

Concept Note

**EANET Seminar on
utilizing Satellite Monitoring including access to Dust and Sand Storm
12 December 2025 13:00-15:30 (Bangkok time (UTC+7))
- EANET Project Activity 7 in 2025 -**

1. Background

- Satellite observation of air pollutants, including acidifying substances, has become an increasingly important tool for air quality monitoring. Compared with ground-based systems that are often spatially limited, satellite instruments provide near real-time, consistent coverage over large areas and help identify the sources, transport, and meteorological influences on air pollution. Such data also contributes to understanding the links between air quality, climate change, and policy needs.
- In East Asia, the Republic of Korea has played a leading role through the Geostationary Environment Monitoring Spectrometer (GEMS), launched in 2019, which measures NO₂, O₃, SO₂, and Aerosol Optical Depth (AOD) hourly across the region. The Pan-Asia Partnership for Geospatial Air Quality information (PAPGAPi) Project, initiated in 2020 by the National Institute of Environmental Research (NIER) under the Ministry of Environment of the Republic of Korea, with support from the Korea International Cooperation Agency (KOICA) and the United Nations Economic and Social Commission for Asia and the Pacific (UNESCAP), involves 13 Asian countries to share GEMS data and strengthen regional capacity. Japan is also advancing satellite observation with the Global Observing SATellite for Greenhouse gases and Water cycle (GOSAT-GW), the third in the GOSAT series following GOSAT (2009) and GOSAT-2 (2018), was launched in June, 2025.
- GOSAT-GW carries two instruments—Total Anthropogenic and Natural emissions mapping SpectrOmeter-3 (TANSO-3) and Advanced Microwave Scanning Radiometer-3 (AMSR3). The TANSO-3 sensor was developed and operated by the Ministry of the Environment (MOE), the National Institute for Environmental Studies (NIES), and the Japan Aerospace Exploration Agency (JAXA). Given the challenges of monitoring wide-area phenomena such as Dust and Sand Storms (DSS) in Northeast Asia and haze in Southeast Asia, satellite technology offers a highly effective approach. For EANET Participating Countries, enhanced understanding of space-based observations will help integrate these technologies with ground-level and low-cost sensor monitoring, strengthening collaborative efforts to assess and manage air quality in the region.

2. Objectives

- To discuss, and make recommendations, if possible, the possibility of future collaboration with organizations related to satellite monitoring
 - To discuss the applications of satellite monitoring for such as DSS problems.
 - To obtain scientific knowledge on the relationships between satellite monitoring and ground level monitoring.
3. Expected participants
- Government officials, such as representatives for the Intergovernmental Meetings and Working Groups in the EANET, other relevant officials, etc.
 - EANET related scientists, such as the Scientific Advisory Committee members, Task Force members, other relevant scientists, etc.
 - Resource persons, including invited speakers from other regional networks and international organizations
4. Date, Time and Venue
- 13:00-15:30 (Bangkok time (UTC+7)) 12 December, 2025)
 - Online format (using Webex)
5. Organizer
- Network Center for the EANET (Asia Center for Air Pollution Research: ACAP)
6. Arrangement
- Registration through the dedicated website below is required.
 - Registration site
(tbd)
7. Contacts
- eanet@acap.asia
 - Network Center for the EANET (Asia Center for Air Pollution Research: ACAP)

8. Program outline

Time	Topics/title of a presentation	Speaker	Note
13:00 UTC+7 (15:00 JST)	Opening the workshop Group Photo	Prof. Meng Fan, Deputy Director General, NC Ms. Yujeong Kim, Ad Interim coordinator, EANET Secretariat	MC: Dr. Ken Yamashita, NC
13:10 (15:10)	Presentation 1: (30 minutes: The GOSAT-GW observations of greenhouse gases and air pollutants from the urban to global scales)	Dr. Tanimoto Hiroshi, NIES	
13:40 (15:40)	Q&A (10 Minutes)		
13:50 (15:50)	Presentation 2: (30 minutes: Dust sand storm in Mongolian Plateau)	Prof. Dr. Wang Tao, Northwest Institute of Eco- Environment and Resources, Chinese Academy of Science	
14:20 (16:20)	Q & A (10 minutes)		
14:30 (16:30)	Presentation 3: (30 minutes: GEMS applications: Current status and way forward	Dr. Hye Jung Shin, ESC, NIER	
15:00 (17:00)	Q & A (10 minutes)		
15:10 (17:10)	Discussion, summary of the seminar	Prof. Meng Fan, Deputy Director General, NC	
15:30 (17:30)	Closing		