



Our official website

## Smart Monitoring & Emission Reduction for a Healthier Future

DEVELOPED BY: AI TECHNOLOGY CENTER,  
ASIAN INSTITUTE OF TECHNOLOGY

## ABOUT THE SOLUTION



### OVERVIEW

The "Lower Mekong Emission Watch" is a cutting-edge emissions monitoring platform developed to combat worsening air quality in the Lower Mekong Subregion (LMS). This platform quantifies harmful emissions from forest fires, crop burning, traffic, and industry, enabling informed policies to reduce health and climate risks.

## OUTCOMES & IMPACT



### CLEANER AIR

Monitors and reduces PM2.5 and other air pollutants through satellite tracking of fires and emissions, supporting policies that improve public health and reduce transboundary haze.



### CLIMATE ACTION

Identifies seasonal fire patterns and pollution hotspots, enabling timely interventions and promoting sustainable alternatives to open burning in agriculture and forestry.



### REGIONAL COLLABORATION

Fosters coordinated action across Cambodia, Laos, Myanmar, Thailand, and Vietnam through shared platforms, standardized methods, and multilingual tools.

- Identifies seasonal hotspots
- Near real-time emissions fire detection
- Interactive dashboard and downloadable data
- Multilingual platform
- 2km x 2km grid-based, standardized emissions inventory



### KEY CAPABILITIES

- ✓ Real-time fire and smoke detection via satellite
- ✓ AI-based land use and burn area mapping
- ✓ 2km-grid emission inventory for key pollutants
- ✓ Daily and historic data (2018–2025) available
- ✓ Interactive maps, charts, and data downloads
- ✓ Dual-sensor validation (Himawari-8 & VIIRS)
- ✓ Custom filters by location, time, and source
- ✓ Bilingual platform (Thai & English; more coming)
- ✓ Links with health, agri, and environment systems
- ✓ Training for agencies, universities, and NGOs
- ✓ Open access for cross-border collaboration



### DATA-DRIVEN DECISION-MAKING

Delivers real-time, location-specific emissions data via an interactive dashboard to help policymakers, planners, and researchers make informed, science-backed decisions.



### CAPACITY BUILDING

Empowers government agencies, universities, and civil society through training programs, workshops, and practical guides on emissions monitoring and environmental management.



SYSTEM VISUALIZATION



## IDEAL FOR



◆ Agriculture & Forestry Departments



◆ International Development Organizations  
◆ Policymakers & Regulators



◆ Research & Academic Institutions



◆ Environmental & Health Agencies

## Smart Monitoring & Emission Reduction for a Healthier Future System Visualization

