Chapter 1

Walking and cycling, the predominant mode

In Africa, on average, people spend up to 56 minutes walking or cycling for transport every day

Walking and cycling in Africa has long been a peripheral priority in transport planning and engineering. This is surprising since more people walk than use any other form of transport. Active travel also creates immeasurable mobility value. It generates the least noise and air pollution, requires no use of fossil fuels and has significant health benefits. In car-congested African cities, it's the people who walk and cycle for significant periods of time that should be central to sustainable urban mobility decision making processes.

Up to 78% of people walk for transport in Africa every day. However, car ownership levels are increasing along with dangerous levels of air pollution.[7] In Lagos, for example, road transport is the main source of ambient air pollution.[8] The number of vehicles has nearly quadrupled in the last 10 years, most of which are unsafe and highly polluting. The Nigerian capital city is not alone, cities in Ethiopia, Ghana, Rwanda and others face similar challenges.

Transportation is a large source of multiple pollutants which contribute to climate change and poor air quality including black carbon, carbon dioxide and nitrogen oxides.[9] Black carbon and other co-pollutants are key components of fine particulate matter (PM2.5) air pollution, a leading environmental cause of poor health and premature death.[10] Heavily congested traffic areas, which are common in African cities, often experience elevated concentrations of nitrogen dioxide and particulate matter.[11]

> **"The trend toward increased motorisation is especially dangerous for the most vulnerable populations."**
>
> Lagos Non-Motorized Transport Policy

Some cities in Africa including Accra (Ghana), Plateau (Benin), Gossas (Senegal) and Kampala (Uganda) have recognized the risks of increasing air pollution. They have, amongst other things, developed relevant policies and joined the BreatheLife Campaign.[12] The BreatheLife Campaign is an initiative that combines public health and climate change expertise with guidance on implementing solutions to air pollution in support of global development goals.

Collaboration in addressing air pollution is becoming increasingly important. Air pollution is now the second largest cause of death in Africa. In 2019 it was responsible for 1.1 million deaths across Africa.[13] It has major negative impacts on health, human capital, the economy and public health systems. Recent data indicates that people living in areas with high levels of air pollution are prone to developing chronic respiratory conditions.[14]

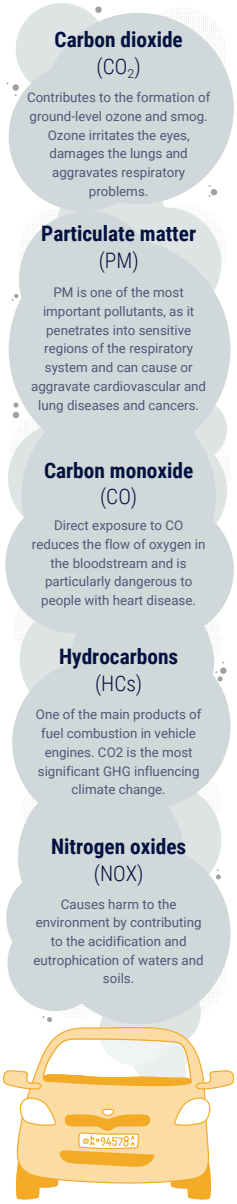
The rise in motor vehicle use not only pollutes the air, it also impacts public health by discouraging physical activity where there is an affordable choice. Africa 2063 calls for a future where African people have sound health and well-being.[15] Physical activity in the form of walking or bicycling everyday reduces the risk of high blood pressure, heart attacks, mental health issues, and a variety of cancers.[16]

Obesity levels are rising rapidly across the continent. Eight of the top twenty countries with the fastest rising rates of adult obesity are in Africa.[17] [18] While it is often argued that the higher levels of exposure to air pollution while walking and cycling can be more harmful this is not necessarily the case. Research indicates that everyday physical activity for travel is overall more beneficial for health than private vehicle use.[19] Walking and cycling are central to the prevention of obesity in adults, children and people with other existing conditions including type-2 diabetes which has increased in prevalence by 129% since 1980 in the African region.[20]

The WHO recommends a minimum of 150 minutes of moderate-intensity physical activity and 75 minutes of vigorous-intensity physical activity per week for adults with minimal time spent being sedentary.[21] Walking and cycling are indispensable to meeting these activity requirements.[22]

Active commuting has seen a renewed appreciation during the pandemic. The unique ability of non-motorised transport to combine mobility with social distancing and health benefits creates an unprecedented opportunity to bolster the momentum for walking and cycling in African cities,[23] where it is predicted that the pandemic will continue to smoulder for several years.[24] Rethinking mobility is now a priority to enhance resilience and create the conditions for a greener, more inclusive recovery.

FIGURE 6
Common Pollutants from Motor Vehicles



Adapted from the EEA Report - Explaining road transport emissions - a non technical guide (2016)

1 **Action 1:** Retain the value

Active mobility and compact urban planning needs to be at the heart of mobility agendas.[25] Understanding the demand and needs of people walking and cycling and taking action to protect and enable them contributes directly to achieving many of the Sustainable Development Goals. Safe and enabling human scale environments improve individual and community health (particularly for the urban poor).[26]

It is tempting to laud the high levels of physical activity for transport in Africa for the health, air quality and mitigation benefits, however, it is important to note that particularly high levels are also an indication of poor land use planning and massive social inequity. Poorer people, particularly women, often take much longer journeys on foot, out of necessity and limited choice.[27] Retaining the value in the high modal share means shifting urban planning, investment and infrastructure development towards the needs of pedestrians and cyclists with a particular focus on those that are most vulnerable.[28]

Many decision makers cite inaction for walking and cycling to be as a consequence of a lack of data. **Often walking and cycling records, where they exist, provide an inaccurate understanding of the mobility reality for millions of people**. Although useful, there are 3 key issues that normally reduce the visibility of walking and cycling in mode share data collection. Firstly, there is no consistent methodology. Secondly, collection is usually focused on 'main mode' – this does not include trip stages nor multiple trips and thus often does not include walking or cycling. Thirdly, walking and cycling are grouped together (in what is usually referred to as Non-Motorised Transport) making it difficult to understand the unique travel patterns of each mode.

Cities should compile existing data and conduct baseline surveys to document existing conditions. Over time, this database can be updated when street improvement projects are implemented on particular corridors.

Ethiopia Non-Motorized Transport Strategy 2020-2029

Decision makers need to have better cognisance of the actual levels of walking and cycling for transport and take action to retain the value and improve the experience. Few countries in Africa measure walking and cycling levels as a mode share of transport trips at all. Typically, the data only focus on the commute trip and only record trips of more than 1.5km.

The STEPwise Approach

Accurate modal share data along with data on time spent walking provides a robust evidence base for informed and appropriate action. A helpful insight into the levels of walking and cycling for transport, disaggregated by gender, ability, age and income is the World Health Organisation (WHO) STEPwise approach to non-communicable diseases risk factor surveillance.[29]

The STEPwise approach is simple, standardized method for collecting, analyzing and disseminating data in WHO member countries. Specifically, the Global Physical Activity Questionnaire asks *"How much time do you spend walking or bicycling for travel on a typical day?"*[30] Currently, WHO has collected mean minutes of travel time from 55 countries, including 19 in Africa. The data collected does, however, have some limitations in comparability. For example, it does not correspond to the same year for each country, is only a partial dataset for the region and does not clearly disaggregate between walking and cycling.

Physical activity has significant benefits for hearts, bodies and minds. Countries and communities in Africa must ensure that walking, cycling and other forms of active transport are accessible and safe for all, and thereby contribute to improving health of people and the planet.

Fiona Bull, Head of Unit, Physical Activity, WHO HQ

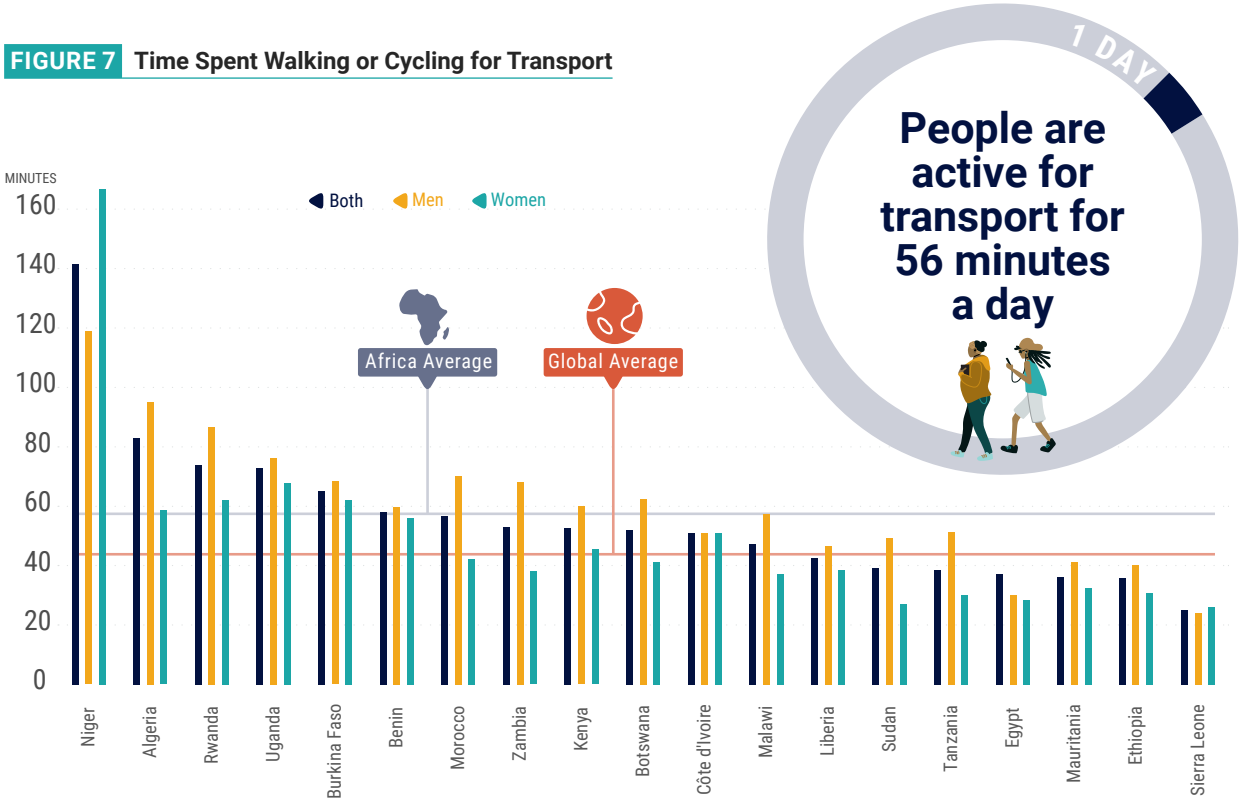
Despite the limitations, WHO data suggests that on average, people in Africa, are walking or cycling for transport for 56 minutes per day. The Global average is 43.9 Minutes. Figure 2 illustrates that people in Niger (77.6% active) are walking and cycling the most for transport in Africa of all countries for which data are available, averaging 141,6 minutes per day.

In Niamey, the Capital City of Niger, data, although limited, indicates that over half the trips in the city are made on foot.[31] On a national level, women walk and cycle 29% more than men. Many women in more rural areas walk long distances to sell their products in urban hubs, often leaving their villages before sunrise.[32] Women's and girls' limited access to financial resources leads to higher dependency on walking. They also face greater safety and security risks as they walk city streets.[33]

In Uganda - the most physically active country in Africa - the average time spent physically active for transport is 72.8 minutes. Work-related physical activity and travel-related physical activity contribute most to overall weekly physical activity levels.[34] Despite being the most physically active, time spent active for travel is almost half the time of those in Niger and still less than those in Rwanda (73.9 minutes) and Algeria (83 minutes).[35] The countries in Africa with the least amount of time spent walking and cycling for transport based on available data are Ethiopia (36 minutes) and Sierra Leone (25 minutes).

The WHO collects physical activity data to support their role as custodians of the healthy lives and well-being dimensions of the global agenda (SDG 3). Specifically, SDG target 3.4 aims to reduce premature mortality from noncommunicable diseases (NCDs) and to promote mental health and wellbeing. This includes a 25% voluntary reduction target for premature mortality of NCDs and a 15% reduction in the prevalence of insufficient physical activity by 2030.

FIGURE 7 **Time Spent Walking or Cycling for Transport**



Adapted from the WHO STEPWise Country reports


© Women walking on a busy street in Kigali, Kigali Today LTD

The WHO Global Action Plan for Physical Activity provides the framework for encouraging everyday activity and promotes walking and cycling. In Sub-Saharan Africa, NDCs are becoming a growing challenge for health systems geared towards targeting infectious diseases and maternal and neonatal deaths.[36] All countries in Africa have committed to the SDG 3 targets.

Locate the demand and need

> *Understand the demand and needs of people walking and cycling: Do education sites, employment zones, health care centres, shops and green space have clear, safe space for walking and cycling?*

There are strong links between physical activity and the built environment.[37] Understanding the demand and needs of people walking and cycling in Africa is the best foundation to developing effective policy and responsive actions.

There is already some understanding of why people who live in low-income areas do and don't walk and cycle in Africa. For instance, walking and cycling are low-cost transport options and many people lack suitable alternative transport options. There is very little research, however, relating to walking and cycling behaviour in middle-income countries in Africa.

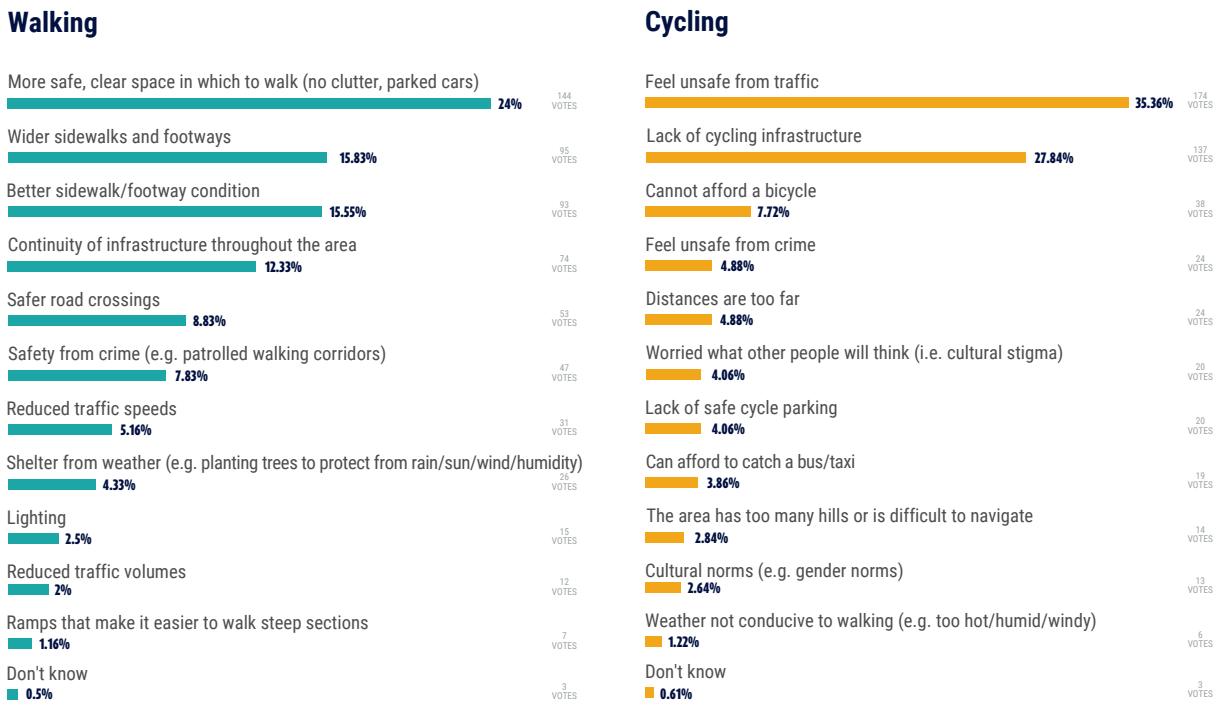
Many cities and countries collect travel survey data already. However, the quality of the data, and the type of data collected, could be improved. Not all surveys collect data about gender, accessibility, social inclusion, walking and cycling trip purposes, distances and time travelled. Surveys are not always conducted frequently enough, and cities may find themselves using outdated data to make crucial planning decisions.

Voluntary submission to the WHO Stepwise data and a national or local survey that accurately identifies both the number of people, key routes and locations as well as the amount of time spent can help both validate and add to the robustness of available data.

Plans will be data-led and should eventually result into a dense network of streets and paths that meet NMT requirements as much as possible.

Nairobi Non-Motorized Transport Policy

FIGURE 8 **Perceived Needs of People Walking and Cycling in Africa**



Data collected from interviews with transport and urban planning experts. See the methodology for further details.

Outcome Indicator

Average minutes active for transport per day disaggregated by walking and cycling, gender, disability status, age and income.

Surveys can be used to understand how gender, age, ability, and income influence demand and need. Proactive strategies are needed to ensure the needs of women, people with disabilities, young people, the elderly, and those on low incomes - who are known to walk most - are especially understood so that they can be responded to. It is also important to understand the attitude towards walking and cycling infrastructure. This is expanded on in Chapter 5 of the report.

General household surveys, household travel surveys, randomised sample interviewing, and travel diaries are established methods for collecting data on walking and cycling experiences and how it compares to the attractiveness of other modes. Some countries collect household data specifically focused on walking and cycling patterns.[38] Household travel surveys are most helpful when information is collected every five years at the very least.

Public transport operators, education providers, healthcare practitioners, faith leaders, park managers and employers are potential conduits to reaching communities informally for survey responses. They are able to act as representatives of many trips that are often walked and cycled. As service providers and community leaders they have an interest in ensuring their facilities are safe, easy to access and welcoming. They could be long term partners to data collection and improvements.

67% of pedestrians are likely to want a continuous network of footpaths and safe places to walk.

85% of cyclists' likely needs are for a continuous network of bike lanes and safe space to cycle

Table 1.1: Activity Tools and Guidance Materials

Tool
Data Collection for Bus Rapid Transit
Rural Transport Survey case study (Sierra Leone)
Toolkit to Better Utilize Existing Data from Household Surveys to Generate Disaggregated Gender Statistics
WHO Stepwise Approach to NDC Risk Factor Surveillance (STEPS)
NMT Count Survey form
A guide to setting up an urban observatory

The consistent lack of essential infrastructure makes the experience of walking and cycling in Africa, difficult, unpleasant, and dangerous. Mobility experts consulted in the development of this report seem to be on the same page when it comes to understanding what pedestrians and cyclists need. Figure 3 above illustrates the perceived needs of people walking and cycling in Africa.

According to experts surveyed, 67% of pedestrians are likely to want a continuous network of footpaths and safe places to walk. The same can be seen when it comes to cycling. 85% of cyclists' likely needs are for a continuous network of bike lanes and safe space to cycle. Complementing the need identified for new infrastructure to facilitate walking and cycling is the requirement to manage traffic by slowing speeds and reducing volumes.

© Family enjoying car free day in Rwanda, Kigali Today LTD

Case Study: Household Surveys in Dakar, Senegal

Authorities in Dakar have been proactive in understanding the mobility demands of people in the Senegalese capital.

CETUD (*Le Conseil Exécutif des Transports Urbains de Dakar)* which is the authority responsible for city transport planning and service delivery conducted a household survey on mobility in 2015 entitled "The Transport and Access to Urban Services in the Agglomeration of Dakar." The survey used stratified, randomised sampling to develop a statistically reliable measure of mobility practices and travel needs in the city.

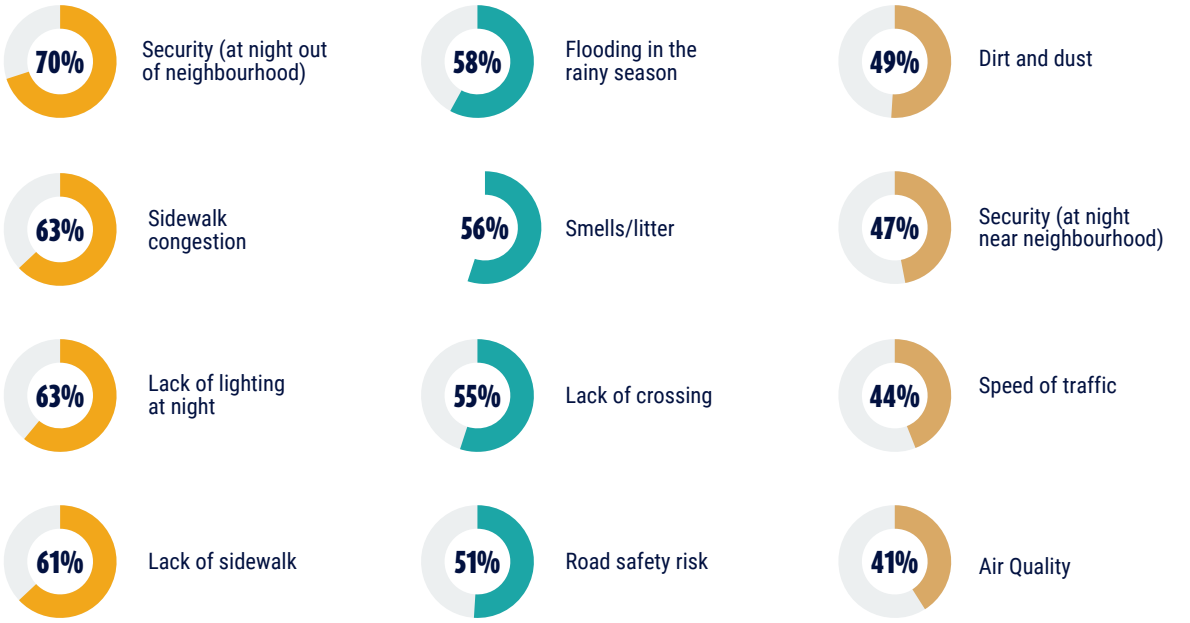
© Woman walking on a sidewalk in Dakar, Vadeenas, Shutterstock

Most journeys in Dakar, Senegal are walked. However, many streets have no footpath or crossing and are encroached on by traders and parked cars. A household survey in 2015 quantified the level of concern.[40]

The survey identified that 94% of the 7.2 million daily trips are made by walking (70%) or public transport (24%). The quality of the walking experience in Dakar was reported as a concern for many (Figure 7 below). This highlighted a gap in transport policy, budget and accountability.

A new Sustainable Urban Mobility Plan (SUMP) was developed for the city in 2020, to ensure that future urban mobility in Dakar remained sustainable.[39] It is hoped that the SUMP process will respond to the concerns raised in the survey and expand the remit of CETUD to make the authority responsible for walking too. Two mass rapid transit projects are currently implemented in Dakar. Improvements to the walkability of the city and extension of the public transport network are further expected to be solutions to ongoing challenges of road safety, air pollution, traffic congestion and motorisation.

FIGURE 9 **Perceptions of walking experience in Dakar, Senegal**



Adapted from the Dakar Household Survey 2015, SITRASS – CUREM