

Running Together: Advancing Clean Air Through Community Building

Kultida Ruechai Research Associate

Waeautsaman Wani Youth representative

Urban Design and Development Center & UrbanBetter

12 March 2026 at UNITED NATIONS CONFERENCE CENTRE, BANGKOK

Why We Started This Activity

What is PM2.5?

Particles smaller than 2.5 microns

Invisible to the naked eye

Can enter lungs and bloodstream and long-term health effects

Air Quality Standards

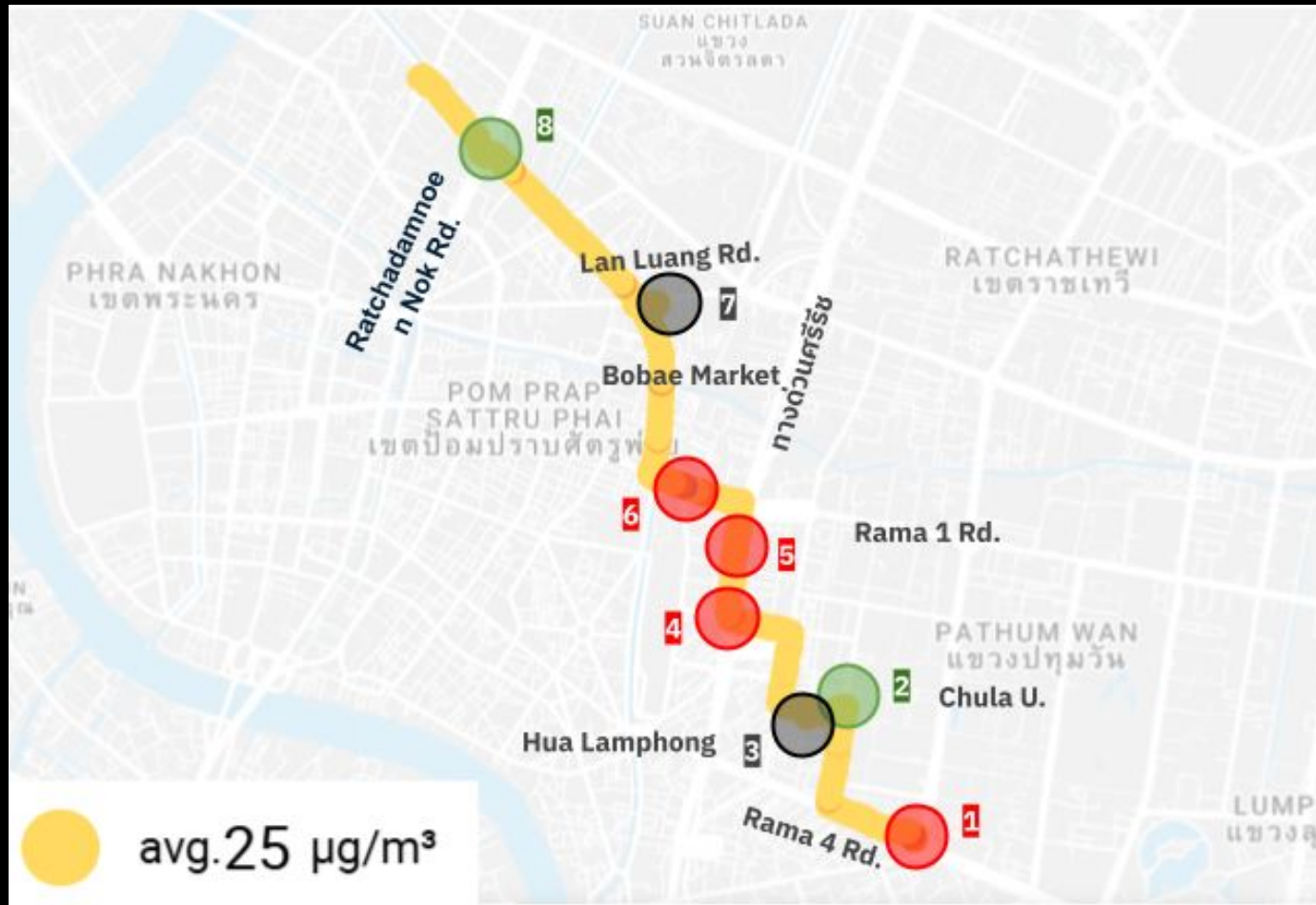
WHO guideline: year average $\leq 5 \mu\text{g}/\text{m}^3$

Thailand standard: year average $\leq 15 \mu\text{g}/\text{m}^3$

***Youth will live with today's air the longest.
We must be big part of building cleaner
cities.***

Urban Air Walk: Learning from the City

Route: Samyan Mitrtown – UN Thailand (5 km)



- 1.
 - 2.
 - 3.
 - 4.
 - 5.
 - 6.
 - 7.
 - 8.
- Legend:
Red box: 1, 4, 5, 6, 1
Grey box: 3, 7
Green box: 2, 8

A close-up photograph of a person's hand holding a white, circular, portable air quality sensor. The sensor has a small circular lens on top and a metal ring for a keychain. The person is wearing a white t-shirt and a colorful beaded necklace. The background is a bright, outdoor setting.

Air Quality Monitoring

Measured Data

- PM1
- PM2.5
- PM10

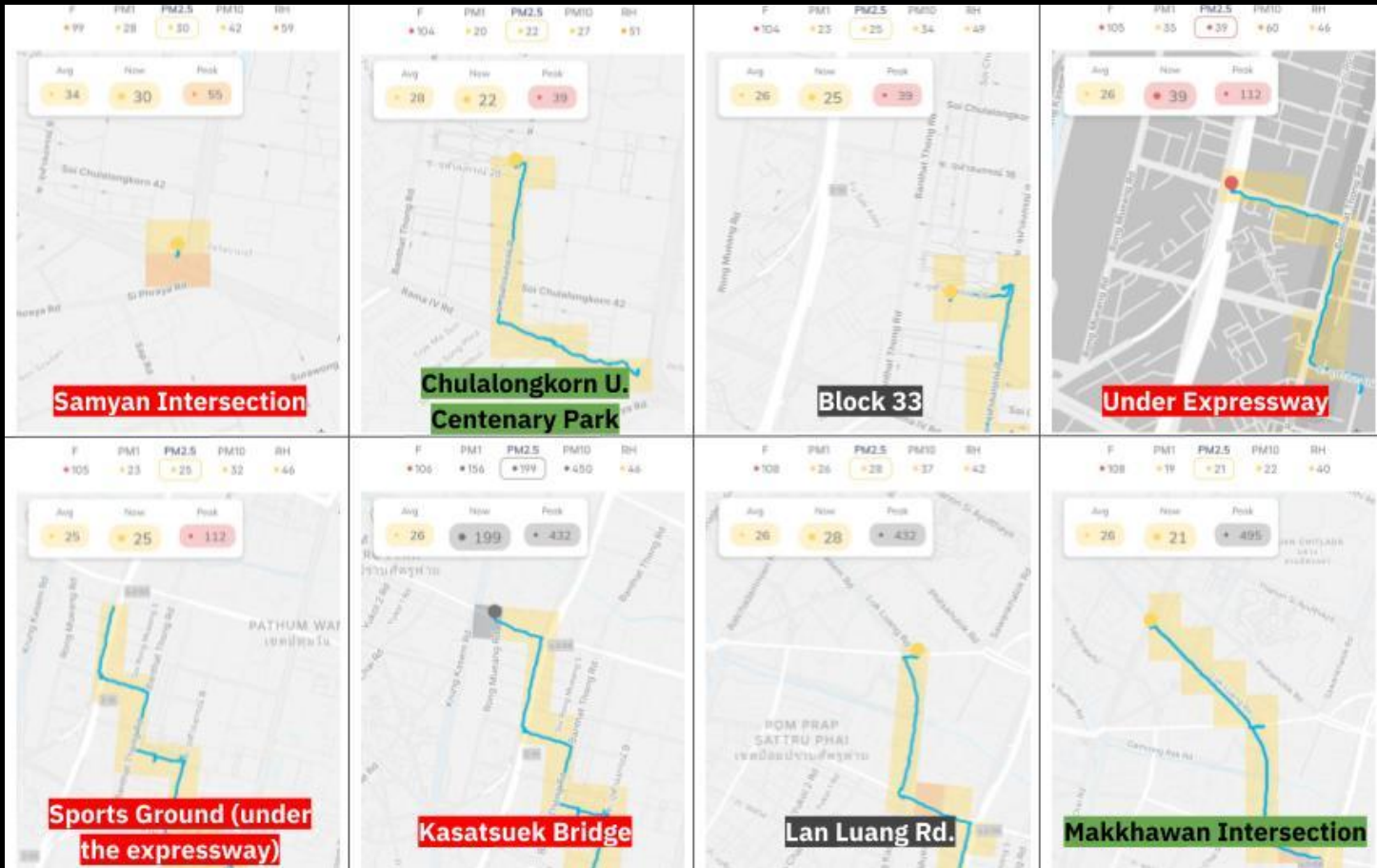
Tools

- Portable air quality sensors

Applications

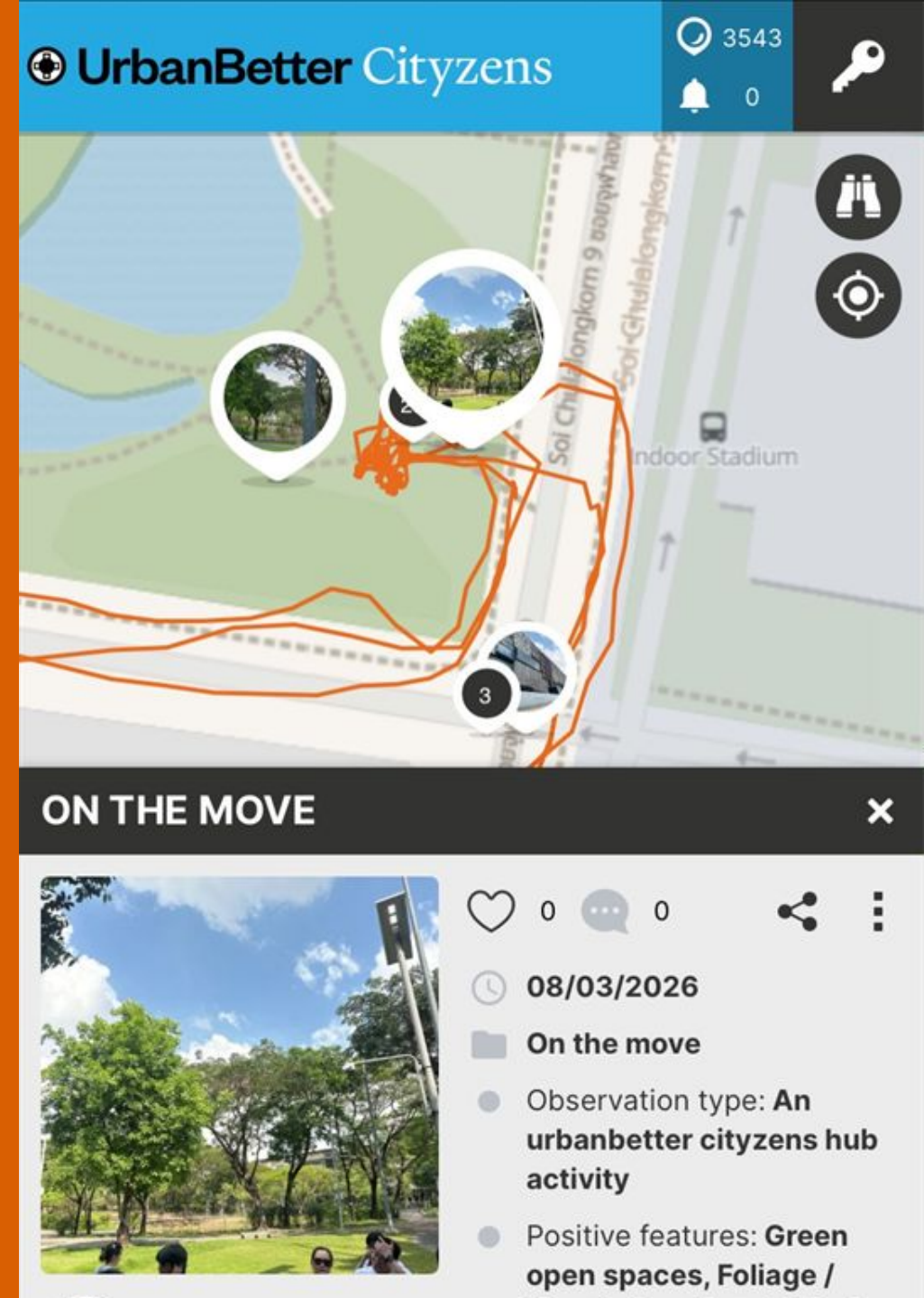
- AirCasting – real-time PM monitoring
- UrbanBetter Cityzens App – recording urban observations

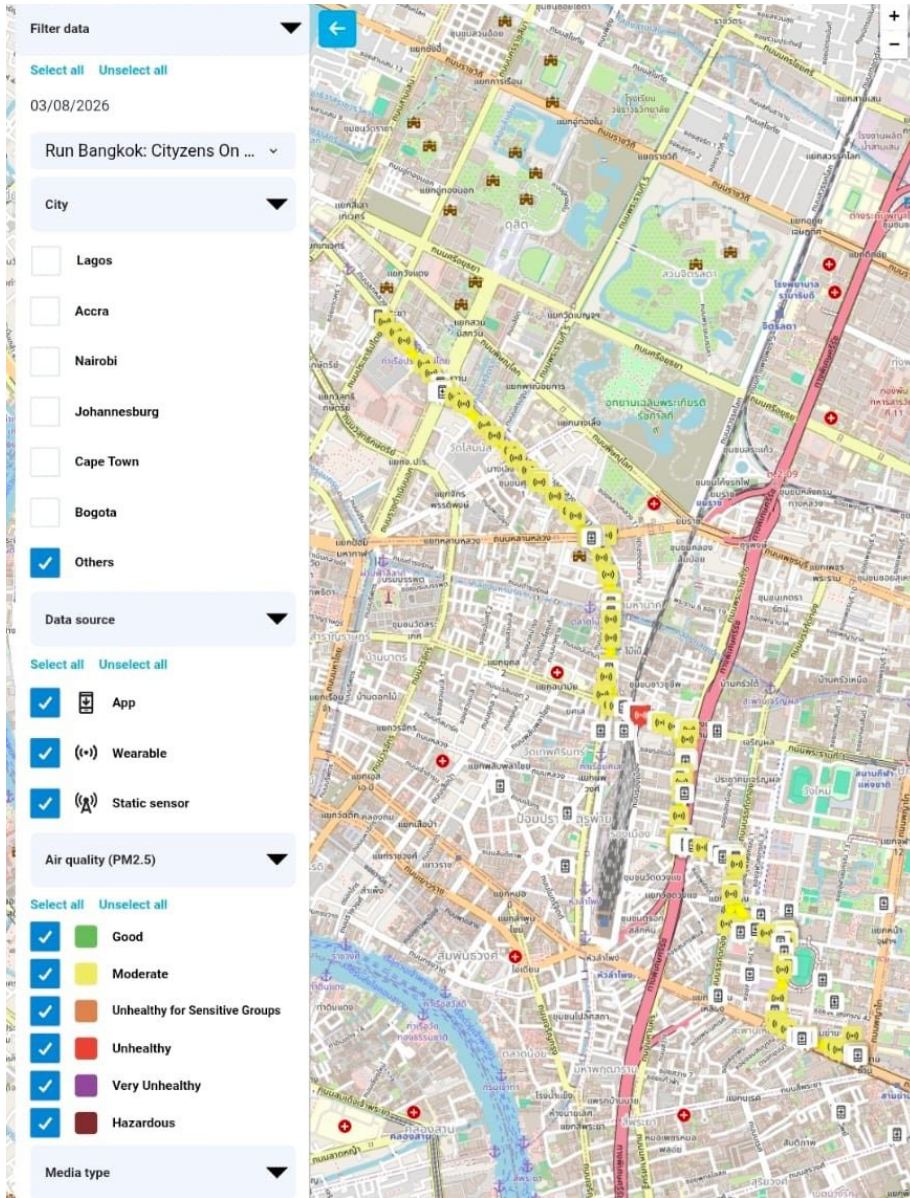
What We Learned from the activity



UrbanBetter Cityzens App

- Real-time **urban observations**
- **Identify** both positive and negative surrounding urban conditions.
- Finding **healthier places for daily activities**
- Understanding how **urban environments affect air quality**





UrbanBetter Visualisation Platform

- White icons: observations from the Citizens App
- Colored icons: PM2.5 air quality levels
- Few green icons indicate **limited good air quality along the route**
- Yellow icons show mostly **moderate air quality with occasional spikes**
- Each point displays PM2.5 level and time recorded when clicked

The City We Want to See

Youth vision for cleaner cities

- Walkable and **breathable urban spaces**
- More **green and cooling spaces** in the city
- **Public access** to air quality information
- Stronger **air quality management** from public sectors



Urban Design and Air Quality

City design influences pollution

Air pollution is affected by:

- street design
- traffic density
- construction management
- ventilation corridors
- green infrastructure



UDDC & URBANBETTER ACTION

- 1. Analyze** citizen-generated data
- 2. Make environmental data publicly accessible**
- 3. Share insights** with the Bangkok Metropolitan Administration (Bangkok for All)
- 4. Develop** Citizen Science Modules for youth and communities
- 5. Integrate** into academic studios and project implementation.

Bangkok Citizen Hub

A platform for youth-led citizen science and urban action in Bangkok.



Aims to:

1. Support **community-led** urban data
2. **Connect** citizens, researchers, and policymakers
3. Make **urban data accessible** to the public
4. Encourage **youth participation** in urban issues



Clean air is not only an environmental issue —it is a shared responsibility.

And the next generation must be part of the solution.



BAQ 2026

BETTER AIR QUALITY
CONFERENCE 11-13 MAR • BANGKOK



Thank you for listening!

For any questions, please feel free to contact me at: Kultida.r@uddc.net



 UrbanBetter



