

Draft of Concept Note
“Workshop on Transboundary Air Pollution: Strengthening ASEAN–APCTT Cooperation through Integrated Technology, Policy, and Field Practices for Sustainable Air Quality”
3-5 February 2026
in Chiang Mai, Thailand

1. Background

Transboundary haze pollution is one of the most persistent environmental and public health challenges in Southeast Asia, primarily driven by biomass burning associated with agricultural practices, land-use change, and forest degradation. Seasonal wildfires emit significant quantities of particulate matter and trace gases, leading to widespread degradation of air quality, damage to ecosystems, and increased risks to human health. These impacts are particularly observed in the Lao PDR, Myanmar, Thailand and Vietnam, where shared landscapes, fire patterns, and regional meteorological conditions allow smoke and haze to spread across national borders. As a result, haze episodes frequently affect multiple countries simultaneously, disrupting economic activities, straining public health systems, and highlighting the interconnected nature of the problem.

Addressing this challenge requires coordinated ASEAN action supported by consistent and comparable information. Satellite remote sensing and geospatial technologies provide essential tools for monitoring fires and air pollution over large areas using standardized methods. However, the effective and sustainable use of these technologies depends on institutional readiness and human capacity in the region. Strengthening technical skills and fostering collaboration through joint capacity building and co-development are therefore key to establishing a regional approach and to tackling to transboundary fire and haze monitoring and response.

To support the cross-sectoral strategy of APASTI 2026-2035 on increasing national and regional capacity in space technology, sciences and satellite development and enhance regional collaboration on satellite based air pollution monitoring, Ministry of Higher Education, Science, Research and Innovation, in collaboration with Geo-Informatics and Space Technology Development Agency (Public Organization) and Asian and Pacific Centre for Transfer of Technology (APCTT) will co-organise the “Workshop on Transboundary Air Pollution: Strengthening ASEAN–APCTT Cooperation through Integrated Technology, Policy, and Field Practices for Sustainable Air Quality.” The workshop is a kickoff activity under the SCOSA's initiative entitled the Common Blue Sky: Earth Observation (EO) for a Cleaner Air in ASEAN aiming to enhance technical capacity in the use of satellite and geospatial technologies for fire and air pollution monitoring in the region.

2. Objectives

- 2.1. To strengthen regional understanding of transboundary fire and haze dynamics
- 2.2. To build technical capacity in the use of satellite and geospatial technologies for fire and air pollution monitoring
- 2.3. To promote regional collaboration and co-development of a transboundary monitoring approach

3. Participants

The number of participants will be approximately fifty representatives from ASEAN Member States (AMS), ASEAN Secretariat (ASEC), from Science and Technology Division and the Asian and Pacific Centre for Transfer of Technology (APCTT). Expected participants include:

- **Technical Specialists:** Scientists and researchers engaged in the development of disaster monitoring technologies and early-warning systems.
- **Strategic Officials:** Officials focused on preventative measures and disaster mitigation.
- **Decision-Makers:** Policy-makers responsible for translating technical data into actionable safety legislation and resource allocation."

Thailand will cover the costs of four-night hotel accommodation (check-in on 2 February and check-out on 6 February) for one participant per country. APCTT will cover the round-trip airfare of one participant per country invited through its Governing Council.

Additional participants from the same country are most welcome to attend; however, their travel and accommodation costs shall be borne by the participants themselves.

For all participants, Thailand will provide land transportation in Chiang Mai and meals during the programme.

Any other expenses incurred beyond those stated above shall be the responsibility of the participants.

4. Dates and Venue

3-5 February 2026 (excluding travel days) in Chiang Mai, Thailand

5. Host

- Ministry of Higher Education, Science, Research and Innovation (MHESI), Thailand
- Geo-Informatics and Space Technology Development Agency (Public Organization), Thailand

6. Budget funded by

- Ministry of Higher Education, Science, Research and Innovation (MHESI), Thailand
- Geo-Informatics and Space Technology Development Agency (Public Organization), Thailand
- Asian and Pacific Centre for Transfer of Technology (APCTT)

7. Program (Tentative)

Day	Detail	
2 Feb 26	Travel Day	
	<ul style="list-style-type: none"> - Participants/Speakers arrive in Chiang Mai - Check-in at the accommodation 	
3 Feb 26	Academic Seminar (Kick Off)	
08:30-09:00	Registration	
09:00-09:15	Opening and Welcome Remarks	Office of the Permanent Secretary, MHESI - Chiang Mai University - Geo-Informatics and Space Technology Development Agency (GISTDA) MC: Poramet Thuwakhom
09:15-10:00	Keynote Presentation: Challenges and Directions for ASEAN Cooperation in Addressing Transboundary Air Pollution	Dr. Wijarn Simachaya President, Thailand Environment Institute (TEI)
09:55-10:25	Thailand's Policy Framework and Measures for Air Pollution and Transboundary Haze Management	PCD
10:25-10:45	Coffee/Tea Break	
10:45-11:30	Satellite and Geospatial Technology for Transboundary Air Pollution Monitoring and Management	Dr. Pakorn Petchprayoon Dr. Pramet Kaewmesri
11:00-11:30	Forest Fire Management and PM2.5 Reduction in the Forestry Sector	Department of National Parks, Wildlife and Plant Conservation / Royal Forest Department
11:30-12:00	The role of Chiang Mai University in supporting air pollution management through research and innovation	Assoc. Prof. Somporn Chantra, Ph.D. (Faculty of Sciences, CMU)
12:00-13:00	Lunch	
13:00-13:30	Depart to Chiang Mai University	
13:30-14:30	Visit Air Quality Monitoring Station & AcAir CMU, Environmental Science Research Center, Faculty of Science, Chiang Mai University	Assoc. Prof. Somporn Chantra, Ph.D. (Faculty of Sciences, CMU)
14:30-15:00	Transfer to Chaing Mai Warroom	

Day	Detail	
15:00-16:30	Technical visit to Chiang Mai War Room, Chiang Mai Provincial Administrative Organization <ul style="list-style-type: none"> Overview Biomass Fuel Management System (FireD) Experience sharing on data use for evidence-based decision-making 	- Chiang Mai Provincial Administrative Organization - Asst.Prof. Chakrit Chotamonsak, Ph.D. (Faculty of Social Science, CMU)
18:00-20:00	Dinner Reception and Networking	
4 Feb 26	Learning from field experience: forest fire and haze management.	
08:00-09:00	Transfer to Doi Suthep–Pui National Park (Mae Sa Noi – Mae Sa Mai)	
09:00-09:30	Welcome and Brief Introduction of the Site	Doi Suthep–Pui National Park staff
09:30-10:00	Presentation: Local context, forest fire management, and haze-related challenges in protected areas	Doi Suthep–Pui National Park staff
10:00-10:15	Coffee/Tea Break	
10:15-12:00	Field work: <ul style="list-style-type: none"> UAV-based forest fire detection technology integrated with AI to enhance patrol and early detection in high-risk areas 	Asst.Prof.Phudinan Singkhamfu, Ph.D. (College of Arts, Media and Technology, CMU)
12:00-13:00	Lunch	
13:00-13:30	Roles of research and field data in supporting air pollution management in Northern Thailand	CMU/GISTDA
13:30-14:30	Lessons from the field: what works and what remains challenging	CMU/GISTDA
14:30-14:45	Coffee/Tea Break	
14:45-16:30	Summary and experience sharing from the field visit: pollution sources and the forest fire operations center.	Representative from each country
16:30-17:00	Activity Wrap Up	Host
5 Feb 26	Policy Seminar and Cooperation Planning	
09:00-09:30	Review of lessons learned from the previous days Briefing on the objectives of the group work.	GISTDA
09:30-12:00	Group Exchange and Brainstorming on Problem Solving Group 1: Technical Group 2: Policy Topics: <ul style="list-style-type: none"> - Data standards and satellite data - Situation monitoring and tracking models - Approaches to international cooperation activities - Policies for addressing transboundary issues - International cooperation activity roadmap 	CMU/GISTDA/OPS MHESI All participants
12:00-13:00	Lunch Break	
13:00-14:45	Presentation of the outcomes from each group (10 minutes per group).	
14:45-15:00	Coffee/Tea Break	
15:00-16:00	Workshop: “Technical and policy plan for the sustainable mitigation of transboundary air pollution”	All
16:00-16:30	Closing Summary and Defining Follow-up Actions	
6 Feb 26	Departure Day	
	<ul style="list-style-type: none"> Return to Bangkok/home countries 	

Remark: The agenda may be subject to change as necessary.

8. Expected Outcomes

- 8.1. Shared understanding among participating countries on transboundary fire and haze pollution and its regional impacts.
- 8.2. Enhanced technical capacity in using satellite and geospatial technologies for fire and air pollution monitoring.
- 8.3. Adoption of common approaches and harmonized methods for regional data analysis and comparison.
- 8.4. Strengthened regional collaboration toward a joint transboundary monitoring framework.
