**On-going projects**

(1)

Title: Air Quality Improvement Program in Thailand (AQIP-Thailand)

Sponsor: AFD

Project Partner: Egis, AirParif, Citepa

Duration: 2023-2026

Overall Project Objectives: To support partner countries and cities in the region in their efforts to develop and implement policies and projects in order to improve air quality.

Center’s Key Activities: Technical support at local and national levels to enhance knowledge of air pollution phenomena, strengthen local capacities, and support public policy formulation

(2)

Title: Climate Change Adaptation to Smoke Haze for Improved Child Health in Southeast Asia

Sponsor: e-Asia

Project Partner: Australia, Thailand, Indonesia, Cambodia, and Laos

Duration: 2024-2027

Overall Project Objectives: To strengthen research and development capabilities towards resolution of shared challenges across the region, including those associated with materials, alternative energy, agriculture, health research, disaster risk reduction and management, advanced interdisciplinary research towards innovation, and environment

Center’s Key Activities: Assess the effectiveness of climate change adaptation interventions for strengthening community resilience to smoke haze in SEA and increasing their adoption and implementation in the region to protect children’s health

(3)

Title: Assessment of agricultural and forest burning emissions in Lao PDR (Forest Fire Emission- Lao)

Sponsor: The World Bank Group (WBG)

Project Partner: Lao PDR

Duration: 2025

Overall Project Objectives: To conduct a science-based assessment of air pollution from agricultural residue and forest open burning practices in Laos to support the Government of Laos in identifying the prioritized measures for reducing air pollution associated with these burning practices in the country.

Center’s Key Activities:

• Collect and analyze satellite data to assess air pollution in Laos.

• Develop a methodology framework to analyze land-use cover change (primary forest loss) due to the forest fire.

• Compile the emission inventory for agricultural residue and forest fire open burning in Laos

• Critical review of emission inventory studies related to agricultural residue and forest fire open burning

• Compare the emissions of agricultural residue and forest fire open burning developed in Laos with other studies

• Provide a menu of recommendations

(4)

Title: Deliver training programme for implementing decrees for reducing open waste burning and air pollution

Sponsor: United Nations Environment Programme

(Climate and Clean Air Coalition, CCAC)

Project Partner: Clean Air Asia, Ministry of Environment of Cambodia

Duration: 2025-2027

Overall Project Objectives : To support Cambodia in effectively reducing open burning and improving air quality through an action plan and a training program that will strengthen the enforcement capacity of stakeholders.

Center’s Key Activities:

• Center will support to implement different activities in capacity building by providing technical expertise in air quality management, and solid waste management, and acting as key personnels in training programs.

• Center will lead the development of the technical guideline on alternatives to municipal solid waste open waste burning and co-lead with CAA on an action plan to reduce municipal solid waste open burning in Cambodia.

**Completed project**

Title: USAID Clean Air, known as USAID-Nepal Kathmandu Clean Air Program (K-CAP or Swachchha Hawa)

Sponsor: USAID

Project Partner: Family Health International (FHI 360)

Duration: 2022-2025

Overall Project Objectives:

• Improve Government of Nepal (GoN) capacity at all levels and willingness to drive evidence-based policy formulation, enforcement, and implementation that influences air quality.

• Improve civil society and citizen engagement and knowledge on air pollution issues to advance public interest and GoN and private sector accountability for improving air quality.

• Enhance private sector involvement and investment in addressing air pollution issues.

Center’s Key Activities:

• Technical guidance to strengthen air quality data management and sharing systems

• Supporting data compilation and analysis on air pollution in program areas.

• Building capacity in emissions inventory and air quality modeling

• Contribute to the establishment of a consortium of air pollution researchers for Nepal (CARN)

• Building capacity for local universities, governments, NGO, and other partners in Nepal.

Major achievements :

● A technical report “State of Air in Nepal with focus in Kathmandu Valley”, or SoAR, was published (https://zenodo.org/records/13335444). It provides an assessment of the current air pollution situation in Nepal, with a focus on KV, using information extracted from multiple data sources.

● An Excel-based EI calculator has been developed for KV, incorporating the key local emission source sectors and scrutinized EFs. The tool has been tested with activity data for the year 2019 to estimate emissions of both air pollutants and GHGs for KV, and results have been presented at the workshop on 10 Oct 2023 in KV. It was used by four Master’s students to conduct their research topics on the development of EI from key emission source sectors for KV in 2023.

● A hands-on training on the application of the EI calculator was delivered to 32 DOE governmental officers on 11 Nov 2024.

● The CARN was successfully launched on 4 Apr 2023. A total of 5 CARN meetings were held in KV from Apr 2023 – Nov 2024 (with a total of 222 participants/105 females). Collaborative research topics were proposed by CARN which involved collaboration between the local organizations (TU, KU, KIAS, etc.). The collaboration was realized by involving 7 Master’s and 1 PhD students in the project activities. The students have been jointly supervised by AIT and local universities, which would enhance/sustain the long-term capacity building for Nepal.

● 3 Master’s students graduated with selected research topics proposed by AIT-CARN. 1 manuscript draft was prepared for publication. 1 Master's student thesis is under finalization. 2 Master’s students have initiated their research topics in Jan 2025 and are expected to complete them in Aug 2025. One PhD student started her research in Apr 2024.

● 7 training-workshops under the capacity-building programs were designed by AIT. The total number of participants was 203 (103 females) from government offices and research institutions in Nepal. These events were co-organized with the local USAID Clean Air team (FHI360-Nepal) during the period Apr 2023 – Nov 2024. AIT provided the resource persons in all the training workshops, including the AIT team, consultants, and international experts. The training was well received, well attended, and got good evaluations from the participants.

● 4 workshops on different aspects of AQM were proposed by AIT and co-organized with the local USAID Clean Air team from Apr 2023 – Nov 2024. The events were well attended with vivid discussions. The total number of participants was 205 (99 females).

**upcoming Projects**

(1) Title: Climate Attribution of Wildfire Smoke Impacts on Priority Population Health in Southeast Asia and Australia (CANBREATHE)

Sponsor: Wellcome Trust

Project Partner: Australia, Thailand, Indonesia, Cambodia, and Laos

Duration: 2025-2028

Overall Project Objectives:

• Estimate the burden of wildfire smoke on population health under current and future conditions.

• Understand and influence public perceptions of wildfire health impacts and association with climate change, particularly among disadvantaged and priority populations.

• Build skills and resilience, using innovative and impactful communication techniques.

• Inform and influence climate and health policy development through deep engagement with key policy stakeholders and targeted communication.

• Strengthen cross-sectoral engagement and collaboration across Southeast Asia and Australia, to build capacity and capability for assessing and communicating wildfire smoke impacts.

Center’s Key Activities: Apply climate attribution modelling and storylines to assess the influence of climate change on the risk and characteristics of extreme wildfires and related smoke haze exposure, and on the health of Indigenous people, pregnant women, and children in five heavily affected regions of Southeast Asia and Australia