



Activation insights brief

[HEALTH JUSTICE ON THE MOVE - LANG'ATA CLEAN AIR RUN]

UrbanBetter Cityzens [NAIROBI] Hub

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Activation overview

Date of activation:

[17th-05-2025]

Problem Identification and Framing:

The main issue we focused on is poor air quality in Lang'ata. This comes mostly from heavy traffic, old vehicles with poor emission controls, open waste burning, and the nearby Wilson Airport. These activities release a lot of harmful gases and dust into the air, affecting people's health.

We chose to focus on areas with high traffic like Mbagathi Way and Lang'ata Road, where the air pollution is most visible. We also looked at problems like open sewer lines, lack of green spaces, poor walking and cycling infrastructure, and badly managed waste.

People affected include children, the elderly, traders, patients, boda boda riders, and anyone who walks or travels through the area daily. Their health is at risk due to breathing in polluted air, and there's a need to push for safer, cleaner urban planning and better waste and transport systems.

Our primary question(s)were:

- What are the main sources of air pollution in Lang'ata and how do they affect daily life?
- Do residents understand how air quality connects to their health?
- How safe and accessible are the public spaces in Lang'ata for walking and cycling?
- How can community data (like what we collected) be used to influence planning and advocacy?
- What role can youth and local groups play in pushing for cleaner air and better urban health?
- How can storytelling and real-time data help bring attention to air quality and inspire action?



Approach

Where and when did it take place?

The Langata Clean Air Activation took place on a vibrant Saturday morning, beginning and ending at Taidy's Restaurant near T-Mall. This location served as the central hub for check-in, coordination, and post-activity engagement.

The activation was designed to accommodate both runners and walkers, offering two distinct yet well-thought-out routes to allow maximum participation and safety:

Run Route (Approx. 10KM)

- Start at Taidy's Restaurant
- Head towards T-Mall roundabout
- Proceed straight onto Lang'ata Road
- Make a U-turn at Lang'ata Road Primary School
- Return to T-Mall roundabout
- Continue along Mbagathi Road towards DOD roundabout
- Loop back on the same Mbagathi stretch
- Finish back at Taidy's Restaurant

Walk Route (Approx. 7–8KM)

- Start at Taidy's Restaurant
- Walk to T-Mall roundabout
- Turn right at Shell Petrol Station
- Proceed toward Kenyatta Market
- Walk up to the Mosque junction
- Make a U-turn back to Mbagathi Road
- Head back and conclude at Taidy's Restaurant



Why was this location chosen?

Mixed communities: Lang'ata includes both formal estates (like South C, Madaraka) and informal areas (like Kibera), helping us see how air quality affects different people.

Strong local partner: We worked with Youth's Corner, a trusted community group with links to local leaders, youth groups, and authorities.

High foot traffic: Busy areas like Uhuru Gardens and Lang'ata Road help us reach more people and collect useful air quality data.

Good space for running and walking: The area has flat roads and open spaces that are safe for movement.

Air pollution hotspot: Close to Wilson Airport and major roads with lots of traffic, perfect for starting real conversations about pollution and health.

Active youth population: Lang'ata has many students from nearby universities who can join as runners, volunteers, and digital advocates.

Who was involved? (who and numbers)

We had around 211 participants at the Lang'ata Clean Air Run. This included:

- Lang'ata residents
- Youth groups and local CBOs
- Students from nearby universities
- Urban planning interns
- Local administration and City officials
- Mental health practitioners
- Media representatives (like Ghetto Radio)

How we reached out to people:

We shared the run through WhatsApp groups, social media posts, and word of mouth. We also got help from Youth's Corner, who helped mobilize local youth and connect with community leaders. Some of us also invited friends and family.



How was data collected?

During the activation, we collected two types of data. The wearable air quality sensor collected data on PM2.5 along the route. We used the Cityzens app to collect geotagged photo/text/audio data on potential sources of hazardous or protective health/climate exposures in public spaces used for physical activity or encountered during physical activity. We also had conversations with residents along the route to understand their experiences with air pollution and daily challenges in the area.

Did you encounter any limitations and how did you overcome them?

- Sensor issues - Ron's air sensor kept unscrewing and falling. It was accidentally switched off, which led to gaps in data.
- Route confusion - Road markings weren't clear in some areas. Some runners followed the wrong route before being redirected.
- Limited public awareness - Some participants didn't understand the purpose of the Clean Air campaign.
- Few volunteers - Only 20 volunteers handled many roles, route safety, registration, MCing, and data collection. Some had to take on multiple tasks, which made coordination a bit difficult.

What lessons did you learn from these limitations?

We learned that small technical issues, like the sensor coming loose, can affect data collection, so next time, we'll secure devices better and check them often during the run. Also, placing route markings more visibly and clearly will help prevent confusion for both runners and volunteers.

With limited volunteers, we saw the importance of assigning clear roles in advance and using buddy systems to support coordination and engagement. Even with a small team, clear planning and teamwork made a big difference.

We also realized that many people don't fully understand what the Clean Air Movement is about, so in future campaigns, we'll include simple info packs or a short intro session to help participants connect better with the mission.



Key insights

Findings

Brief description of the route(s):

Running - We used the Taidys, Tmall roundabout, Raila Odinga Road, Ngong Road roundabout. Arwings Kodhek roundabout back to the flyover, then back to Mbagathi Road

Walking - Taidys Restraunts-Tmall Roundabout-Mbagathi Road-Ngumo ESTATE-Kenyatta Market-Muchai Drive, then the flyover, then back to Mbagathi Road

- **Average PM reading over the route(s)** average of 13 $\mu\text{g}/\text{m}^3$, which is a step above the recommended WHO safe levels which is 12 $\mu\text{g}/\text{m}^3$.
- **Any areas with higher than average air pollution?**
 - **In those areas, did you observe any notable potential sources of air pollution, traffic conditions, or types of urban spaces?** - Heavy traffic along Lang'ata Road and Mbagathi Way. Many trucks and motorcycles are emitting visible black smoke. Open waste burning near roadside areas and informal dumping sites, and around Kenyatta Market. Crowded intersections with idling vehicles and poor traffic flow.
 - **Potential impact of these observations on air quality, health, physical activity or climate vulnerability** - Poor air quality increases the risk of respiratory illnesses like asthma and bronchitis. High pollution discourages walking or outdoor activity. Contributes to climate vulnerability due to vehicle emissions and unmanaged waste.
- **Any areas with lower-than-average air pollution?**
 - **In those areas, did you observe any protective exposures that could contribute to lower air pollution, eg types of urban spaces?** - Lots of trees and grass. Stuff to w/ biodiversity. Dedicated walking/ running paths, eg a foot bridge. The roads were properly marked eg zebra walking. Great drainage on the main roads
 - **Potential impact of these observations on air quality, health, physical activity or climate vulnerability**- Trees and grass act as air filters, they encourage physical



activity, which reduces the need for motor vehicles, and drainage is helpful to prevent flooding.

Describe other health or climate-related observations relevant for physical activity

We saw a few things that affect how healthy and safe it is to move around. Some areas had poor drainage and open waste, which can increase pollution and health risks. There were also places with smoke from burning waste, which makes the air hard to breathe, especially for children and older people. These things discourage people from walking or exercising outdoors.

- **Overall perception of walkability over the route(s)**- Some parts of the route had good sidewalks and space to walk, but other areas didn't. There was no dedicated cycling lane, but the roads were wide enough to feel safe in most areas. It's clear that the environment can support walking and running , with a few improvements.
- **Any areas with better built environment features**
 - **What were these features noted?** Yes, we observed some places that were planned well. These areas had:
Footbridges for crossing busy roads safely ,**Walking paths** and wide sidewalks, **Clear road markings** and zebra crossings, **Good drainage** systems to prevent flooding, **Traffic lights** and **traffic marshals** managing flow at intersections
 - **Potential impact of these observations on air quality, health, physical activity or climate vulnerability** - These features make it easier and safer for people to walk, run, or cycle. That means fewer people might rely on cars or motorbikes, which helps reduce air pollution. Also, good drainage prevents waterlogging and reduces climate-related risks like floods. It all supports better health and cleaner air.
- **Any areas with riskier built environment features**
 - **What were these features noted? in some parts, we found:**
Open manholes, Uneven walkways, Poorly lit areas
These are dangerous for pedestrians, especially children, older people, and people with disabilities.
 - **Potential impact of these observations on air quality, health, physical activity or climate vulnerability**- These features can lead to injuries and discourage walking or running. When people feel unsafe, they use cars or motorbikes more, which increases pollution. Unsafe environments also reduce chances for daily physical activity, which affects long-term health.



Summary

The average PM2.5 reading recorded across the Lang'ata run route was **13 $\mu\text{g}/\text{m}^3$** , slightly above the WHO recommended limit of **12 $\mu\text{g}/\text{m}^3$** . High pollution levels were recorded along **Mbagathi Way and Lang'ata Road**, especially where traffic was heavy and vehicles (especially old trucks and motorcycles) emitted black smoke. Open burning of waste was also observed in these areas. Cleaner air was noted in greener areas with more trees, grass, and less traffic. These areas also had **footpaths, bridges, and better drainage**, making them safer and more comfortable for walking and running. Participants experienced discomfort in high-pollution zones, noting irritation and shortness of breath. This showed a direct link between environment, health, and mobility. People felt safer and more active in areas with good infrastructure (like marked roads and footbridges), proving that **urban design directly affects physical activity and health**.

Prescriptions

We describe our activations as running diagnostics on our environments. Based on our findings, we suggest the following prescriptions:

1. Specific interventions that can improve conditions in high-pollution or high-risk areas?

- ❖ Install more **traffic lights and cameras** to manage traffic instead of relying only on marshals.
- ❖ Enforce **vehicle emission checks** and promote **cleaner transport options**.
- ❖ **Ban open waste burning** and improve waste collection systems across Lang'ata.
- ❖ Repair and cover all **open manholes** and maintain sewer lines regularly.
- ❖ Build **sidewalks and cycling lanes** on roads that currently don't have them to improve walkability and safety.

2. Protective factors that can be scaled or replicated?

- ★ Expand **green spaces** with trees and vegetation to help clean the air and cool the environment.
- ★ Create more **dedicated walkways and footbridges** to encourage walking and reduce car use.
- ★ Improve **road markings and signage** for both safety and better flow of non-motorized traffic.



3. Next steps for action by residents, civil society, industry, decisionmakers?

Residents & Civil Society - Spread awareness through **digital advocacy**, street campaigns, and school programs. Demand safer streets by joining **local clean air or urban planning initiatives**.

Government & City Officials - Enforce **waste burning laws**, support clean-up efforts, and expand **non-motorized transport (NMT) policies**. Incorporate feedback from community activations into **urban plans and budgets**. Ensure **affordable and sustainable transport** is part of Nairobi's climate and health agenda.

Industry & Businesses - Support and fund **community greening and clean-up projects**. Encourage use of cleaner fuels and reduce emissions from delivery and service vehicles.

4. Suggested role for UrbanBetter Cityzens to support such action.

- Present the findings during the **upcoming Cityzens Assembly in June** to inform discussions and influence policies.
- Continue **digital storytelling** and data sharing through social media to push for change.
- Support **Youth's Corner** to keep the community engaged through clean-up drives, peer-led education, and youth forums.
- Lead and collect **signatures for petitions** calling for better air quality policies and infrastructure improvements.
- Repeat the run in Lang'ata after interventions to track change and hold stakeholders accountable.



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If you would like to get in touch to find out more about this activation or to explore how Cityzens can support ongoing efforts to create healthy, sustainable places, send us an email at NAIROBI@urbanbetter.science

About us

Cityzens is an Africa-led, youth-driven global movement that uses a combination of physical activity and citizen science to advocate for healthy, sustainable places and enhance meaningful youth participation in decisions that shape the future of cities.

The first step of our PRECISION ADVOCACY process involves an activation: a physical activity-based event where we collect data (using wearable sensors and the Cityzens app) and run diagnostics to interrogate a pre-identified issue. We then use the activation's findings to inform stakeholder engagements and physical activity-based public awareness campaigns.

This activation insights brief summarises findings from our recent activation for key decision makers.

For more information about UrbanBetter and Cityzens, visit cityzens.urbanbetter.science