Transforming Unwalkable Cities

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Contributors:
Dr Daniel Oviedo, Maria Jose Nieto Combariza, Dr Louis Kusi Frimpong, Dr Regina Amoaka-Sakyi, Sara Marquez Martin, Mercilia Lombe, Stephen `nsah, Braima Koroma, Dr Seth Asare Okyere and Jim Walker.

Acknowledgements

Front cover - *Women and children walking in Moyiba, Freetown*
Back cover - *Community map, Moyiba, Freetown*

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Contents

1. Abstract

Walking is the predominant mode of transport in African cities. It is estimated that 78% of trips on the continent are made on foot. Yet informal settlements, where 60% of Africa's urban citizens live, are predominantly unwalkable spaces.

In 2023, the Walking Cities Lab, supported by a grant from the Volvo Research and Education Foundations (VREF), coordinated new research to look at how and where the residents of deprived neighbourhoods walk, how they feel when they do so, and what actions they and other stakeholders take in response.

The research across three African cities (Maputo, Freetown, and Accra) took a nuanced and localised approach to understanding the relationships between the precarity of the built environment and the practices and experiences of pedestrians, residents, businesses and organisations. The team developed a transnational dialogue about the agency of pedestrians and other stakeholders in shaping the conditions for walking, and developed practice-oriented tools, pedagogies and insights for walking policy and practice in African cities.

The research was developed as a comparative analysis of interventions to the walking environment made by residents, businesses and NGOs, and their influence on the experience of walking in selected historically vulnerable and disadvantaged territories. The team co-produced qualitative, spatial and quantitative evidence with storytelling and audio-visual documentation of the walking experience, drawing parallels between the interaction of "what people do" to change their (un)walkable environments and pedestrians' practices and experiences.

The analysis helped elicit an evidence-based inclusive policy dialogue with local and global stakeholders about transforming the unwalkable city. Furthermore, learnings were made about the methods used to develop tools, open-access resources and pedagogies for capacity building of practitioners working on walkability in global south urban contexts. The project's multidisciplinary and international team generated a positive impact and has potentially helped expand the role of walking in informal settlements in international policy and practice.

Freetown
[Sierra Leone]

Accra
[Ghana]

Maputo
[Mozambique]
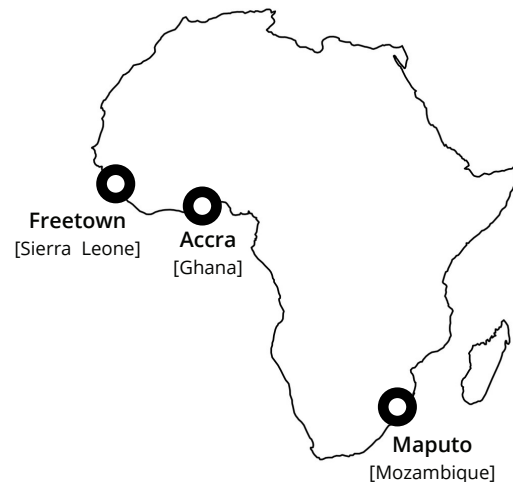
Key Learnings

→ Engaging communities to recognise their aspirations and acknowledge their agency is a key step to support the positive transformation of unwalkable cities.

→ Politicians empathise with the needs of the community when they are exposed to everyday walking experiences. Involving technicians accelerates actioning the responses. Impact evaluation strategies of interventions to the unwalkable city can be strengthened by involving NGOs that are best placed to bridge the gap between academics and everyday practice.

→ The principles underpinning research to transform unwalkable cities are:
1) position walking as a cornerstone of transport and neighbourhood planning,
2) be representative and inclusive: make sure every voice is heard,
3) localise and be flexible: recognise the local politics of transport, the timing and aspirations, and
4) don't be afraid to fail!

2. Research approaches

Walking is the most fundamental component of an urban transport system. In local environments, the determinants of walking accessibility, safety and security, and enjoyment are shaped by policy makers, technical experts and residents. Engagement of these stakeholders is key to transforming the alleys, streets and neighbourhoods that are the walking environment of unwalkable cities. Recognising the complex and varied reciprocal relationship and interdependencies is a fundamental component of these stakeholder engagement processes.

Engaging policy makers

Engaging policy makers teases out their view of walking within urban and transport planning, underscoring opportunities to be harnessed and biases to be addressed for committed investment and planning for walking. Inviting policy makers to focus on walking as a cornerstone of any urban transport systems plants the seed to thinking about consolidation of walking environments rather than motorised environments. The researchers highlighted walking as a zero carbon, predominant mode of transport in African cities that requires investment and planning. By opening a space for dialogue, decision makers were able to recognise the importance of walking within urban and transport policy. Furthermore, planning connections were created across different levels of government and bottlenecks were identified for policy and planning for accessible, safe and enjoyable walking conditions for all.

Engaging with technical experts

Engaging with technical experts highlights the frameworks that underpin planning practices where walking is invisible. Centring the attention of civil engineers, economists, transport planners and other practitioners involved in urban mobility for a few hours, introduces and stresses walking as a component of the challenges to be addressed. The researchers found it helpful to introduce walking in the conversation of technical solutions to transport. For instance, what are the design needs when we consider all the actors in the public space, such as street vendors, people with disabilities and other non-motorised forms of transport and public transport? The research underscores how walking is invisibilised in technical knowledge and the predominance of hard infrastructure developments and public transport as mobility solutions. It also calls attention to an absence of long-term considerations when planning mobility infrastructure, e.g. the lack of consideration given to maintenance.

Engaging communities

Engaging communities leads to amplifying their agency through knowledge, spaces of dialogue and recognising their rights to accessible, safe, and enjoyable everyday walking. The researchers found that everyday pedestrians with diverse sociodemographic characteristics and residents of low-income settlements with precarious infrastructure are generally overlooked. Community engagement is necessary to ensure that a common ground is built to accelerate policy decisions and implementation (Moore et al., 2020). This creates a space for individuals to reflect about walking as a mode of transport, their experiences and needs, and to acknowledge their interpretation of and aspirations for the walking conditions. Through the engagement of the community, it is possible to understand the local political structure, their priorities and actions to pressure change, active participation and influence.

Policy makers, technical experts and locals in discussion during Jane's Walk in Maputo's Sustainable Mobility Week, June 2023

3. Engagement Tools

The team developed a set of tools to engage with diverse stakeholders, creating spaces for evidence-based dialogue about walking. These tools, used in isolation or in combination, represent the building blocks of a strategy for engaging with different communities, challenging deep-seated notions about walking. They provide an entry point for the co-production of strategies to positively transform unwalkable cities.

3.1 Jane's Walks

Jane's Walk is a description used for a neighbourhood walking tour named after urban activist and writer Jane Jacobs. The walks are led by anyone who has an interest in the neighbourhoods where they live, work, or socialise. They provide a space for people to share stories about their neighbourhoods, discover unseen aspects of their communities, and use walking conversations to connect with their neighbours.

In Maputo, the researchers used Jane's Walks to engage locals, experts and policy makers. The half-hour walk, over 1km, was designed to demonstrate the challenges when walking in Maputo's streets. Before the walk, participants exchanged thoughts on walking as a mode of transport. During the walk, participants were asked to share both their positive and negative experiences, as well as what they would change and why. After the walk, group discussions were held on various themes such as finance, governance, road safety, planning and infrastructure for walking.

3.2 Ice-breaker Surveys

Short online surveys can be used to engage stakeholders and benchmark their values of walkability as an icebreaker exercise. Printed forms of the survey can be provided to ensure that those without a smartphone can participate.

In Maputo a 5-minute anonymous online survey asked all 30 workshop participants to indicate their age, gender, and level of education to help understand the impact of these differences on their views about walking.

3.1 - Jane's walk, Sustainable mobility week, June 2023, Maputo

Please take a few minutes to fill out our survey. Thank you.

1. Rate who is affected by poor walking conditions :
> Women
> Men
> Children
> Old people
> People with physical disabilities
> People with low incomes
> People with cognitive disabilities
> People without a car
> Pregnant women

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |

Least affected   *Most affected*

2. How important is walking as a means of transport?

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |

Not important   *Very important*

3. Who should be responsible for planning and making decisions to promote walking?
> Urban Planners / Urbanists
> The County
> Ministry of Transport
> An umbrella institution (coordinating all other institutions)
> National Road Administration
> National Institute of Road Transport
> Councillor responsible for mobility, transport and traffic
> Companies

4. Who do you think should be prioritized on the street?
> Car
> Pedestrian
> Bus
> Cyclist
> Motorcycle

| 1 | 2 | 3 | 4 | 5 |

Least important   *Most important*

3.2 - Anonymous Online Survey, Maputo

3. Engagement Tools

3.3 Community Mapping

Community mapping is a two-stage process where residents of a neighbourhood map the characteristics of their built environment, potential for change and their aspirations for the future.

The first phase is to digitise the spatial knowledge of the community through an online map-based survey. The task is to identify the neighbourhood's roads, paths, alleys, facilities, public spaces, and public infrastructure such as streetlights, marked pedestrian crossings, speed bumps and traffic lights on a satellite image. The perceptions and emotive responses of residents are part of the map as an experiential dimension of the mapped space. Community leaders and residents trained as researchers assist community members in the process of transferring their knowledge into the digital map, including variations of the map that respond to temporalities of day, night and seasons.

The second phase is to reflect on the development of the neighbourhood and the aspirations for the future. Building on the digitised knowledge of the first phase, this phase elicits spatialised deliberations about priorities. A printed version of the map is at the centre of the dialogue between participants that include women, children, the elderly and persons with disabilities. The dialogue is facilitated by a resident trained as a researcher.

In Freetown, community mapping was used to focus on the positives in an area to seek solutions rather than to report problems or deficiencies. The process invited people to talk about what already exists in terms of social assets (individuals, community groups and organisations), physical assets (e.g. community centres, open spaces, and businesses), and what really matters to the community. This helped identify the community's capacities and assets. The exercise highlighted the positive contributions of resident-led interventions to the walking environment. The group focused on what local partnerships and programmes exist, how money is allocated, what resources are available, and what the communities' priorities are to ensure that local people are served more effectively. However, researchers found low expectations in communities who were unfamiliar with being asked their opinions. It was noted that it takes time to build trust and confidence to create a meaningful contribution.

Researchers found that digitising the knowledge of the community serves as an excellent tool for advocacy.

In Moyiba (Freetown), Dome and New Town (Accra) and in Chamanculo C (Maputo) the process of community mapping was enhanced through geolocated street view images.

In Freetown, residents trained as researchers and young researchers from SLURC captured the everyday walking paths used by Moyiba's residents.

In Dome and New Town and Chamanculo C, young researchers guided by community leaders captured everyday views of the pedestrian experience of navigating the neighbourhoods.

The images are uploaded to Mapillary, an open-source website to visualise geolocated street view images of roads around the world : *https://www.mapillary.com/*

3.3 - Community mapping - 360° Street View Images

3.3 - Printed community maps, Moyiba, Freetown

3. Engagement Tools

3.4 Breakout Group Discussions

Breakout group discussions allow the experiences and policy challenges, risks, and strengths to be presented and recorded. In Accra, Maputo and Freetown, 2-hour breakout group discussions were coordinated by researchers. Thstructure of the discussions included:

1. What does walking mean to you?
2. How important is walking as a mode of transport in the community?
3. What are the purposes of your walking trips (destination point and functions?)
4. What are the opportunities for walking in the neighbourhood?
5. What are the major issues that impede walking in the community?
6. What is the general situation of walking at night, on a rainy day or in high traffic?
7. What is your assessment of the walking environment (pedestrian infrastructure)?
8. Which group is most impacted by poor walking conditions and why?
9. From a policy perspective, why is there less emphasis on walking as a mode of transport?

3.4 - Breakout group local engagement workshop technicians, residents & policy makers, Accra, May 2023

3.4 - Breakout group local engagement workshop technicians, residents & policy makers, Maputo, June 2023

3.4 - Breakout group local engagement workshop residents, Chamanculo C, Maputo, Dec. 2023

4. Street Transformations

Individual understanding of walking experiences often manifests collectively as resident-led actions for improving the environment in which everyday walking takes place.
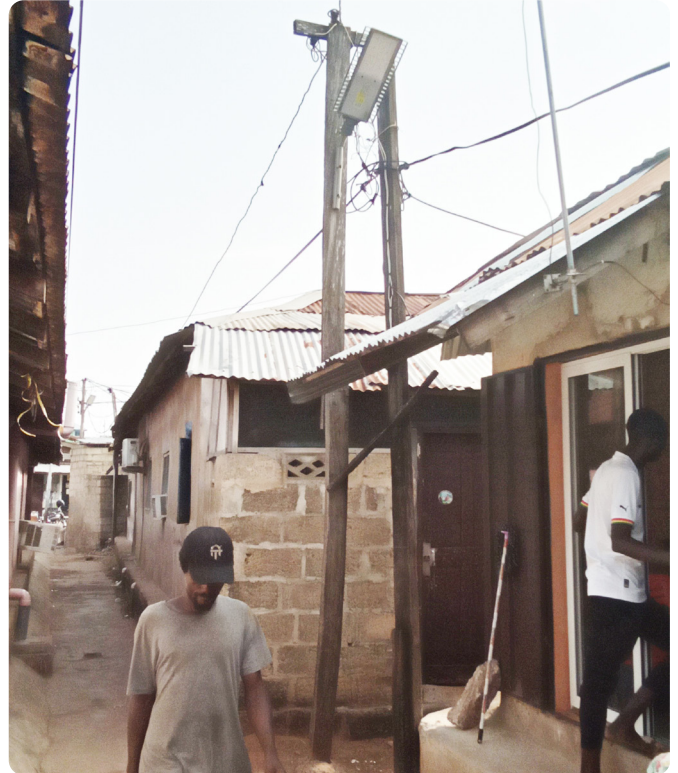
4.1 Street lighting

Availability of lighting has an influence on pedestrians' safety, impacting pedestrian experiences and practices after dark. During winter, walking during daylight hours might not be a possibility for many.

New Town, Accra

Following community discussions and an assembly member's initiative, three lamp posts were installed in New Town using residents' resources and a local electrician's expertise. After noticing the positive impact of this first street lighting initiative, the residents of New Town are aiming for at least ten more lamp posts along the town's major pedestrian routes.

"Pedestrians used to complain about how dark and lonely it was. Now that the path is lit, it is safe at night, people use it frequently. It would've been risky without the lighting."

Moyiba, Freetown

Two community leaders advocated to a local councilman to install streetlamps. With the help of the councilman, they were able to convince a private solar panel company to donate five lamps that were then allocated to five key intersections of the community.
After the lights were installed, small markets were created around them as saleswomen started gathering there to sell their products. Since the community centre doubles as a school, the light has enabled children to play until dark.

Chamanculo C, Maputo

After 5 years of demands by the community for public lighting, an agreement between the Mozambique Electricity Board (Electricidade de Maputo) and Architects Without Borders (Arquitectos sin Fronteras) resulted in the installation of street lights, transforming 15 ha of Maputo's streets. It was a collaborative endeavor between the Rignenera Project (led by the AVSI foundation and financed by the Italian Cooperation Agency) and the Habitat Project (financed by the Spanish Cooperation and Barcelona Global Justice Program).

Public lighting, New Town, Accra

Residents playing boardgames under a streetlamp, Maputo

4. Street Transformations

4.2 Sports facilities
Moyiba, Freetown

The residents transformed an empty, flat area into a football pitch by simply putting up 2 goals. Once a mining pit, the abandoned area lay in close proximity to one of the main schools in the neighbourhood. The residents saw its potential and delivered a powerful message to the community through this low-cost and high-impact initiative.

4.3 Bridges
Dome, Accra

After years of inaction around the community's accessibility challenges, residents pulled together financial resources, labour and skills to build bridges, either transitory or permanent. In some cases an assembly member provided financial support. This collective response has enabled pedestrians and especially residents with reduced mobility to safely cross creeks, rivers, gutters and drainage canals, particularly during the rainy season.

"Walking in Dome is very difficult, especially when it rains. Crossing the gutter is so much easier now."

"The initiative has really helped shorten distances to the market and other places."

"Without these bridges it would've taken several miles to walk to our destinations."

Moyiba, Freetown

Thanks to the collective initiative of its residents, Moyiba now has bridges over drainage canals and staircases to access higher areas of the neighbourhood. The residents directly adjacent to the constructions financed the necessary materials. Residents across the neighbourhood built the bridges and staircases.

Football pitch , Moyiba, Freetown

Bridge across gutter, Dome, Accra

Bridge across drainage canal, Dome, Accra

4. Street Transformations

4.4 Streets
Chamanculo C, Maputo

The Habitat Project (*Projecto Habitat*), which has been ongoing since 2016 following a major upgrade of the Chamanculo C slum by the Municipality of Maputo, began with a 60.000 euros investment from Barcelona's Global Justice Program. The project's primary goal is to contribute to the Right to the City concept by regularising land rights, including plot boundaries and road access, as well as resolving water and sanitation issues.

More than 3km of alleys have been transformed into streets. Notable changes have occurred, residents have begun using the expanded public space for various purposes including casual strolls, social interactions and hosting events like weddings or funerals.

"The project has really helped. In the past we had problems with water flooding. It was difficult to carry coffins through the narrow alleyways. We even used to suffer attacks from bandits. Things are so much better now."

"Now with the lighting, we see a lot more people moving around the streets and passing by the houses. It's been very satisfactory."

"We had so many problems, not only with the streets but also the lighting. We can tell the difference now."

-Before-

-After-

Transformation of waterlogged alleys into streets bubbling with life, Habitat Project 2023, Chamanculo C, Maputo
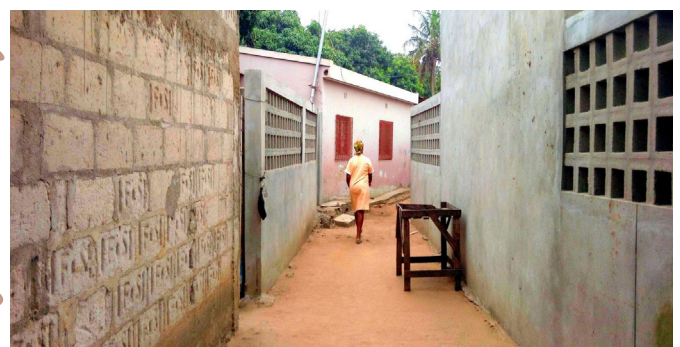
Habitat Project 2023, Chamanculo C, Maputo

Vibrant street furniture, Chamanculo C, Maputo

5. Outcomes

Tangible and intangible outcomes of the Walking Cities Lab methodology

1. Documenting community-led transformation

Systematically documenting the location and conditions of community-built infrastructure increases the likelihood that authorities will take notice of the community's needs, offer financial support and further advance the projects initiated by residents.

2. Creating spaces for empathy and learning

The Walking Cities Lab methodology encourages understanding and cooperation. Residents, planning professionals and governing bodies invariably end up working hand in hand after engaging with each other through the walks, discussions and community mapping exercises. Data collection processes create awareness in pedestrians about their rights and the outcomes of their walking practices.

In the local engagement workshop in Accra, opinion leaders from two different communities took their concerns to the Assembly in a bid to find out how the body would improve walking conditions for residents. Assembly officials were receptive to supporting the community initiatives and participating in the workshop. Policy makers urged the team to share the project outcome with them and expressed interest in further engagement on future projects.

3. Building a useful database for future projects

Research tools such as geolocation-based surveys make it possible to identify the number of plots, size and location within any given neighbourhood and highlight residents' priorities. This is essential data for any upgrading project, as was the case for recent initiatived in Moyiba (Freetown) such as the World Bank's Resilient Urban Sierra Leone Project. Meanwhile, in Chamanculo C (Maputo), Architects Without Borders (ASF) has been using community mapping as an advocacy tool to increase the visibility and awareness of street based urban transformations.

4. Changing the narrative around walking

Prioritising and promoting walking as the most fundamental and sustainable form of mobility, even in disadvantaged communities, shifts discourses and attitudes from walking as a burden to an essential component of accessible, safe and enjoyable built environments, steadily diminishing the dominance of the private car as the ultimate status symbol.

Residents engaged in dialogue, Chamanculo C, Maputo

Fieldwork , Moyiba, Freetown

Bridge across drainage canal , Moyiba, Freetown

6. Learnings and challenges

In the collaborative path towards positioning walking in the limelight in urban and transport planning, the Walking Cities Lab has faced considerable challenges and learned valuable lessons.
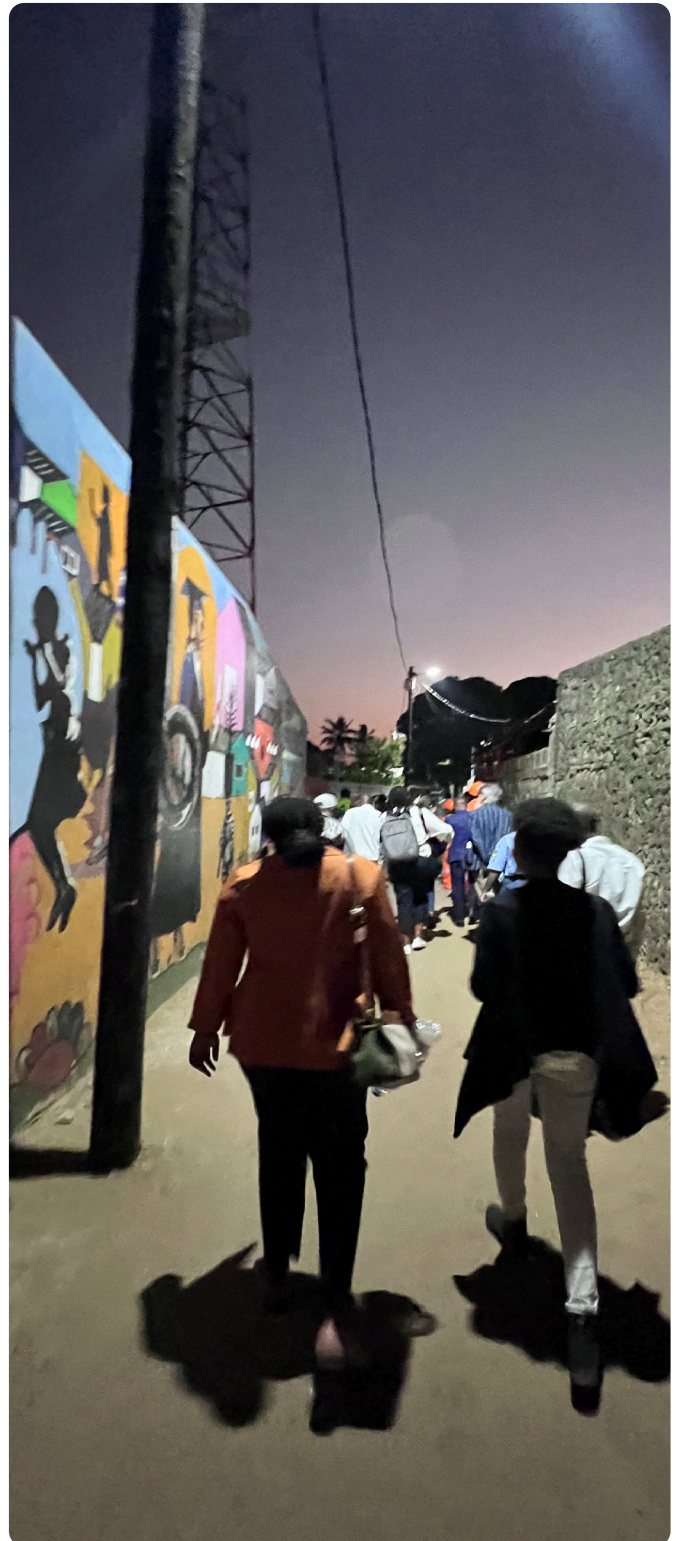
1. Walking in most cities in Africa is both a challenge and an opportunity. While African cities are essentially walking cities with an estimate of 78% of all trips completed on foot, most walking environments lack the conditions for accessible, safe and enjoyable walking trips.

2. Valuing and acknowledging local ingenuities and improvisations strengthens the foundations for lasting urban transformations of unwalkable cities. The knowledge, experience and efforts of community members must be the focus of any action supporting and recognising a local agency.

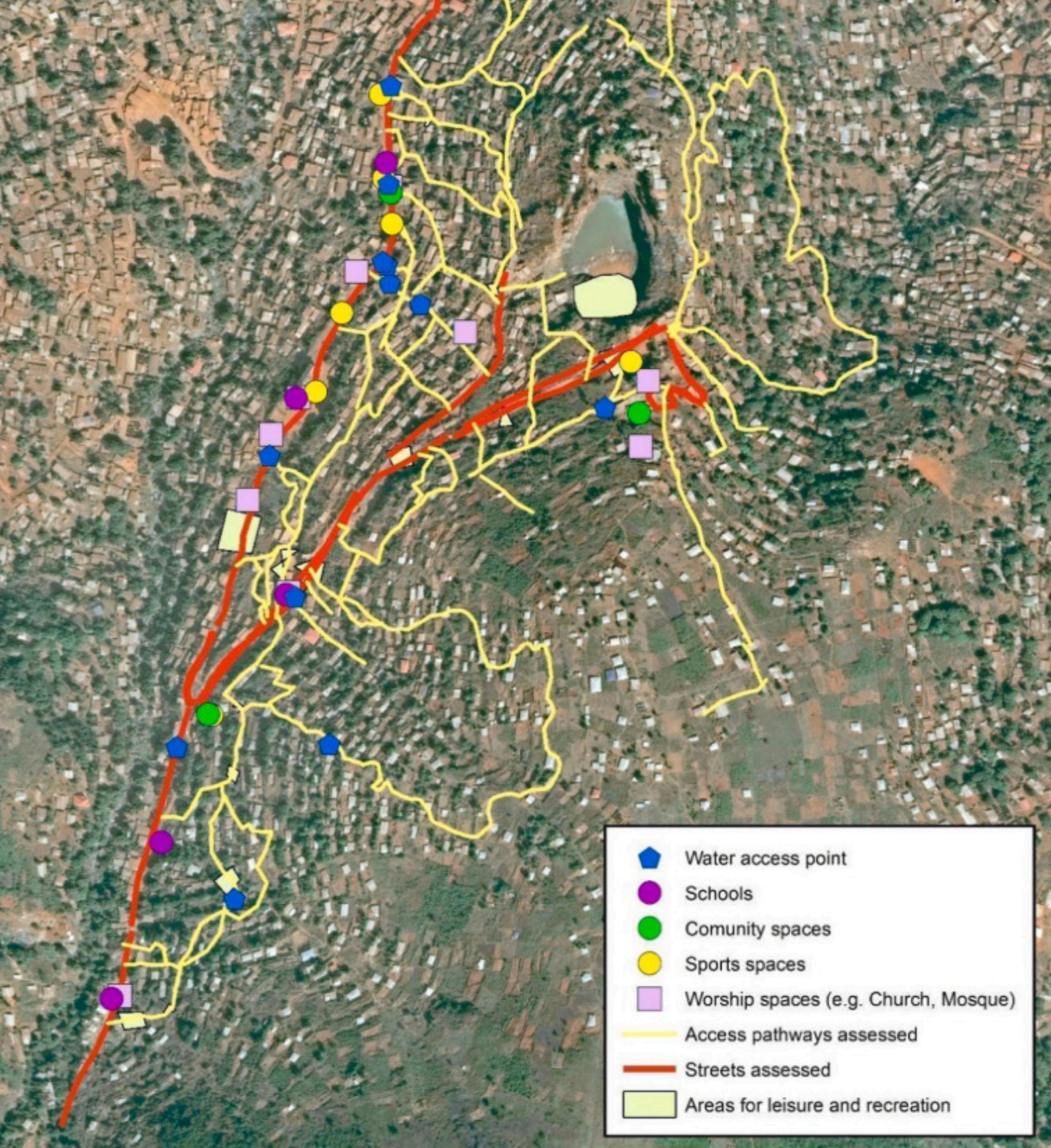**3. Co-producing knowledge about walking with disadvantaged communities busts misconceptions about walking and weakens aspirations for car ownership.** It is essential to change the narrative of walking for only leisure or for health, so as to bring awareness to the fact that walking remains the most sustainable mode of transport. Highlighting everyday challenges of those who already walk stresses the need for the provision of accessible, safe and enjoyable walking infrastructure within the urban transport system. Apps like the Walk21 Walkability.App can be used to systemise and scale.

4. Collaborating with communities in understanding the unwalkable city creates multiple added values that outweigh the apparent cost of this approach in relation to conventional research and planning methodologies. Engaging communities in knowledge production creates transferable capacities and provides a mechanism to train more empathetic practitioners and researchers.

5. Creating a 'knowledge-practice exchange hub' such as the Walking Cities Lab enables to sustain collaborative and community-engaged project experimentation and peer learning that outlive funding life-cycles. The Lab's emerging evidence can be used to advance processes of transformation, advocacy and mainstreaming of equity in walking research and practice in African cities.

Residents roaming the streets of Maputo after dark

Legend:

- **Water access point** (blue pentagon)
- **Schools** (purple circle)
- **Comunity spaces** (green circle)
- **Sports spaces** (yellow circle)
- **Worship spaces (e.g. Church, Mosque)** (pink square)
- **Access pathways assessed** (yellow line)
- **Streets assessed** (red line)
- **Areas for leisure and recreation** (light yellow square)

For further information please visit *walkingcitieslab.com*

All publications can be accessed here : *walkingcitieslab.com/publications*

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