



# The First Step

A Walking and Cycling Newsletter

Brought to you by the UNEP Share the Road Programme

## Issue 1

September 2016



**FOUNDATION**



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Publisher: UNEP

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Stones Kenya Ltd  
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Published by the United Nations  
Environment Programme (UNEP),  
September 2016

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**Publication:**  
**Share the Road Newsletter Issue 1, 2016**

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Cover photo: Sticks and Stones Ltd, Nairobi.

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Dear Readers

**W**elcome to the first edition of The First Step; the Share the Road Programme quarterly newsletter. Our programme was launched in 2008 with co-founder the FIA Foundation for the Automobile and Society. We work with governments around the world to develop policies which promote investment in walking and cycling infrastructure. Because investing in infrastructure for walking and cycling leads to massive benefits; for the environment, for road safety and in improving access to basic services such as health facilities and schools.

No matter where you live or how you travel, everyone begins and ends each trip as a pedestrian. In cities across the world many people rely almost exclusively on walking and cycling as their primary forms of mobility. But despite the high societal costs, increasing the road space for cars continues to be a priority for investors and governments.

However things are changing; we hope that this newsletter will shine a light on great work around the world; where governments and other stakeholders are investing in Non Motorized Transport (NMT) and improving the lives of people who walk and cycle every day.

Our newsletter will showcase our work and feature stories on NMT from around the world written by our contributors. We welcome stories or ideas for stories from our readers, just send me an email at [carly.koinange@unep.org](mailto:carly.koinange@unep.org).

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# Share the Road Around the World

It has been a busy first half of 2016 for the Share the Road Programme, and for the first time we are expanding our reach; whilst continuing to support African countries we have also branched out and have commenced support in the Latin America/Caribbean region. Below is a snap shot of the work we are supporting around the world.

## Brazil:

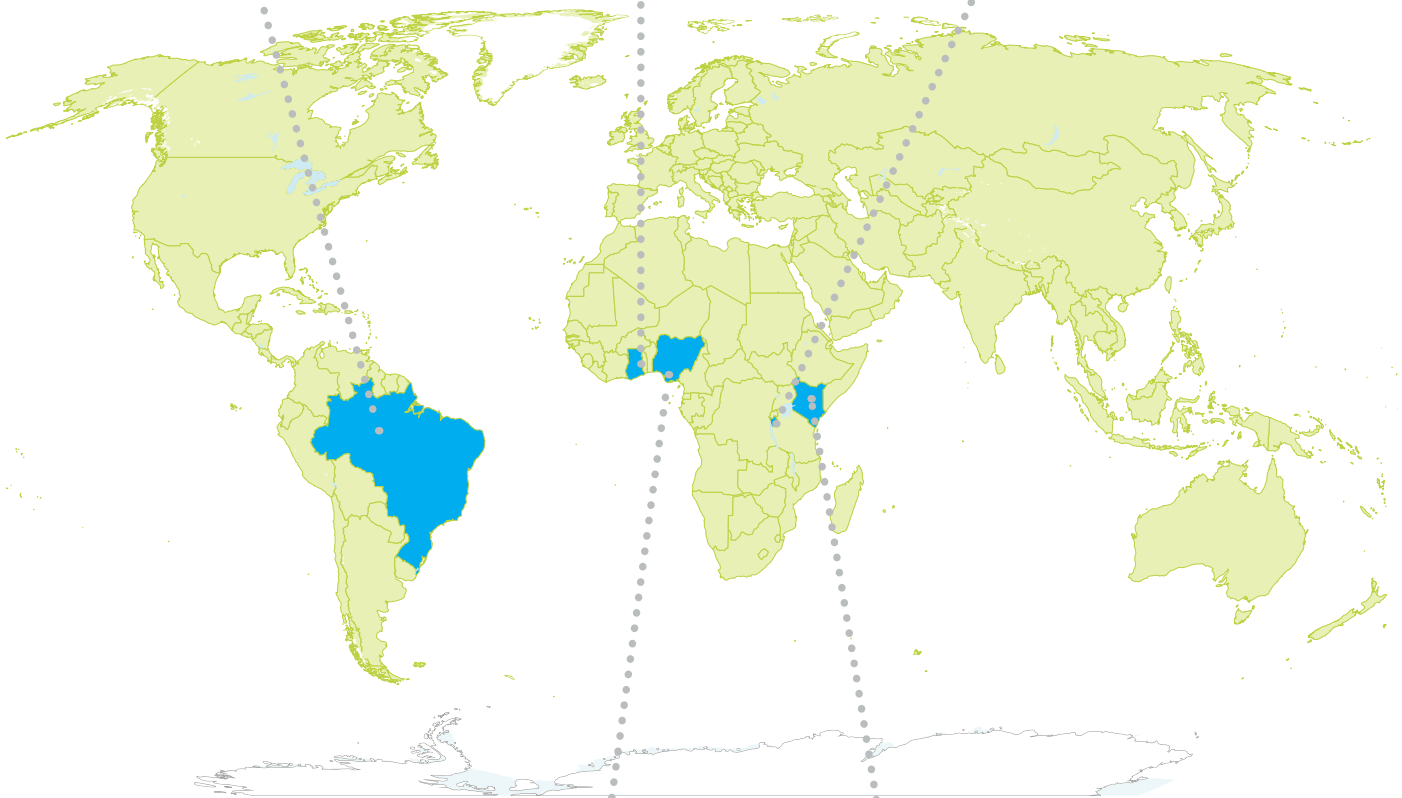
Working in Brazil we will be focusing on road safety legislation and school children; working directly with children we will explore the issues they face and connect them with government policy makers. In parallel a national wide review of NMT and Road Safety legislation and the impact on children will take place in 2016.

## Ghana:

The Ministry of Transport and the National Road Safety Commission have committed to development of a National NMT policy in 2017 with the support of the Share the Road Programme.

## Burundi:

The Ministry of Works and Transport successfully completed an environmental and social impact assessment for a pilot NMT corridor and have committed to developing a National NMT policy in 2017.



## Nigeria:

The Lagos Metropolitan Transport Authority are developing an NMT policy for Lagos which will be launched in December 2016. The Federal Ministry of Transport are also improving their Federal Transport Policy to include a heavier emphasis on NMT. Both agencies will also undertake street design training for key staff.

## Kenya:

Further to the launch of the Nairobi NMT policy in March 2015 in which the Nairobi City County Government commit 20% of their road construction budget to NMT investment, a national workshop was held on how to upscale the policy to a national level. Over the course of 2016 and 2017 we will support the Ministry of Transport and other stakeholders to implement the action plan developed at the national workshop.

# Walking and Cycling Training Course in Cape Town

The last day of May marked the onset of winter for the port city of Cape Town but the cold winds also ushered in the arrival of 20 participants to the NMT for “Creating sustainable African Cities” Training workshop that was being held at the University of Cape Town.


The engineering department of the University of Cape Town played host to the visitors and throughout the two-days critical areas of NMT planning and investment were explored by the participants and the lecture staff. Key areas of discussion for day one included:

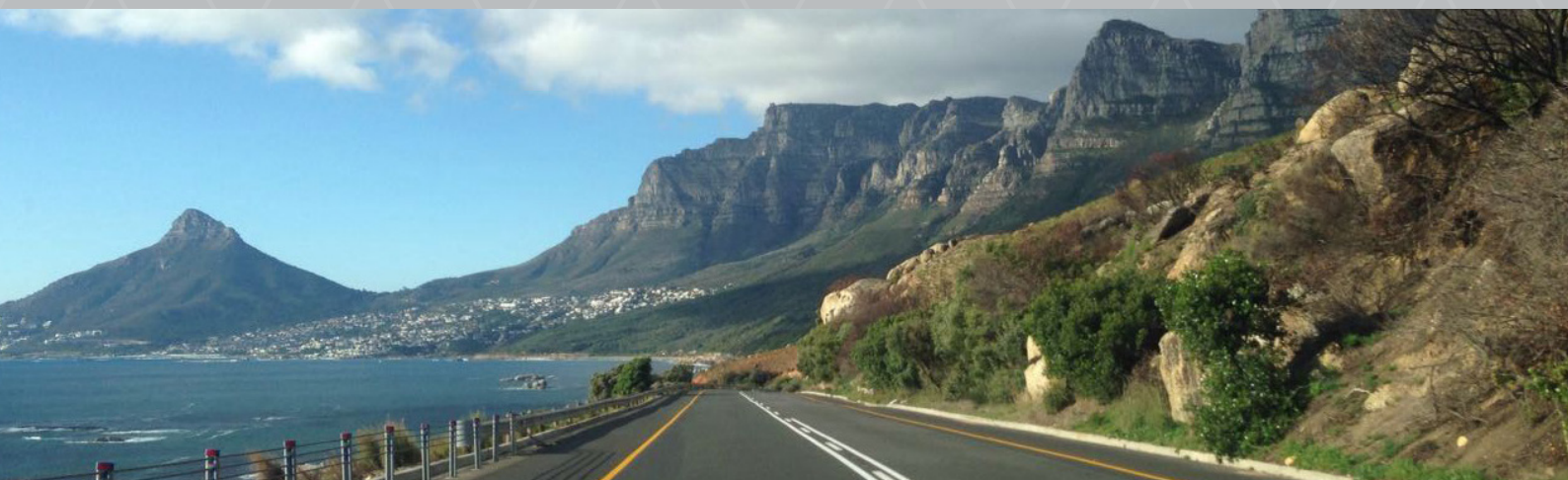
- The importance of NMT and its core benefits with several powerful examples being cited such the positive impact introduction of bicycles in parts of Zambia and Malawi have had in increasing school attendance and reducing dropout rates .
- The need for prioritization of NMT and development of policy – it emerged that while most cities still did not have an NMT policy in place, there were plans to introduce the policy in the near future and also that many aspects of the NMT policy were being introduced and enforced through other avenues.
- Challenges and barriers of NMT in their various cities were explored. Key among them being cultural perceptions of NMT as a ‘poor persons mode of transport’ security concerns, lack of support and infrastructure, long distances, inhibitive terrain and topography.

Day two welcomed the rolling up of sleeves and getting down to work as Professor Mark Zuidgeest started the day off by training participants on best practice network planning & design. There was a specific focus on vulnerable groups and the necessity for universal design from Associate professor Marianne Vanderschuren-. Special guest lecturer Paula Rocha from WRI Brazil also gave lessons learned from Brazil in linking bus rapid transit planning to walking and cycling accessibility. Course delegates then split into groups to design and map out a city cycle network.

## NMT Interview Series

The UNEP Share the Road Programme took the opportunity to organize interviews with senior level policy makers and academics who attended or delivered the training and this interview series showcases their thoughts on cycling and walking plans for their country.

Look out for the  interview symbol throughout the newsletter to hear what they had to say. The interviews were conducted by Eric Lu Sava , Creative Director, Sticks and Stones Ltd (eric@sticks-and-stones.co.ke)





**Mr Sean Cooke**  
**Research Associate**  
**University of Cape Town**

**Interviewer:**

Hi Sean, you have spent sometime in Nairobi, Kenya and in Cape Town, South Africa. What are some of the similarities and differences when it comes to cycling and walking in both places?

**Sean:**  
In both cities, there is a lot of neglect of cyclists and pedestrians and their needs. Planning and development doesn't factor them in well, and where it does the facilities are abused or inadequate. There is also huge lack of emphasis on data collection for NMT. I would say overall the biggest difference would be access to NMT; funnily enough, in Nairobi, there is better access to NMT whereas in Cape Town and to a larger extent South Africa, the use is more aggregated.

**Interviewer:** How do you mean Sean?

**Sean:**  
In Nairobi people who walk and cycle are actually able to access the routes where there are routes and people walk and cycle for functional purposes – going to work, to school etc. While in South Africa, the infrastructure might be there but no access has been created to get to it and most people using NMT are actually doing it for leisure.

**Interviewer:** How do you think some of these challenges can be tackled?

**Sean:**  
In South Africa, integrating existing and future NMT routes and infrastructure with public transport would be a great place to start. For Kenya, maybe linking the NMT routes with services and amenities such as places of work, leisure, hospitals and schools would help.

**Interviewer:** From a research perspective, what do you think should be done to push the NMT agenda in Africa?

**Sean:**  
We need to add factual, numerical & economical arguments to the positives of NMT. If we can back with facts and figures why the NMT agenda is crucial for different facets of the environment, economy and productivity as well as health, then the task will be a bit simpler. We also need tools to compliment the data.

**Interviewer:** Who do you feel should have more involvement in NMT discussions in cities and policymaking?

**Sean:**  
Public Service Vehicular providers. These unfortunately view NMT as competition rather than a complementary alternative. I also feel that the housing sector should have a bigger role in the discussions.

**Interviewer:** What is the future of NMT?

**Sean:**  
NMT is the foundation of all mobility and will continue to grow in popularity into the future, as long as we have a change in mind-set and prove the concept.

**Interviewer:** Tales of you purchasing and using a “mwananchi” (ordinary citizen) bicycle in Nairobi are legendary, so two part question here; clue us in on an adventure during your time in Nairobi while cycling and also, what do you say to people who are in traffic jams for long hours?

**Sean:**  
I once got into a shouting match with taxi drivers who had parked the cars in the bike lane, they actually felt I was in the wrong for using the bike lane and it almost degenerated. As for people stuck in traffic, I always say- You are not stuck in traffic, You are Traffic.



# NMT & Informal Workers

By Susan Wothaya,

Share the Road Africa Coordinator, UNEP.

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## Introduction

**N**MT is an important mode of travel especially for the urban poor and low-income groups. In cities of most developing countries, NMT particularly walking is the main mode of travel. This is often not by choice but due to unavailability of affordable and accessible options. In Kenya for instance, about 47% of the population in Nairobi walk to meet their daily needs, while in other cities in Africa such as Conakry (Guinea) and Douala (Cameroon) the share of walking is as high as 78% and 60% respectively<sup>1</sup>.

A large proportion of the populations in most developing countries are employed in the informal sector. The Economic Survey report on Kenya 2014 shows that about 11 million people were employed in the informal sector in Kenya in 2013<sup>2</sup>. In Africa, more than half of the populations (55%) were engaged in the informal sector in the 2000s (ILO, 2009:27)<sup>3</sup>.

NMT is the most accessible and affordable mode of transport for a majority of informal sector workers. Among the major reasons for dependence on non-motorized transport is the low and often unstable income in the informal sector as well as high public transport fares. Mitullah and Njeri (2003) studied construction workers in Nairobi and revealed that majority of the workers (79%) walked to the construction sites as opposed to 16% who used public transport means. The disparity in the modal share was attributable to low income levels, which limited the affordability of public transport cost for the construction workers<sup>4</sup>.

In some instances, NMT use by the informal workers is by choice. NMT offers flexibility for instance, for peddlers who move around selling their wares such as newspapers, snacks fruits, jewelry, and water. However, in most developed countries, NMT infrastructure is poorly developed or unavailable making users such as the informal workers vulnerable to traffic fatalities.

## Role of NMT in Informal Sector Activities

**I**nformal workers have unique travel patterns as they do not make just one trip to and fro work in a day. Their travel patterns are mostly influenced by their needs and work activities. A study of informal workers engaged in fabrication and distribution of metal products at Kamukunji Metalwork Cluster in Nairobi showed that these workers made multiple trips in a day linked to acquisition of raw materials, production and distribution of goods<sup>5</sup>.

To meet the various travel needs, informal sector workers engage a variety of travel modes such as walking, cycling, public transport (bus, matatu<sup>6</sup>, and train), cars e.t.c. The choice of travel mode often depends on the travel need and other factors such as affordability, accessibility of the mode as well as availability of infrastructure to support the travel mode in question.

<sup>1</sup> Source: Kumar, A., Barrett, F. 2008. Stuck in Traffic: Urban Transport in Africa. AICD

<sup>2</sup> Kenya National Bureau of Statistics, 2014. Economic Survey 2014. Nairobi: KNBS

<sup>3</sup> Bacchetta M., Ernst E., Bustamante J., 2009. Globalization and Informal Jobs in Developing Countries. Geneva: ILO

<sup>4</sup> Mitullah, W. and Njeri, W. 2003. Informal Labor in the Construction Industry in Kenya: A case study of Nairobi. ILO Working Paper 204. Geneva: International Labor Office.

<sup>5</sup> Gichuna S. 2012. "Informal Workers and Travel Choices: The Case of Jua Kali Workers in Kamukunji Metal Cluster, Nairobi." Unpublished Master's Thesis. Nairobi: University of Nairobi

<sup>6</sup> A para-transit mode of transport commonly used in Kenya



**N**MT is an important mode of travel especially for the urban poor and low-income Non-motorized transport including walking, cycling and other modes for loading goods such as handcarts and trolleys are integral modes of transport for the informal workers. These modes are important in accessing desired destinations and activities as described below:

### Work Commute

Majority of the people employed in the informal sector can only afford to walk or cycle to their work locations as public transport costs tend to be un-affordable for such populations. Safe and affordable mobility needs for the poor and low-income earners remain marginalized in urban planning; hence, they have to make trade-offs to meet their needs for food, housing, education and travel costs.

A common practice for informal workers is to reside in informal settlements near the work places, where they can walk or cycle to save on transport costs. In other cases, in a bid to save on costs of housing, informal workers reside in low cost houses away from their places of work and commute on public transport and walk or cycle where possible.

Public transport is however largely un-affordable and the fares are in most cases inconsistent depending on time and distance. Some coping strategies for the poor and low income earners include combining travel modes, for instance, walking for the better part of the journey and using public means such as bus, matatu, bicycle, motorcycles or three wheeler rickshaws for the rest of the journey. Another strategy is to use public means during off-peak hours. This would be very early in the morning, daytime or late in the evening.

### Production and Distribution of Goods and Services

Informal sector work involves a variety of activities including production and distribution of goods and services. These activities include categories such as trade in goods and services (clothes, shoes, cooked food, groceries, hair dressing); manufacturing (garment making, metal ware, and woodwork) and repair services (shoes, clothes, vehicles, and cycles).

Non-motorized transport is widely used by informal workers in distribution of goods and services as well as sourcing raw materials for manufacturing purposes. Informal workers engaged in distribution activities such as vending newspapers, snacks, fruits, vegetables, second-hand items or services like painters, plumbers, electricians often walk or cycle to access their customers. These activities involve multiple trips that would be un-affordable to meet using public motorized means. An analysis of non-motorized travel characteristics along Jogoo Road, Nairobi showed that majority of the respondents who made multiple trips in a day used bicycles while those who had less daily trips used a matatu<sup>7</sup> (Mitullah and Makajuma, 2011). The study inferred that those who made multiple trips were informal sectors workers and could not afford a matatu for the trips.

<sup>7</sup> Mitullah, W. and Makajuma, G. 2011. Analysis of Non-motorized Travel Conditions on the Jogoo Road Corridor in Nairobi, Kenya. ACET Working Paper No. 7-02. Nairobi: University of Nairobi.



## An informal worker transports goods on a bicycle in Mombasa, Kenya



Informal workers mainly use intermediate modes of transport including handcarts (commonly known as mkokoteni in Kenya), trolleys and wheelbarrows for transport of goods since they are more flexible and affordable than motorized means. Trolleys are mostly used to carry non-bulky items while handcarts carry bulky and heavy goods. Informal workers sometimes use handcarts and wheelbarrows for displaying their wares. In such cases, the vendor stays at one location or moves around to reach the customers.

Social activities such as attending informal groups (known as chama in Kenya), shopping, visits to friends and relatives form a significant number of trips made by informal workers. The frequency of these trips and distance mainly determines the mode of transport. Walking and cycling are used for frequent and short trips while matatu is used for longer distance and occasional trips.



## The NMT Infrastructure Challenge

The greatest challenge for any NMT user in developing countries is the lack of NMT infrastructure, and poor design and maintenance where it exists. Majority of roads are constructed without sidewalks, cycle tracks and crossing facilities for NMT users. This exacerbates the risk of traffic fatalities involving pedestrians and cyclists. The World Health Organization (WHO) estimates that pedestrians and cyclists account for about 27% of road traffic deaths globally. The fatalities are even higher in developing countries for instance, in Africa; it is about 43%<sup>8</sup>.

There is also lack of infrastructure for intermediate modes of transport such as handcarts, trolleys and wheelbarrows in which case, they use the motor vehicles carriageway or pedestrian paths. Law enforcers view these modes as a nuisance on the roads, for instance in Nairobi, there are cases where the informal workers get fines for using them on the carriageway or in certain parts of the city. The charges at times are too exorbitant for an informal worker to afford and in such cases; their goods are confiscated<sup>9</sup>.

<sup>8</sup> WHO (World Health Organization), 2013. "Global Status Report on Road Safety 2013: Supporting a Decade of Action". See [http://www.who.int/violence\\_injury\\_prevention/road\\_safety\\_status/2013/en/](http://www.who.int/violence_injury_prevention/road_safety_status/2013/en/) (accessed 18/08/2015)

<sup>9</sup> Gichuna S. 2012. "Informal Workers and Travel Choices: The Case of Jua Kali Workers in Kamukunji Metal Cluster, Nairobi." Unpublished Master's Thesis, Nairobi: University of Nairobi





Informal workers  
display products  
along a pedestrian  
walkway,  
UN Avenue, Nairobi

## Urban Design

The present urban designs are increasingly leading to an urban sprawl, segregating residences from work areas. This implies that travel becomes more expensive as the travel distances increase. Low incomes in the informal sector constrain affordability of transport expenses. This has a number of implications: first, informal workers may suffer walking or cycling (with no proper infrastructure) over long distances to the sources of employment, secondly, they may compromise some of their needs to cater for transport and thirdly, they may opt living in nearby informal settlements so as to walk or cycle to work.

## Conclusion

Non-motorized transport is the most accessible and affordable mode for people employed in the informal sector, owing to the low-income levels in the sector. Multiple trips in a day characterize the travel patterns of most informal workers, mainly due to the nature of work that involves production and distribution of goods and services. Public transport services remain largely un-affordable hence; NMT becomes the only option for meeting such travel needs. Despite the important role of NMT in informal sector activities, there are major challenges in terms of inequitable urban planning designs and lack of infrastructure for walking and cycling as well as for intermediate transport modes.

Investment in non-motorized transport infrastructure has direct social and economic impacts on the informal sector workers. Properly designed NMT infrastructure offers safe, easy and faster access to destinations. The social impacts include safe, easy and faster access to destinations, which is vital for the well-being of the NMT users. Faster and easy access to work opportunities for informal workers will improve their economic status. Informal activities are inevitable in developing countries as they offer a source of livelihood for a large number of urban populations. Research shows that presence of informal workers is associated with reduced crime and increased safety in the streets especially for women, children and the elderly. Informal workers provide essential goods to the road users and in return offer an honest source of livelihood for the traders. The success of these activities therefore has an impact on poverty reduction as well as decline of poverty-related crimes. Urban road design should therefore consider space allocation for informal workers rather than shunning them as an obstruction to traffic flow.



**Hon. Sabiu Zakari**  
**The Permanent Secretary**  
**Federal Ministry of Transport in Nigeria**

**Interviewer:**

There are quite a number of challenges that are hindering pedestrians and cyclists in different countries, do you mind citing some of the factors that are a hindrance particularly for Nigeria?

**Hon. Zakari:**

As an emerging economy, there are certain factors that are given precedence over others such as security, food, water and health amenities. So these are prioritized first. However, we cannot simply ignore NMT; for you to offer food security or even health services, you need to create a way for people and goods to move from one place to another. Every day we all start off as pedestrians, so we must make allocations for pedestrians and those using other non-motorized means.

**Interviewer:**

What other challenges come to mind?

**Hon. Zakari:**

Unfortunately from a cultural perspective, our society is very aspirational. Everyone wants to drive a big car and walking or cycling is associated with poverty. This mentality is a big stumbling block.

**Interviewer:**

What are your thoughts on training to build capacity, such as this one we are participating in?

**Hon. Zakari:**

I believe that training like this is what will spearhead implementation & enforcement of cycling and walking policies across Africa. Just this one training course has so many different people from different fields and different countries. It is a great opportunity for us to share & learn what works and what doesn't from each other.

**Interviewer:**

What is the most crucial aspect you feel should be taken from this training?

**Hon. Zakari:**

In one word? Action. It is important that we put what we are discussing and learning into action. More than anything else, if we don't take action on the things we are discussing we will be wasting time and resources.

**Interviewer:**

Can you give us an example of this?

**Hon. Zakari:**

Sharing of information and resources. My colleagues from the Lagos Metropolitan Transport Authority are here and we have discussed that working in tandem will help us develop and implement policies through sharing resources and information and will save us a lot of time and money.

**Interviewer:**

So am I correct in thinking that there is a plan to introduce an NMT policy in Nigeria?

**Hon. Zakari:**

Yes of course definitely! We are looking at all avenues to ensure that a policy is not just introduced, but it works. It is for our own good, a properly planned and executed walking and cycling policy will mean less time wasted in traffic jams, less road accident fatalities, better air and noise quality in our cities and across the country. NMT is not an independent facet to - it is a complimentary aspect to it.

**Interviewer:**

Finally, do you use NMT to get around?

**Hon. Zakari:**

I walk quite a bit but I want to do more and I think as you saw the other day, I am still very adept at riding a bicycle even though I haven't done it in a while.



# Are E Bikes the Future for Pedal Power?

By Priyanka deSouza,  
Environmental Consultant,  
Priyankadesouza@gmail.com

## Introduction

The transportation sector contributes 23% of the global GHG emissions. It is the only major sector in which an absolute increase in carbon emissions is observed. The transport sector is also a major contributor of air and noise pollution in cities and has led to cities scrambling to shift to a 'sustainable urban mobility' paradigm. Whilst all modes of transportation require some amount of energy what we do know is that non-motorized transport (NMT): walking and cycling, consumes the least amount of non-renewable energy, and is therefore is the most sustainable. NMT is also accessible to even the most marginalized sections of society.

Electric vehicles have been touted by many to be an important player as a contributor to 'sustainable mobility' paradigm. However, electric bikes (e-bikes) have quietly slipped into the forefront of electrification charge. According to an INSG Secretariat Briefing Paper, in 2013, 112,000 electric cars were sold worldwide; Contrast this with the 40 million e-bikes that were sold in the same year. 32 million of these bikes were sold in China alone.

## What is the definition of an e-bike?

There are hundreds of e-bike models. An attractive feature of e-bikes is that dedicated charging infrastructure is not required. They can be charged from existing power outlets. Most e-bikes fall into either the following two categories, or into the spectrum between the two.

1. **Bicycle style e-bike (BSEB):** These are very similar to standard bicycles and include functioning pedals
2. **Scooter style e-bike (SSEB):** These have many features of gasoline-powered scooters. Most rely exclusively on electric power and not pedaling

Most countries have enacted legislation limiting the top speed and weight of e-bikes- thus setting manufacturing standards and safety requirements.





# ■ The China Case Study

The rise of e-bikes in China was fueled by four main government policies.

- Firstly, in 1999, the government designated e-bikes that conformed to the above top speed and weight limits as bicycles. E-bicycles in China thus fell under the Non Motorized Transport (NMT) category and did not require licensing and registration. Riders do not need a driver's license and in addition, e-bikes have access to bicycle lanes.
- Secondly, many cities restricted the ownership and use of gasoline motorcycles in their urban centers.
- Thirdly, as China became more prosperous in the '90s, it invested in programs that gave entrepreneurs access to technology and finance. This led to an acceleration in development of the component and accessory plants, which occurred in parallel with the development of the battery industry. This allowed manufacturers to retrofit traditional bicycles with motors powered by batteries.
- Finally, the e-bike industry was propped up by a slew of land and monetary grants. Consumers were also given cash incentives to use e-bikes.

For these reasons, the sales of e-bikes sky-rocketed in China which has come with its own challenges; as the demand for larger, faster vehicles has increased in China, manufacturers are taking advantage of the lax regulations and are manufacturing e-bikes that exceed the upper speed and weight limits. These high speeds have led to a rise in road accidents which have caused e-bikes to be dubbed as 'road killers'. E-bikes have even been banned in certain Chinese cities.

Taiwan has also tried to promote e-bikes with far less success than China. The Taiwan Environmental Protection Administration (TEPA) started to promote e-bikes in 1998 and issued subsidies to the tune of NT\$1.8 billion to ensure that e-bikes were cost competitive with gasoline powered scooters. However, TEPA acknowledged a policy failure in creating a sustained demand in 2002. This was partly because of the dissatisfaction of consumers with first generation products which made them wary of the technology; and partly due to the fact that gasoline scooter usage was not restricted, thus giving Taiwanese consumers an option which Chinese users never had.

## Can E-Bikes and Traditional Walking and Cycling Co-Exist Safely?

As noted earlier, NMT brings about a triple win of safety, environmental and accessibility benefits. Given the above safety concerns, it is clear that e-bikes can be considered as NMT only if safety regulations are put in place, and more importantly, enforced to prevent such road accidents from occurring. We have to ask the question; will introduction of e-bikes discourage people from walking and cycling on NMT infrastructure? It is important to document the lessons that have been learnt from the Chinese early adoption of this technology as it is predicted that two wheeler growth will explode in the near future in Africa. Two wheelers are becoming more affordable due to growing levels of economic wellbeing. In Kenya, for example, between 2005 and 2011, motorcycle registration increased by almost 40 fold. However, there has also been a 5-fold increase in motorcycle-related deaths reported by police between 2005 and 2010.

## Other questions to consider

There are many other considerations to the e-bike market that need to be explored; E-bikes have clear environmental advantages over other modes of transport. However, dependent on where countries draw their electricity from can negate some of the environmental benefits, recycling of batteries also has to be considered along with affordability of the bikes.

When studying the sustainability dimension, we also have to think about what are e-bikes a substitute for? This is useful in thinking about if championing the rise of e-bikes will lead to the transport system being more sustainable. Are e-bikes a substitute for gasoline-powered scooters, or are they a substitute for public transport? (Note that in several parts of Africa, two wheelers serve as public transport). There is insufficient evidence to provide a definite answer to this question. UC Berkeley researchers have studied the uptake of e-bikes in two big Chinese cities and have come to the conclusion that e-bikes serve more as an affordable higher quality substitute for public transport, rather than as a transitional mode between bicycle and automobile ownership. However, these results cannot be generalized to other parts of the world as several other factors such as a cultural acceptance of two wheelers is necessary for this technology to take off. Location specific studies need to be carried out in order to answer these

There is no denying that e-bikes have taken the lead in electrification of mobility and can offer a great alternative to other less sustainable means of transport. However, countries considering introduction e-bikes into their sustainable mobility mix should undertake full analysis and research of the local context first.



**May Obiri-Yeboah**  
**Executive Director**  
**National Road Safety Commission in Ghana**

**Interviewer:**

Ok, so to start us off what is the Ghanaian position on NMT in terms of policy, implementation and enforcement?

**Mrs Yeboah:**

First off, there is a great need for more advocacy for NMT. The need to have positive associations with NMT can't be stressed enough. There are efforts by various groups and agencies but more needs to be done. Not just to the stakeholders and policy makers but the communities at large.

**Interviewer:**

That's a very interesting approach; do you mind expanding on it?

**Mrs Yeboah:**

Sensitization, education and information especially of the agencies that are involved in decision-making will go a long way in moving NMT from just policy into action in terms of infrastructure, use and even cultural perceptions.

**Interviewer:**

Some of the attendees have mentioned challenges such as cultural perceptions as being something that needs to be overcome; can you mention any others that are a contributing factor?

**Mrs Yeboah:**

Oh yes cultural perceptions play a big role, but some aspects are also natural, like the topography and climate play a huge role. The weather in Ghana is extremely hot, walking or cycling to work is a job in itself. Existing infrastructure isn't designed in an NMT friendly manner and changing this is not easy

**Interviewer:**

Can these challenges be overcome and if yes, how?

**Mrs Yeboah:**

The first position in the war for walking and cycling is hearts and minds. We need to re-educate and again sensitize people from a very early age about the importance of NMT. Let us start educating people on why alternate means of transport would directly benefit them and those around. Education from the very basic level & sensitization on better ways to build NMT accommodating infrastructure

**Interviewer:**

You speak very passionately about this, is having a sustainable NMT policy in place something you feel is a mission for you?

**Mrs Yeboah:**

I speak as a mother, a sister, a wife and a member of the community first, we simply can't keep losing people to road accidents and health issues caused directly or indirectly by not having an NMT policy in place. When you look at the numbers you realize we MUST have and enforce a walking and cycling policy.

**Interviewer:**

What steps should be taken in implementing or legislating a walking and cycling Policy?

**Mrs Yeboah:**

We don't have an NMT policy in Ghana yet constituted into the law and while we are still drafting and pushing for legislation, we are still looking at introducing elements of NMT in existing structures through platforms such as the National Transport Policy.

**Interviewer:**

Do you feel there are other groups that should be included in the dialogue in creating this policy?

**Mrs Yeboah:**

I think it is crucial that all members of society are included. Some groups actually have a big sway with the masses so groups like local assemblies and trader and market associations should definitely be given precedence.

**Interviewer:**

Finally, do you yourself use forms of NMT to get around, say a bicycle for instance?

**Mrs Yeboah:**

(Laughing\*) Ha ha ha growing up, it was not easy for us, (when I say us I mean girls) to ride bicycles. It was seen as a pastime for vagrant youth. So sadly I never learnt to ride a bicycle. I am however a very active walker.

# School Mobility Around the World

By Farah Salim Eck,

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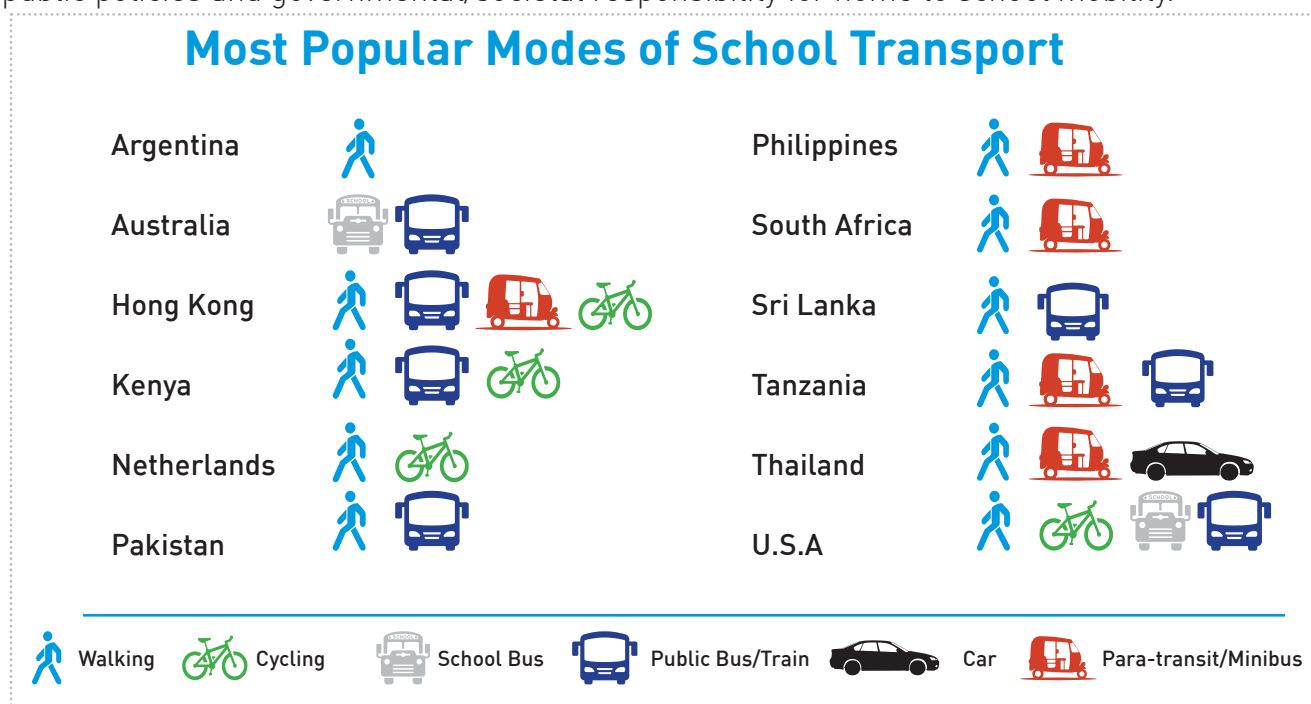
For many students across the world, tricky subjects or lots of homework aren't the most difficult aspect of going to school: getting to and from school poses the greatest challenge to their academic careers.

While most low-income youth and youth in developing countries walk to school, there are many other methods of mobility from being driven in private cars, taking public buses, taxis, utilizing para-transit, motor-buses, walking and cycling; the mode of transportation that students utilize is as diverse as the students themselves. These transportation modes also have varying degrees of governance and subsequently, varying degrees of safety implications. The info-graphic (Figure 1) depicts the major transportation modes used in 12 countries.

It is important to recognize that even within country borders, there are disparities in the transport options available to students from varying socioeconomic backgrounds and geographic locations. For example, while the dedicated school bus is a "given" for private schools in some countries, other urban youths of lower income households might not have this privilege and need to utilize public or alternative methods. Alternatively, youth living in rural areas in some countries might not have access to any transportation option other than walking, often for long distances.

In extreme cases, this fascinating pictorial on Amusing Planet shows just how far or how dangerous some school-children's twice daily commute to and from school can be, and just how much they value their education.

Following an overview on different modes of transport as they relate to youth and safety, with implications for public policies and governmental/societal responsibility for home to school mobility.



## Walking

Studies have shown that in both developed and developing countries, the options for transportation for students are limited for children from lower income households. The cost of owning a car is seemingly out of reach, and expenses associated with public transportation are also high. In a series of studies, between 40-60% of students living in disadvantaged, urban areas walked to school in Iran, the Netherlands, Switzerland, and Taiwan. In Iran, a sample of 3rd, 5th, and 7th graders who traveled by foot to school indicated that they would prefer to walk if given the choice [as opposed to other modes of transportation].<sup>1</sup>

In regions like Africa, where a small minority of the population is able to afford to own or access a car, the majority of students use public transport or walk to school. However, for many children they face a host of safety and security issues on their daily walk to school. According to a 2007 report by the Zambian Ministry of Education, students who need to walk long distances to/from school risk harassment, sexual abuse, poor nutrition, and even the inability to offer critical family support.



Initiatives like the UNEP Share the Road Programme support government in prioritizing safe infrastructure in cities for those who walk and cycle; critical to ensure the wellness and ease of students to commute back and forth to school. Interestingly, in some countries the lack of exercise and opportunities to walk are also affecting the health of children. Interventions like the development of the walking bus concept, in which students walk together to and from school (usually escorted by an adult), are being created in order to increase the prevalence of walking amongst youth.

## Cycling

Cycling is another method of non-motorized transport that some students utilize for commuting to and from school. However, what is particularly interesting is that there is a definite socioeconomic divide when it comes to owning and/or access to bicycles. For instance, youth in mainly developed countries indicate that they bicycle to/from school, as opposed to much fewer numbers in developing countries. But even in developed countries, studies have indicated that children from low-income and minority households are more likely to bike [or walk] than students from higher income households.<sup>3</sup>

World Bicycle Relief, which provides bicycles to deserving individuals in developing countries, has found that students who have received bicycles through their program “arrive at school on time, safe and ready to learn”. After evaluating a bicycle pledge-to-own program in Zambia, World Bicycle Relief found that school attendance among the recipients increased by 27%, and academic performance increased by almost 59%. These astounding statistics show that by offering youth access to a bicycle, many positive changes can occur. However, there are also implications of traffic safety, secure bicycle parking, along with the need for adequate bicycle infrastructure. These implications are still major hurdles to the untamed growth of bicycle riding in developed and developing countries.

## Para-transit, Minibus, or Share Taxi Transportation

A very popular mode of transportation, called the para-transit, minibus, or share taxi, takes almost as many forms as it has names (see Figure 2 for a chart of the various names). The majority of developing countries have their own version of these para-transit modes that are typically cheaper than the standard, public bus system, and have much more extensive routes. These minibuses are in fact usually large vans or small buses which are privately owned, but operated by individuals who are paid a weekly or month salary. In some countries, the driver is accompanied by a second person who takes the fees and helps to manage seating (or in some cases, standing) within the minibus.

Global Names for Para-transit/Minibus	
<b>China</b>	Public Light Bus
<b>Dominican Republic</b>	Carro Publico
<b>Egypt</b>	Microbus
<b>Ghana</b>	Tro Tro
<b>Guatemala</b>	Ruletero
<b>Haiti</b>	Tap Tap
<b>Israel</b>	Sherut
<b>Kenya</b>	Matatu
<b>Philippines</b>	Jeepney
<b>Russia</b>	Marshrutka
<b>South Africa</b>	Kombi
<b>Tanzania</b>	Dala Dala
<b>Thailand</b>	Baht Bus
<b>Turkey</b>	Dolmu

Figure 2

While minibuses seem to be one of the more popular options for youth to utilize for school transport, they are not always pleasant or safe.

In a study of these para-transit services in Tanzania, the dala dala operators (as the minibuses are called) are particularly unfriendly to schoolchildren because of their perceived lack of profitability due to the reduced ride fare for youth. In fact, dala dala operators often refuse to pick up youth during rush hour and instead favor adult riders because of the higher fare.<sup>4</sup> In order to combat discrimination of student riders by minibus drivers, various governments are



A bicycle rickshaw dedicate to school service in India; photo credit to Ryan and Laura Keller

now intervening to ensure that other passengers are not chosen over students.

Minibus operators face significant pressure to meet daily requirements in terms of numbers, both in trips made and the total amount of fares received. In the Philippines, efforts have been made by the government to ensure that jeepneys, the Filipino version of minibuses, uniformly offer students, together with senior citizens and persons with disabilities, with a 20% discount on fares without penalizing or taking away from the driver's or helper's earnings.

Not only is the issue of profitability in relation to student riders a factor for minibuses around the world, but the safety issues are staggering in most countries of operation. In two separate studies of minibus operations in South Africa and Pakistan, the number of crashes and therefore resultant injuries and/or deaths caused by minibus crashes was the highest for all methods of transportation. The analysis of the Pakistani study found that in fact, children constituted the majority of these injuries and/or deaths.<sup>5</sup>

Other types of transportation more locally nuanced to the particular countries, such as samlor in Thailand (a bicycle rickshaw), or tuk tuk (motorized, 3-wheel rickshaw) in India, also offer students with alternative transportation to and from school. While prices range by specific mode of transportation, out of necessity because of location or time, these informal or para-transit vehicles are important complements of the usual or more conventional transportation modes which operate on fixed-routes. However, as it relates to students, para-transit, while convenient, is dangerous, and unreliable.

In South Africa, the government has taken considerable steps to regulate the kombi (as their minibuses are known) industry as a result of safety concerns effecting not only youth but all rider populations. One potential inroad that the South African government has initiated and which other governments may consider, is to develop policies to enable the minibus industry to become more profitable without cutting corners in terms of safety and/or neglecting or discriminating against student riders. More can be done by other governments and organizations the world over to bolster the safety, convenience, and efficiency of this very popular commuting mechanism for students. Sensitization of minibus operators and owners, modifying the fee model to discourage discrimination of student riders, regulation of vehicle maintenance, placing restrictions on seating capacity, and mandatory installation of seat belts are all policies or initiatives that can drastically reduce casualties, inconvenience, and hardship for students and make their daily commutes to school easier.

## Public Bus or Train/Rail

The public bus and rail system around the world are also popular modes of transport. Depending upon the country, the public bus/train system both within urban and rural areas might either be the only viable option or one of many for students to utilize when traveling back and forth to school. From the countries reviewed in this article, more than half (including developing and developed nations) have public bus or public trains which move the majority of the population to and from their destinations, including students.

Because it is one of the world's densest cities, Hong Kong has essentially perfected the Mass Transit Rail (MTR), an intercity train known for its efficiency, cleanliness, and ease of use. Students also benefit from this well-organized and thoughtfully planned transportation system. The Hong Kong government regulates fare increases, which ensures that students between the ages of 12-25, who are currently enrolled fulltime at a recognized institution, may apply for a student Octopus (rechargeable multi-ride and multi-use) card. Additionally, in order to support low-income households, the government in Hong Kong has instituted a travel stipend which allows youth and their families to have greater mobility.<sup>6</sup>

Disadvantaged youth in other countries might not have the same type of governmental assistance or regulation that is offered by Hong Kong. For example, students in Sri Lanka who do not have dedicated school buses and who must use a public bus report significant discrimination and bias by bus operators. In fact, they have reported that operators often refuse to allow them on board during peak hours because of the students' reduced fare, making them less profitable of a passenger than a full fare adult.<sup>7</sup>

Because they are dependent upon this type of transportation, there is little that the children can do in terms of protest or alternatives. However, some governments have recognized the need to enforce regulations on the public bus and/or rail systems to ensure that children are protected. In Kenya, for example, the Ministry of Transport has successfully implemented laws that require public buses to be fitted with seatbelts and to enforce passenger usage. But one particular regulation, the prevention of passengers (both youth and adults) from standing on larger buses, has incidentally caused a significant loss of revenue for the operators. This has caused much controversy in that country and still is in debate about the ability of adult vs. youth passengers to stand on buses which were designed to accommodate standing passengers.<sup>8</sup>

## Dedicated School Bus

The least utilized mode of transport around the world (by the numbers), the dedicated school bus, is undoubtedly the safest mode. Officials from the National Transportation Safety Board (in the USA) have found that school buses are safer than cars, even if the buses are not fitted with seat belts. In fact, the NTSB indicates that school buses are 50 times safer than students being driven.<sup>9</sup> Statistics presented by the Scottish Executive Central Research Unit suggest that a child travelling by car is seven times more likely to take part or be involved in a road traffic casualty than a child travelling by bus.<sup>10</sup>

However, because of their limited use—solely to transport students to and from school for a maximum number of times per day—school buses are not necessarily cash cows. This statistic does not consider school buses from private schools, which are typically included in school fees. While the big yellow school bus has become synonymous as an American education icon, dedicated school service (whether as a bus, van, or otherwise) has been a growing trend both within developing and developed countries. This growth indicates a rise in special school-service transportation along with increased school bus safety measures.

In the Philippines, efforts have been made by the Land Transportation Franchising and Regulatory Board to ensure safety of school buses specifically to accommodate for the unique needs of youth riders. For instance, all public buses should have front-facing seats, must be equipped with seat belts, and must have metal guards on the windows. In addition, the LTFRB has instituted a ban on vehicles older than 15 years to operate as school buses, providing increased emphasis on safety for students.<sup>10</sup> And in Hong Kong, while most students utilize the MTR to go to and from school, because of the research supporting dedicated school transport services, there has been a push for “nanny vans,” or minibuses which are dedicated solely to certain primary schools.

While special school buses are expensive to operate and maintain, there are significant benefits which outweigh the costs. The reduction of injuries and death (for both youth and adults) along with an expected decrease in costly accidents and collisions bolsters support for the adoption of dedicated school bus services. Moreover, the advantages of utilizing dedicated school bus services also decrease environmental concerns such as pollution, traffic congestion, and transit time (with implied reduction in traffic. And most significantly, the ability for students to concentrate on their studies and their schoolwork as opposed to the journey to and from school is perhaps the greatest return on investment for dedicated school bus services.

<sup>6</sup> National Transportation Safety Board, 2015. [http://www.trafficsafetymarketing.gov/staticfiles/tsm/PDF/schoolbus\\_safety2.pdf](http://www.trafficsafetymarketing.gov/staticfiles/tsm/PDF/schoolbus_safety2.pdf)

<sup>7</sup> European Union General Energy and Transport Directorate, 2004. Road Safety in School Final Report [http://ec.europa.eu/transport/roadsafety\\_library/publications/rsst\\_final\\_report\\_v1.3.pdf](http://ec.europa.eu/transport/roadsafety_library/publications/rsst_final_report_v1.3.pdf)

<sup>8</sup> Republic of the Philippines Department of Transportation and Communications, Land Transportation Franchising & Regulatory Board, 2015. <http://lfrb.gov.ph/main/getinformed#sthash.Tz9lfaTp.dpbs>



# The Next Turn for School Mobility

The discussion of transportation, especially public transportation, is one that has typically not involved youth. But the conversations needs to include these stakeholders—students—who depend upon transportation at least twice on a daily basis for school transit. As such, this article seeks to encourage further discourse on how to improve, enable, and increase school mobility for students around the world.

Much like the case of the dedicated school bus, the minibus and other forms of para-transit, for some countries, the standardization and regulation of buses to ensure the safety of youth comes with an expensive price tag. If countries choose to go one direction, that is to avoid the cost to institute dedicated school bus service and/or improving current public modes of transportation for students, students will continue to navigate long, uncomfortable, unpredictable, and potentially unsustainable routes to school. Regardless of the adoption of such policies or regulations, policy makers and urban planners and private sector alike will need to address transportation-related issues such as: lack of routes and frequency of service serving areas of need by youth, disproportional pricing, lack of respect, cleanliness, security and transit fare overpricing.<sup>12</sup>

From the American yellow school bus to the samlor bicycle rickshaw in Thailand, school mobility is a critical and relevant global issue impacting millions of students each day. Undoubtedly, one of the most important human rights is access to education. In regards to transportation, access is very literal, and refers to whether the journey is arduous, long, uncomfortable, or unpredictable. Overall, larger discussions and research incorporating youth-related perspectives and indeed involving youth at the table, are needed when discussing school mobility in a variety of contexts and countries around the world. The major issues that are outlined above, as presented by the various modes of transportation. By including youth in the development of transportation policies and discourse, policy makers and private sector stakeholders will enable safer routes to school, and empower youth to concentrate on their studies. And this school mobility effort deserves an A+.

<sup>3</sup> McDonald, N., 2008 - Critical factors for active transportation to school among low-income and minority students: Evidence from the 2001 National Household Travel Survey, *American Journal of Preventive Medicine*, 34, 341-3

<sup>4</sup> McMillan, Tracy, 2013. *Children and Youth and Sustainable Urban Mobility*, 85.

<sup>5</sup> Arrive Alive, 2015. <https://arrivealive.co.za/Minibus-Taxis-and-Road-Safety>

<sup>6</sup> Padukone, Neil, 2013. <http://www.theatlantic.com/china/archive/2013/09/the-unique-genius-of-hong-kongs-public-transportation-system/279528/>

<sup>7</sup> McMillan, Tracy, 2013. *Children and Youth and Sustainable Urban Mobility*, 185.

<sup>8</sup> McMillan, Tracy, 2013. *Children and Youth and Sustainable Urban Mobility*, 63.

<sup>12</sup> Youth 4 Public Transportation, 2016. <http://www.uitp.org/youth-4-pt>



## Global Calculator

The UK Government's International Climate Fund and the European Union's Climate-KIC have developed a Global Calculator tool. The tool which was launched in January 2015 is a model of the world's energy, land and food system that allows users to explore the options for reducing global emissions to 2050. The Global Calculator is an interactive and open-source tool that helps the users to understand the link between lifestyle, energy use and the consequences for the climate.

The Calculator model is an Excel Spreadsheet which has a user-friendly, web-based interface. The world needs to cut harmful greenhouse gas emissions to around half of today's levels by 2050 in order to meet the international commitments to constrain the global mean temperature increase to 2°C.

The Global Calculator tool shows that there are many different pathways to 2°C. This will be achieved through interventions such as transformation of technologies and fuels. Transition to low carbon will require a massive effort across all sectors including uptake of clean technologies across the electricity, buildings, transport and manufacturing sectors and significant improvement in the land management practices.

► <http://tool.globalcalculator.org> ◀



**Mohamed Abdullahi**  
**County Executive for Roads, Public Works & Transport**  
**Nairobi City County**

**Interviewer:**

What are some of the challenges that implementation and enforcement are facing?

**Mr Abdullahi:**

The first is the mentality and the second is physical limitations. Unfortunately, NMT is considered a poor man's mode of transport in our societies and other challenges of a psychological nature that are also quite difficult to overcome; for example, you have pedestrians jumping over barriers dividing the highway while there is a pedestrian overpass crossing a few metres away. There are also very many rudimentary complexities that come with implementing and enforcing the NMT Policy from a physical point of view, for example most of the infrastructure already in place was not designed with NMT in mind.

**Interviewer:**

Speaking of challenges, what are some of what we would call man-made challenges that make the use of NMT very difficult or impossible not just for Nairobi but for Africa as a whole?

**Mr Abdullahi:**

Road safety is one. Even in areas that are clearly carved off and demarcated for NMT users, there are still a very high number of accidents and fatalities. Secondly, security – if a route is unsafe, poorly lit or constructed, then people will under no circumstance use it. Above all, legislation should ensure that policies such as NMT are followed through infrastructure, education and enforcement. Without legislation, there can be no financing, dialogue or proper mandate for ensuring that things move in the right direction.

**Interviewer:**

In terms of dialogue, who do you feel needs to be included more with regards to discussions about NMT?

**Mr Abdullahi:**

The walking public are definitely a key component to any discussion. Up to 47% of people in Nairobi walk to either their place of employ or school daily. So these people, should have a big say. The media also have a big role in educating the public on various element of NMT and finally, it would be a great thing to see more politicians and leaders get involved genuinely in issues pertaining NMT.

**Interviewer:**

Two-part question as we bring the interview to a close, first, what is your message to NMT users and the public in general with concern to NMT and two, do you use NMT in your day-to-day life.

**Mr Abdullahi:**

To the public and NMT users, my message is simple. NMT is a dignified mode of transport. It is sustainable, healthy, accessible to all and environmentally sound. Let us please not be ashamed of doing something that is right. On the second question, I must say I pride myself in being a very active walker.

## How much does investing in cycling and walking actually cost?

**N**on-Motorized Transport (NMT) has immense benefits for individual users, as well as society at large, through improvements to physical health, air quality, the environment, climate change, personal finance, accessibility, mobility and the empowerment of vulnerable groups.

Currently, there is no comprehensive holistic method for appraising the various costs and benefits of NMT projects in developing cities. Contemporary tools used in the developed world are thematic, focusing only one specific benefit of NMT, or require impractical amounts of contextual data. To aid the promotion of NMT infrastructure investment, UNEP Share the Road (StR) together with University of Cape Town (UCT) has developed a Non-motorized Transport Project Appraisal Tool (NMT-PAT) to take into consideration the wide range of benefits (health, social, economic and environmental) while not requiring unrealistic amounts of data.

NMT-PAT (Project Assessment Tool) is an excel based tool that evaluates the costs and benefits associated with walking and cycling projects. The tool utilizes common, aggregate transport and economic indicators where possible and provides the ability to use local institutional knowledge to supplement existing data or substitute data that is unavailable. The user can generate meaningful insight into the viability of NMT infrastructure in their city, which would be useful in planning, budgeting and decision-making processes.

NMT-PAT has four key categories of benefits and disbenefits that are considered relevant to non-motorized transport projects: environmental, health, economic and social. Necessary indicators such as number of trips per day, modal split, trip length, scheme costs, inflation rate, economic and share of trips affected by the planned project are fed into the tool in order to utilize effectively the quantitative and monetary functionality of NMT-PAT.

The improvement or provision of NMT facilities provides benefits to different road users who may directly use the facilities or benefit indirectly from its use. Benefits can also be derived from knowing that there is an alternative option in case it is ever needed. Many studies that evaluate the societal contribution of NMT infrastructure, fail to sufficiently include the indirect positive impacts. The scope of NMT-PAT could be extended such that it fully captures the holistic contribution of NMT to the city.

Applicability of the tool in African city context has so far been tested in Nairobi, Kenya. Four case study scenarios were considered- two smaller scale, newly constructed projects and two larger, theoretical networks - in order to test NMT-PAT on projects with varying scale and context. The likely environmental, health, economic and social costs or benefits of each case study scenario were successfully examined, which proves the suitability of the tool.



NMT-PAT Training Workshop in Nairobi

Further, the tool's suitability was tested during a full-day training workshop organized by UNEP's Share the Road Programme and University of Cape Town on 10th December, 2015 in Nairobi. Relevant local experts were invited, including NMT activists; transport engineers; government personnel and development bank economists. Participants were able to perform a project appraisal example in a few hours using data collected in the four case study scenarios in Nairobi. This further proves the tool's applicability in assessing the costs and benefits of NMT in African context. This shows that the tool has great potential to accurately and equitably appraise NMT investments in the urban developing countries context.

The NMT-PAT tool is available for use and can be used by any interested parties to appraise the costs and benefits of any non-motorized transport project.

You can find the tool here:

► [www.unep.org/Transport/sharetheroad/News\\_info/PAT\\_Training.asp](http://www.unep.org/Transport/sharetheroad/News_info/PAT_Training.asp) ◀





**Prof. Mark Zuidgeest**  
**Associate Professor,**  
**University of Cape Town**

**Interviewer:** You have spent time in Africa and in Europe. What would you say are the biggest similarities and differences when it comes to walking and cycling ?

**Prof Zuidgeest:** I'll start with similarities: In both places, there is a demand for NMT. There is a genuine need for NMT as a mode in both cases if this need is not addressed or attended to, it will lead to a decline or reduction in the use of the same. The differences, for most people in Europe, there are alternative means if walking and cycling is removed from the equation. For Africa, there is no such thing, for most if not all users of NMT, it is the primary mode of movement. Another major difference is that in Africa, NMT is in active use everyday despite the staggering figures of deaths and injury. Finally and sadly, there is an aspect of exclusion for NMT users. It is not recognised in most cases as a mode of transport.

**Interviewer:** Narrowing down to Africa, what are some of the challenges that dissuade use of walking and cycling .

**Prof Zuidgeest:** Long distances, topography and climate are some of the natural challenges that come to mind while in terms of human made challenges, we are looking at perceptions, lack of infrastructure or poorly built infrastructure. In places like Netherlands, owning and riding a bicycle was for a very long time viewed as the preserve of a select few, for those who were well off and could afford to do it. Everyone aspired to become a cyclist. In contrast, here in Africa, everyone feels that walking is an undignified and cycling is a stepping-stone to owning a car.

**Interviewer:** How do we combat this mentality in your opinion?

**Prof Zuidgeest:** We need to start from the bases by creating awareness and showing NMT in a positive light. School programmes or including NMT in school curricular would mean the coming generation would have a better perception of NMT. Dignifying walking and cycling infrastructure could also go a long way in changing the mentality. Finally, we need to find a way to incentivise the use of NMT.

**Interviewer:** Interesting that you should mention incentivising walking and cycling, who or how in your opinion would we go about this?

**Prof Zuidgeest:** Involving different arms of government and the business sector in an incentive program. For example, if we have a company or business that puts extra efforts in trying to get their employees to use NMT by providing walking and cycling facilities or facilitating the purchase of bicycles or through training, the government can introduce a tax reprieve or rebate of sorts.

**Interviewer:** Speaking of government, do you feel there is more governments can do to encourage walking and cycling?

**Prof Zuidgeest:** Undeniably. Government involvement in promoting the use of NMT is central. Everything from legislation to enforcement and infrastructure is all dependent on governments. In some cases, governments can go a step further by introducing incentives such as waiving taxes on bicycle imports or parts.

**Interviewer:** We were talking to Sean Cooke earlier (Research Associate at UCT and a course staffer for the programme) and we asked about the roles of public transport vs walking and cycling ... what are your thoughts?

**Prof Zuidgeest:** Public transport & NMT should be viewed as close cousins. NMT never has and never will be a competitor for Public Transport. We must find a way for the 2 sectors to work together. Things like Bike Sharing projects, can only work with the assistance and support of public transport and the providers.

**Interviewer:** Finally professor, is there anything you would like to add in closing?

**Prof Zuidgeest:** This training has brought together the right people who are in a position to institute real and sustainable progress and it has been very positive to see everyone actively involved in the discussions and exercises. It will be interesting to see how the aspects of the training, sharing and interactions play out in the coming months and years.



**W**alking and public transport are the principal modes of transport in the urban space in Kenya. Matatu, a form of para-transit mode, is the main provider of public transport services in Kenya. This is largely due to their high frequency and responsiveness to demand as well as availability in most areas including remote places such as the informal settlements.

Matatus however have significant weakness and challenges despite their contribution in providing the much need mobility among them, lack of safety and poor quality of service. Safety is particularly a chief concern in the public transport system in Kenya. Recently, cases of sexual abuse and harassment of women by the matatu operators (who are mainly men) while waiting for public vehicles or walking through public transport terminals have been on the rise.

Flone Initiative, a local civil society organization in Kenya has been on the forefront since 2013 advocating for elimination of violence against women in public spaces. The organization led a famous campaign in Nairobi dubbed “My Dress My Choice” after a woman was brutally assaulted at a public transport terminus in Nairobi for allegedly dressing inappropriately. In an interview with Ms. Naomi Mwaura, Flone Initiative’s founding director, she pointed out that issues of sexual abuse and harassment of women in public spaces are rampant but they are rarely reported or brought into the limelight.

Ms. Mwaura indicated that the Initiative focuses on addressing the root causes that lead matatu drivers and conductors to perpetrate gender-based violence. These include harsh working conditions with low incomes, lack of professional development and job security. She also observed that being a matatu driver or conductor is mainly not by choice, as it is hardly perceived as an honorable profession. Further, matatu operators are often perceived as immoral, rough and uncouth. “Matatu drivers and conductors feel they are in a low profession. Some of their customers are professional women hence they feel as if they are looked down upon and view their masculinity as threatened.” observed Ms. Mwaura. Flone initiative hence aims to change this narrative through its training programmes focusing on educating public service vehicle operators on customer service, safety, gender equality and skills and professional development.

Women tend to constitute the majority of non-motorized (mainly walking) and public transport users despite the insecurities they face in travel. This points to the fact that women have limited mobility options. Ending violence against women in the public spaces including streets, public service vehicles and bus terminus hence implies ensuring safety and comfort for the majority of the users. Further, improved safety will ensure greater access for women to the limited mobility options.



## Nairobi takes the lead in investing in walking and cycling

Road accident data in Nairobi, Kenya shows that in 2014, out of 723 fatalities, 507 were pedestrians. The general perceptions of NMT as a mode for the poor, outdated, no economic returns are major factors for its marginalization in urban planning and infrastructure investment to date. Hence, NMT remains a captive mode rather than a desirable choice.

Nevertheless, NMT has major benefits for environment (uses renewable energies, non-polluting), safety (protecting vulnerable road users from high-speed traffic) and accessibility (financially affordable for all) and within Kenya Nairobi is taking the lead in realizing these benefits.

The UNEP Share the Road Programme and the Kenya Alliance of Residence Associations supported the Nairobi City County government in developing and launching an NMT policy for Nairobi in March 2015. The policy targets to achieve a transport system in Nairobi that fully integrates NMT by creating a safe, cohesive and comfortable network of footpaths, cycling lanes and tracks and green areas. It will also spearhead the introduction of laws and regulations to ensure that NMT facilities and areas are prioritized.



### Key Highlights of the Policy

- NCCG Committed to ensure at least 20% of NCCG's existing and future transport budget is allocated to NMT and public transport (PT) infrastructure and services
- NCCG committed to pass by-laws that require private developers of large commercial, industrial and residential estates to make appropriate provisions for NMT modes to connect to existing/planned networks. Such provisions will include, but not limited to, NMT lanes inside and outside of the development, bicycle parking, street lighting, PT provisions, tree shades, and benches

Since the launch a national workshop was held; hosted by UNEP, Ministry of Transport and Infrastructure and the National Transport and Road Safety Authority (NTSA) to take stock of investments in NMT in Kenya and discuss key issues regarding NMT among them, viable options for financing NMT in Kenya.

The workshop highlighted the mismatch between policymaking and implementation. A lot of effort is made in formulating policies but little is done to implementing them. UNEP applauded NCCG and MoT for demonstrating commitment to implement the NMT Policy for Nairobi.



### A Safe & Healthy Journey to School for Every Child

A new Global Initiative for Child Health & Mobility has been launched by the FIA Foundation to promote action on road traffic crashes and air pollution, two leading causes of death, serious injury and chronic illness for children across the world.

The Global Initiative for Child Health & Mobility is a coalition of organisations and agencies (UNICEF, Save the Children, UNEP, the World Resources Institute, the Overseas Development Institute and the FIA Foundation) coming together to advocate and work towards a vision that, by 2030, every child should enjoy a safe and healthy journey to school.

The initiative was launched on 7th June 2016 at an event held at ODI in London, with key note speakers including road safety advocate Zoleka Mandela; ODI Executive Director Kevin Watkins; the Chairman of the FIA Foundation, Lord Robertson; and Head of the UNEP Transport Unit, Rob Jong.

With at least 500 children killed every day on the world's roads, thousands more injured in road traffic crashes and millions suffering from chronic respiratory illness, a significant proportion of which can be attributed to motor vehicles, there is a clear need to make safe and sustainable mobility a priority policy issue.

Find out more here:

► <http://www.childhealthinitiative.org/> ◀



“ You have to conclude that there's not much value being placed on safeguarding our children on the roads. This has to be seen as a violation of our children's rights. This is not a society I want to live in.....This is an initiative for all of us, for every child, on every journey. ”  
Zoleka Mandela, Road Safety Advocate

## Actions on Air Quality

In June 2014, the United Nations Environment Assembly (UNEA) adopted resolution 1/7 “Strengthening the Role of the United Nations Environment Programme in Promoting Air Quality”. In this resolution, UNEP was requested to make an overview of actions undertaken by governments to improve air quality. UNEP embarked on an initiative to compile actions and policies being undertaken by governments around the world to improve air quality.

You can find the resulting Actions on Air Quality Report here:  
▶ [www.unep.org/transport/airquality/AQ\\_GlobalReport\\_Summary.pdf](http://www.unep.org/transport/airquality/AQ_GlobalReport_Summary.pdf) ◀

## Free Transport Related Webinars

Every month in the Webinar series the Bus Rapid Transit Centre of Excellence invite a member of their team or an invited expert to present recent research results or a city case study. Recent seminars include rethinking the next generation of BRT in China and understanding fare evasion in urban bus systems in Chile.

Check out the upcoming seminars and book your place here:  
▶ [www.brt.cl/education/webinars/](http://www.brt.cl/education/webinars/) ◀

## Habitat III

The world is gearing up for Habitat III, held once every 20 years this global conference is the United Nations Conference on Housing and Sustainable Urban Development to take place in Quito, Ecuador, from 17 – 20 October 2016. The UNEP Share the Road in partnership with the University of Cape Town will be launching the findings of their report entitled “Global Outlook on Walking and Cycling” in October 2016; highlighting policy and reality for pedestrians and cyclists all over the world.

Find out more here:  
▶ <https://www.habitat3.org/> ◀

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[www.unep.org/transport/sharetheroad](http://www.unep.org/transport/sharetheroad)