

Concept Note

EANET Online Workshop on the Utilization of Low Cost Sensors for Air Quality Monitoring: Recommendations and Strategies

6 November 2024 (13:00-16:45 Bangkok Time)

- EANET Project Activity 3 in 2024 -

Network Center for EANET (Asia Center for Air Pollution Research: ACAP)

1. Background

- Air quality administration usually uses conventional reference monitors. However, low- and middle-income countries cannot fully use them in their air quality monitoring network due to the limitation of resources. Less expensive and smaller monitoring devices, so-called Low-cost sensors (LCSs), are capable to fill the gaps in existing air quality monitoring networks, and the data measured by LCSs will provide information for policy-relevant air quality measures.
- In most areas in the Asian region, air quality monitoring capacities of the national and local governments are still limited and need to be developed to improve their air quality to achieve SDGs. Considering emerging sub-regional-scale and serious seasonal air pollution events, such as Ozone and PM2.5 pollution, building network of reliable and internationally comparable air quality data becomes more important. Thus, it is necessary for practitioners to consider how they can wisely select and use reliable LCS with the network of reference-level monitors in an integrated manner for enhanced air quality monitoring.
- The EANET has been developing the air quality monitoring network in the East Asia region with 13 participating country governments and their scientists and assisting them to develop domestic capacity of scientific and internationally comparable air quality monitoring. The EANET is expanding its scope to wider air pollution issues, and the wise use of reliable LCS is one of the EANET's interests for development of monitoring capacity. The EANET project titled "Methodology Study for Development of LCS Hybrid Air Quality Monitoring Network (HAQMN)" has been implemented since 2022.
- Besides the above mentioned EANET project, there are some projects to implement air quality monitoring by using a LCS network in urban and regional scale of East Asia. These networks are collecting the data via internet and some projects demonstrate real time data. These preceded projects show how LCS technology and citizen participation can contribute to monitoring and improving air quality. They also show how data transparency and open access are important for increasing public awareness of air pollution.

2. Objectives

- To share information on technical requirements, data management and visualization, citizen participation, policy involvement and business model by preceded projects of LCS monitoring network in Asian region
- To discuss scopes and challenges for establishing a sustainable LCS monitoring network in East Asia and for sharing LCS data and scientific findings to strengthen efforts to improve the regional air quality in East Asia.

- To consider recommendations on future directions of LCS monitoring in EANET

3. Organizer

Network Center for EANET (ACAP)

4. Date, Time and Modality

Date: 6 November 2024

Time: 13:00-16:45 Bangkok time

Modality: Online style

5. Expected Participants

Policymakers, practitioners, and technical officers of local/national government related to air pollution issues in participating countries of EANET and other countries in Asia.

6. Arrangement

Online participation, registration through the dedicated website below is required.

Registration site:

https://us06web.zoom.us/webinar/register/WN_D7SLRqZ5Qmqjn1vnhsBl3g

7. Contacts

Dr. Akie Yuba, Atmospheric Research Department, Asia Center for Air Pollution Research, Network Center for EANET, yuba@acap.asia

Provisional program of the regional workshop

6 November 2024	
Time/Duration	Agenda
13:00- 5 mins	<p>Opening Remarks</p> <ul style="list-style-type: none"> ● Dr. Fan Meng, Deputy Director General, ACAP ● Online group photo
13:05- 100 mins (20 mins presentation and 5 mins Q&A for each)	<p>Session 1: Lesson from the preceded projects: Air quality monitoring by using a LCS network in Asian region</p> <p>Presenters will introduce their present status and efforts on LCS monitoring in the light of technical requirements, data management and visualization, citizen participation, policy involvement and business model, followed by discussions among participants to seek advice and exchange views.</p> <p>Presenters:</p> <ul style="list-style-type: none"> ● Prof. Tomoki Nakayama, Nagasaki University (Aakash Project) ● Prof. Justin Sentian, Universiti Malaysia Sabah ● Dr. Nguyen Viet Hoai, Vietnam National University (AQSEA) ● Dr. Maria Obiminda L. Cambaliza, Ateneo de Manila University (IGAC-MANGO) <p>Moderator:</p> <ul style="list-style-type: none"> ● Dr. Hiroaki Minoura, Visiting Researcher, ACAP
14:45- 10 mins	<p>Break</p>
14:55- 25 mins (20 mins presentation and 5 mins Q&A)	<p>Session2: Report on the EANET project “Methodology Study for Development of LCS Hybrid Air Quality Monitoring Network (HAQMN)”</p> <p>Presenter will introduce the activities on the EANET LCS Project, followed by discussions among participants to seek advice and exchange views on the project.</p> <p>Presenter:</p> <ul style="list-style-type: none"> ● Dr. Akie Yuba, Senior Researcher, ACAP <p>Moderator:</p> <ul style="list-style-type: none"> ● Dr. Keiichi Sato, Department Head, ACAP
15:20- 10 mins	<p>Break</p>
15:30- 60 mins (25 mins online poll and 35 mins panel discussions)	<p>Session3: Discussions on scopes and challenges for establishing a sustainable LCS monitoring network in East Asia to strengthen efforts to improve the regional air quality</p> <p>First, online polls regarding the following key questions are made by participants to seek their needs and views.</p> <p>Key Questions:</p> <ol style="list-style-type: none"> 1. What are the most critical local air quality issues in your country? 2. How will citizens and communities be paid attention to local air quality data? 3. Is there available infrastructure (internet, power supply, etc.) to operate the LCS network in your country? 4. How do governments and local authorities plan to use the data from the LCS network for policy makings? 5. What kind of funding and support are necessary for sustaining the LCS network?

	<p>Then, the panelists make comments or recommendations on future directions of LCS monitoring in EANET considering the key questions.</p> <p>Panelists:</p> <ul style="list-style-type: none"> ● Dr. Le Ngoc Cau, IMHEN, Vietnam ● Dr. Kyu Kyu Sein, DMH, Myanmar ● Prof. Tomoki Nakayama ● Prof. Justin Sentian ● Dr. Nguyen Viet Hoai ● Dr. Maria Obiminda L. Cambaliza <p>Moderator:</p> <ul style="list-style-type: none"> ● Dr. Keiichi Sato, Department Head, ACAP
<p>16:30- 15 mins</p>	<p>General Q&A and summary of the workshop</p>
<p>16:45-</p>	<p>Closing</p>