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USING FORECASTING DATA TO IMPROVE ACCESS TO AIR QUALITY INFORMATION AND AGRICULTURAL OPEN BURNING HOTSPOTS

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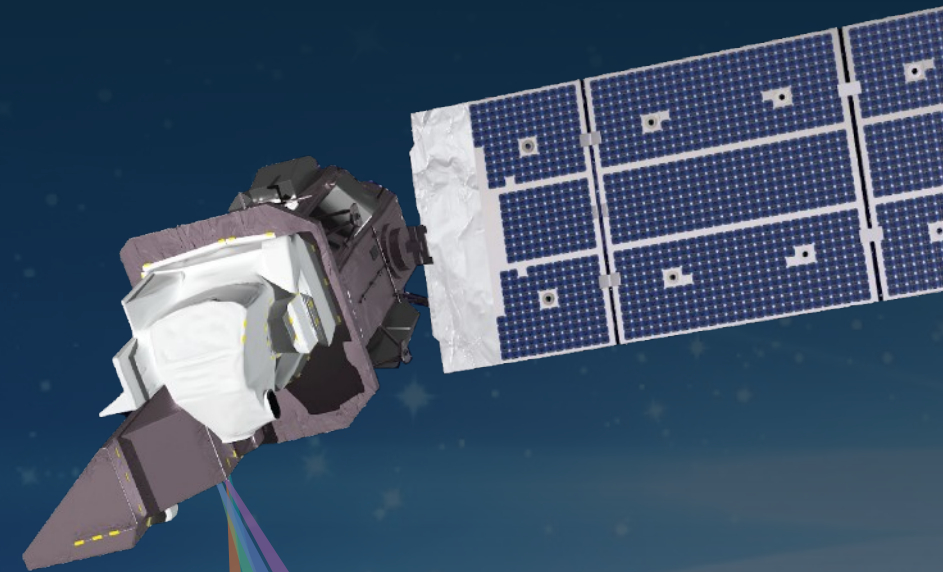


CONNECTING SPACE TO VILLAGE



SERVIR is a joint initiative of NASA, USAID, and leading geospatial organizations in Asia, Africa, and Latin America that partners with countries and organizations to address climate challenges

Using satellite data and geospatial technology, **SERVIR** co-develops innovative solutions through a network of regional hubs to improve resilience and sustainable resource management at local, national and regional scales.



USAID
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ALLIANCE



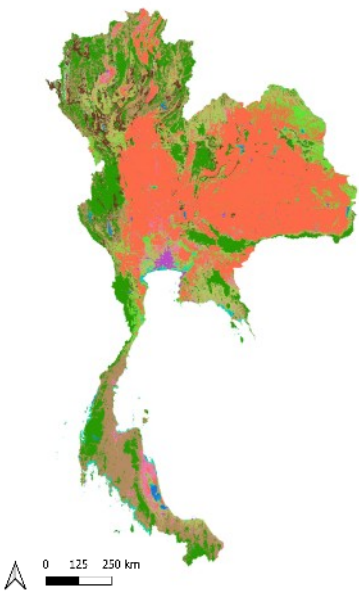
CIAT
International Center for Tropical Agriculture
Since 1962 Center for Sustainable Change

ICRISAT
INTERNATIONAL CROPS RESEARCH
INSTITUTE FOR THE SEMI-ARID TROPICS

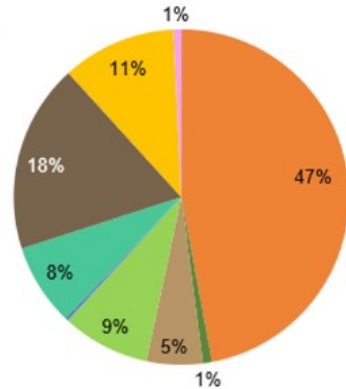
ICIMOD

adpc

Land cover and Fire hotspot detection



- MODIS (MCD12Q1.006) Land Cover
- Everg. Needleleaf Forest
 - Everg. Broadleaf Forest
 - Decid. Needleleaf Forest
 - Decid. Broadleaf Forest
 - Mixed Forest
 - Closed Shrubland
 - Open Shrubland
 - Woody Savannas
 - Savannas
 - Grasslands
 - Permanent Wetlands
 - Croplands
 - Urban
 - Natural Croplands
 - Barren
 - Water



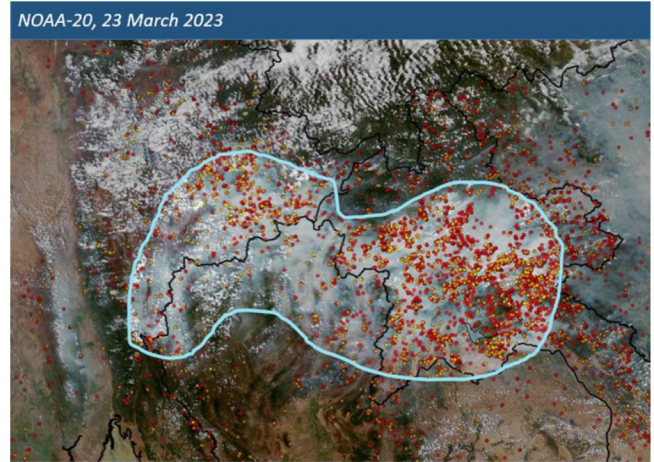
- Cropland
- Mixed Forest
- Evergreen broadleaf forest
- Grassland
- Permanent wetland
- Urban
- Deciduous broadleaf forest
- Woody savanna
- Savanna
- Natural cropland

NASA Earth Science

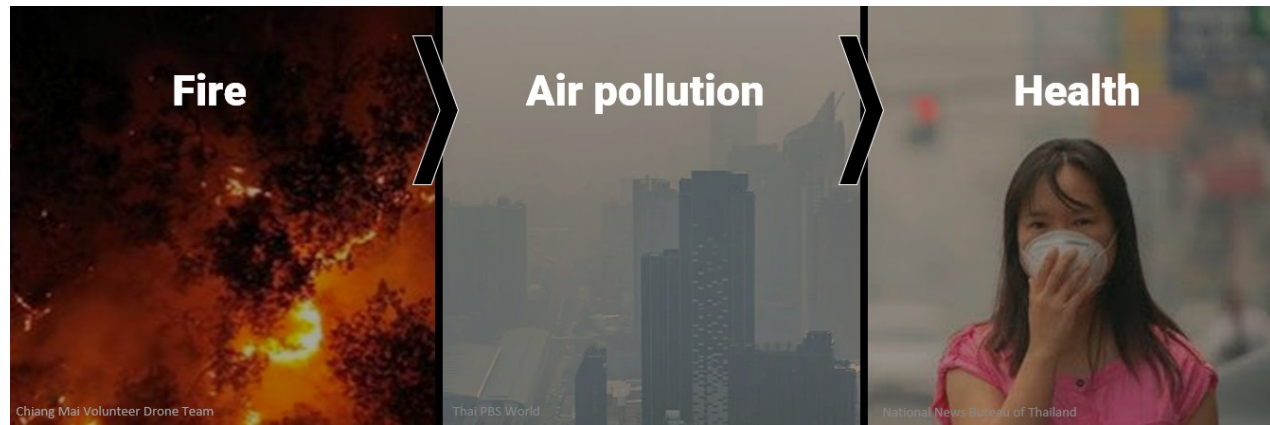
Missions: Present Through 2023



Transboundary haze in Southeast Asia, 2023



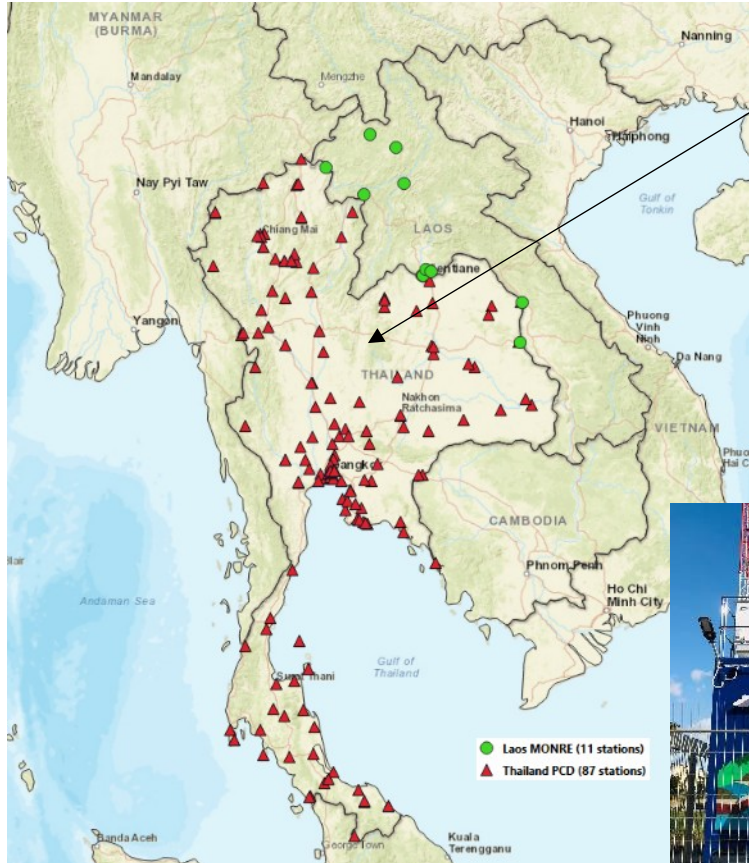
Moderate to dense smoke haze observed over eastern Myanmar, northern Thailand, and northern Lao PDR on 23 March 2023, based on NOAA-20 satellite surveillance. (Source: ASMC)



BAQ 2023
BETTER AIR QUALITY CONFERENCE
15-17 NOV • MANILA

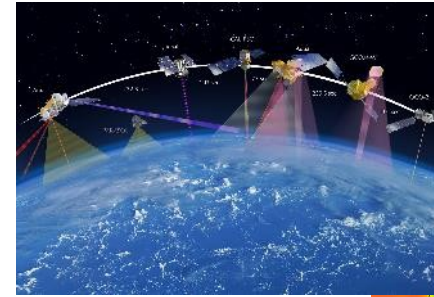
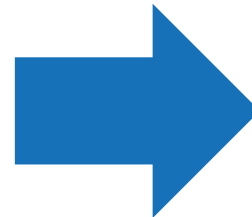


Satellite-based Air Quality Monitoring and Forecasting

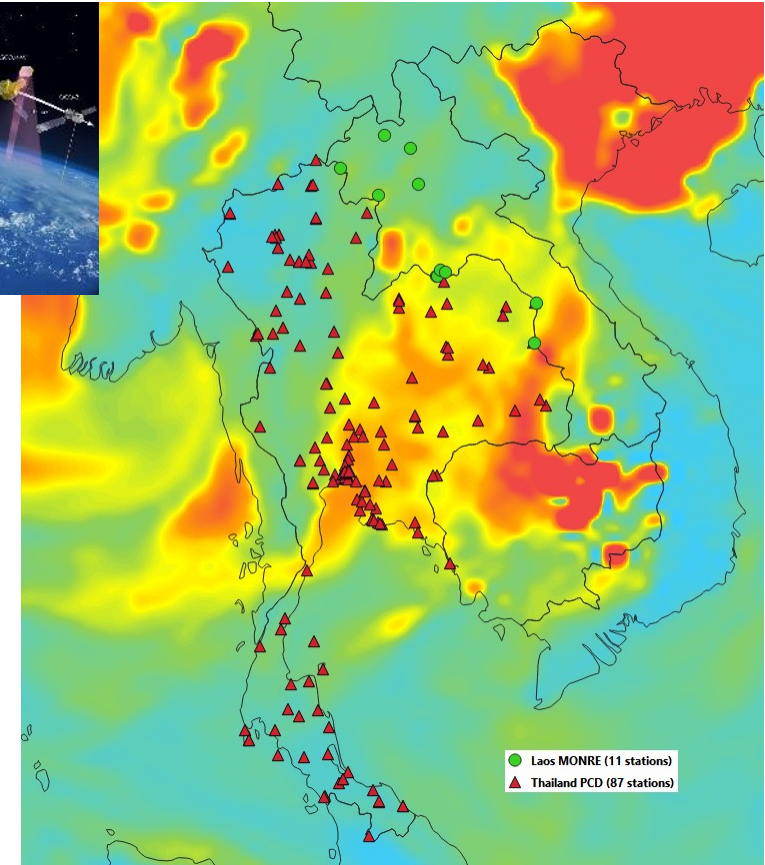


Air quality monitoring systems on the ground don't cover all areas –

The people in rural areas do not have access to air quality information

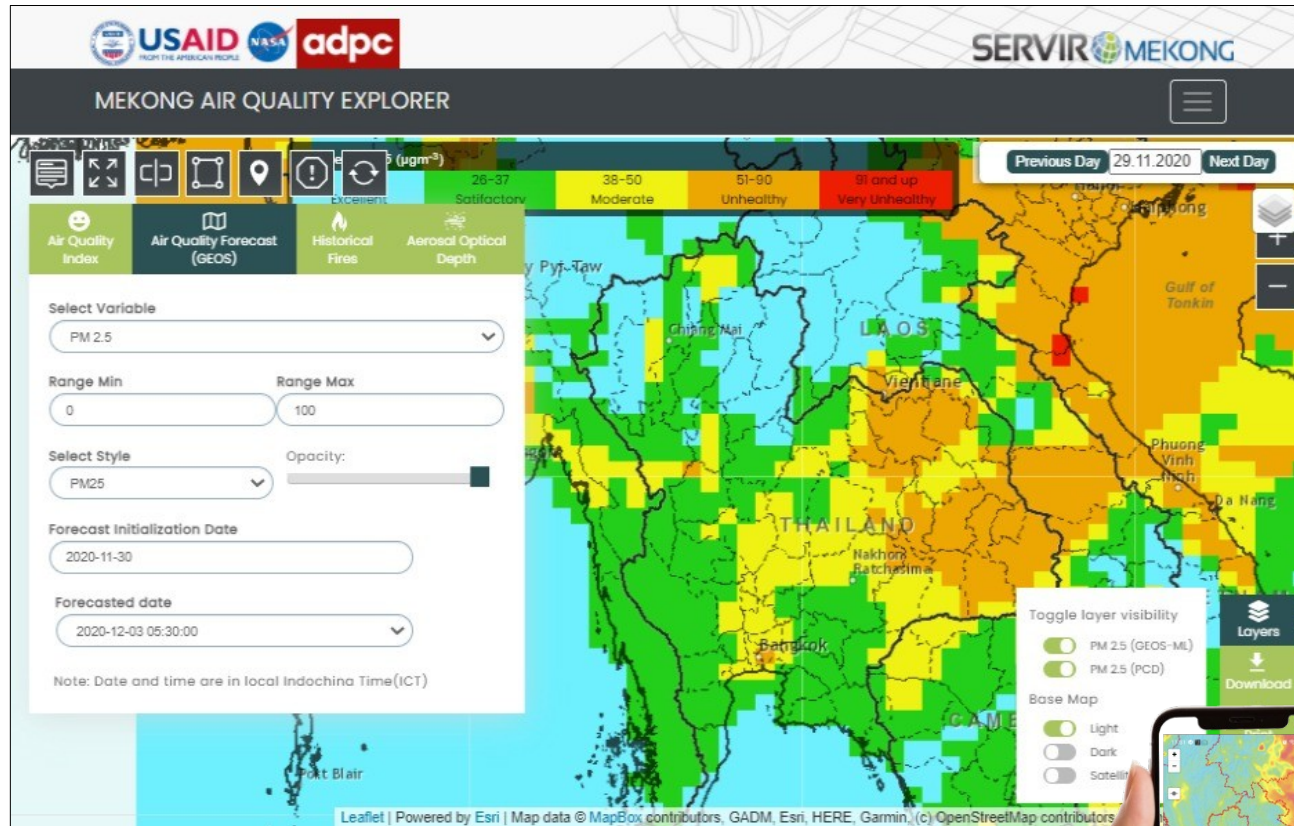


Satellite-based observations and AI technology fill the information gaps that ground stations cannot provide

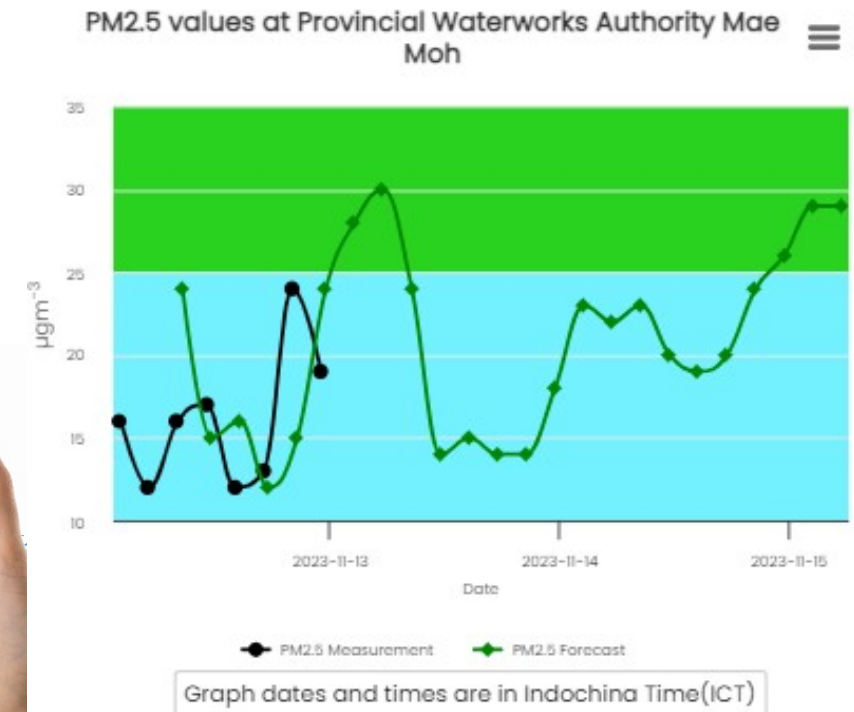


Mekong Air Quality Explorer Tool

Fire and PM2.5 regional information system



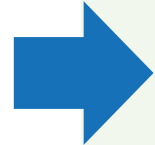
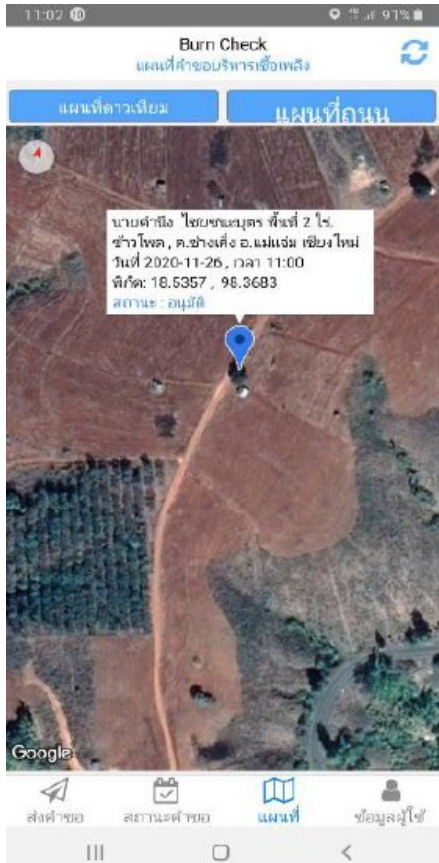
- ✓ Near-real-time wall-to-wall air quality parameters: PM2.5 and toxic gases such as Ozone and Nitrogen Dioxide
- ✓ 3-day forecasted of PM2.5
- ✓ Fire hotspots, updated twice daily



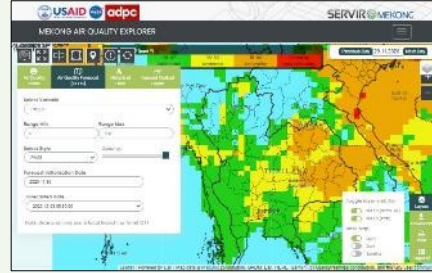
<https://aqatmekong-servir.adpc.net/en/mapviewer/>

Turning Data into Action

Request from a farmer



Decision Support System



3-day forecasted of PM2.5

Approved

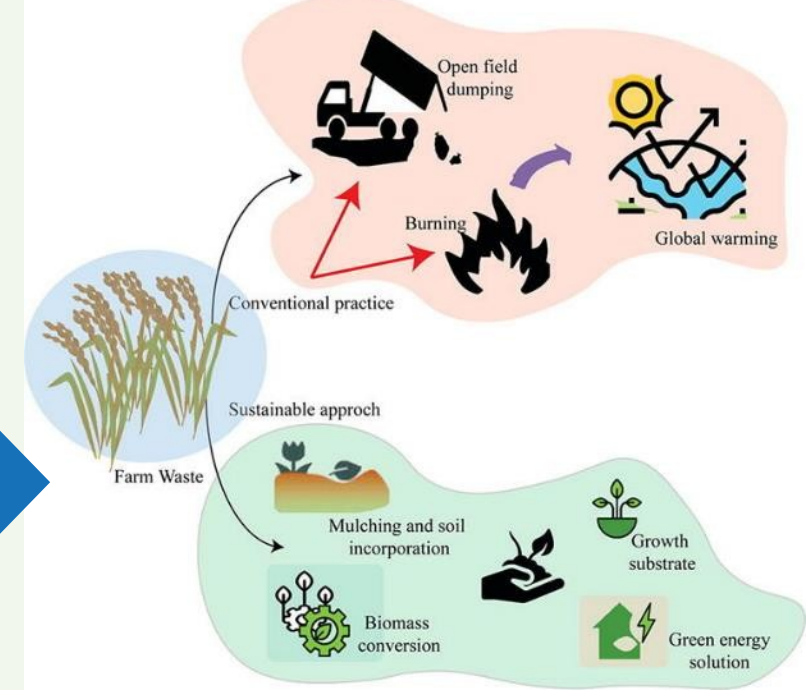
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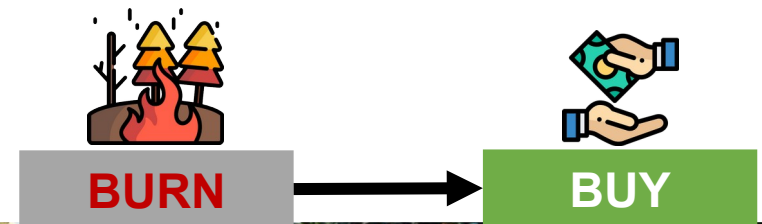
Complete



Alternative approaches



Carbon credits for farming



THANK YOU

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