World Health Organization's air quality limits, hindering populations' right to a healthy environment.

The Acid Deposition Monitoring Network in East Asia (EANET) was established in 2001 as a regional intergovernmental network to promote cooperation among countries in East Asia to address acid deposition problems. In 2021, at the Twenty-Second Session of the Intergovernmental Meeting (IG22), the 13 Participating Countries of the EANET agreed to expand its scope to address wider air pollution problems and launched the EANET Project Fund to encourage cooperation with partners outside of its network.

In the last 20 years, the EANET has made excellent progress in acid deposition monitoring cooperation, including on particulate matter, sulfur dioxide, nitrogen dioxide, and ozone. The Network has fostered a regional monitoring network and scientific exchange platforms that contribute to solving acid deposition and air pollution problems in East Asia.

In November 2022, the Twenty-fourth Session of the Intergovernmental Meeting (IG24) approved the first batch of "EANET Project Plans" funded through the EANET Project Fund, with an Estimated Income for Project Activities in 2023 of US\$489,700, including funding from EANET, additional financial support from Japan (MOEJ) from the Republic of Korea (NIER); and in collaboration with the Asian Development Bank (ADB); and in-kind support from Japan (JARI, NIES), Mongolia, the Philippines, and Viet Nam (IMHEN, MONRE) for the implementation of 8 projects, among which two projects focusing on Volatile Organic Compounds (VOC) and Low-Cost Sensors (LCS).

In this respect, and in line with the efforts to facilitate the sharing of a common understanding of air quality and acid deposition issues, the EANET Awareness Workshop in 2023 will be organized on Tuesday, 30 May 14:00-17:00 (ICT) at the United Nations Convention Center in Bangkok, Thailand, and in a hybrid format, under the name “ EANET Regional Awareness Workshop in 2023: a focus on Volatile Organic Compounds (VOCs) and Low Cost Sensors (LCS)”, as part of the Climate and Clean Air Conference: Air Quality Action Week, organized by the UN Environment Programme (UNEP) and the Climate and Clean Air Coalition (CCAC). The Workshop is held in cooperation with the Regional Resource Centre for Asia and the Pacific (RRCAP).

Objective and Participants

The Workshop is expected to increase public understanding of air pollution and acid deposition issues through the lens of experts, policymakers, and other stakeholders from the EANET region and globally. The two sessions will focus on innovative and emerging topics, specifically on Volatile Organic Compounds (VOCs) and Low-Cost Sensors (LCS) related opportunities, limitations, and good practices, and possibly generate future collaboration ideas.

The sessions will be attended online and/or in person by policymakers, national researchers, and scientists mainly from the Network’s 13 Participating Countries. It will also welcome representatives of partner organizations working on related issues.

Session description

Volatile Organic Compounds (VOCs) are a component of air pollution that includes a complex mixture of hundreds of carbon-containing gases. VOCs also include a wide variety of chemicals, some of which can cause short- and long-term adverse health effects. However, due to the unique characteristics of VOCs and the relatively high cost of measurement, VOC monitoring and its related activities in the EANET region are still at an early stage.

Session 1 will showcase issues and challenges on VOCs. Experts and stakeholders from the EANET Participating Countries will discuss how VOCs can be monitored and possibly mitigated. Two examples, funded by MOEJ through the EANET Project Fund and co-finance, of technical assistance to build implementation plans in Mongolia and the Philippines will be show-cased, considering how to replicate similar activities in the EANET region and beyond.

The Low-cost sensor (LCS) technology to measure air quality has remarkably advanced in recent years and is now widely used by the private sector and provides information on the atmospheric environment to citizens through data communication networks. Noticing the cost-effectiveness of LCS, international organizations have started to promote the use of LCS in selected areas to strengthen the capacity of governments where official air monitoring networks are insufficient.

In Session 2, we will learn about the wide potential of Low-Cost Sensors (LCS), including the related limitations and opportunities. Panelists will discuss improving air quality monitoring networks, citizen-data, and the development of hybrid monitoring networks, such as through the HAQMN Project funded by MOEJ through the EANET Project Fund and co-finance, and finally data and quality standards’ requirements. A deployment plan in Viet Nam, in collaboration with the ADB and other partners, will be presented, allowing possible similar deployments in the region.

Tuesday, 30 May 2023
14:00 - 17:00 (ICT - Bangkok
Time)

Hybrid event: United Nations Conference Center (UNCC),
Bangkok, Thailand, and online

PROGRAMME

14:00 - 14:20

Opening Session

Delivery of Welcome Remarks

Introductory Presentations

Two Decades of EANET

EANET Project Fund and Activities

14:20 - 15:15

Panel Discussion

Importance and Challenges of VOCs
Measurement and Control in East
Asia

15:15 - 15:45

Networking break

15:45 - 16:50

Panel Discussion

LCS's role in air quality management
in East Asia

16:50 - 17:00

Closing Session

Conclusion and Closing Remarks



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