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Introduction

Transportation and mobility are the drivers of any economy which connect citizens to various activity locations. While the challenge of transport is acknowledged to affect most urban dwellers, the situation tends to be worse for low income households who often walk to their destinations or use unreliable and expensive transport. A number of authors (Gannon and Liu, 1997; Kenyon, et al, 2006; Ohnmacht et al 2009; Lukas, 2012) have highlighted the importance of transport in linking populations to services and opportunities. Gannon and Liu note that availability of transport can reduce poverty by increasing economic efficiency and enhancing opportunities (Gannon and Liu, 1997), while Ohnmacht et al observe that lack of mobility is inextricably linked to social disadvantage and exclusion. These observations apply to all contexts of human settlements, but the situation tend to be more intense in low income urban areas, where incomes are generally low and services and economic activities are located away from the settlements. This results in isolation of the poor which in turn undermine their wellbeing (Delbosc and Currier, 2010) and contribute to social exclusion.

There are several factors which limit mobility of the vulnerable groups, namely: physical, geographical, economic, time, fear and space based, as well as exclusion from facilities (see Appendix 1). Most low income and vulnerable groups face these mobility challenges. In Kenya, low income urban residents who live in slums and informal settlements face transport challenges which restrict many to their settlements, while a few others walk to their destinations or rely on unscheduled public transport. The latter are erratic with unpredictable fare structures, especially during rainy seasons. To the low income group, any slight change of fare during the day often results in no movement or being stranded away from home. These challenges are worse for the vulnerable poor who include Persons with Disabilities (PWDs), women, children, and the elderly who tend to be marginally catered for in public transport. While there are, a few elite schools' transport in Kenya, majority of children and youth from low income households cannot afford dedicated school transport and have to either walk alongside unsafe traffic or push themselves into unscheduled public transport. The same case applies to the PWDs, elderly, and women who often have special transport needs which include multiple trips for different reproductive and productive activities.

This paper discusses transport and social exclusion based on a scoping study conducted in Kenya focusing on three major cities: Nairobi, Mombasa and Kisumu. The paper highlights issues of social exclusion in respect to low income groups with an emphasis on the vulnerable group, a group widely recognized to be mobility-disadvantaged. The analysis relies largely on literature review relating to low income groups drawn from both published works and documentary evidence. The literature covers the group as far as their regular and important support service provision are concerned, location and destinations such as work, school, shopping and health

related trips. While the report acknowledges the importance of other modes of transport such as rail and air, the paper largely concentrates on road transport which is the dominant mode for most urban residents in Kenya. Overall, the review reveals lack of data on low income groups especially in the cities of Mombasa and Kisumu. The existing literature tends to focus on Nairobi, which call for research in the area of transport and exclusion in Kenya.

Overview of Transport and Social Exclusion

Affordable and reliable transportation enables the vulnerable group to access important opportunities such as education, employment, health care, housing, and community life. Apart from the latter, these services are often not located within low income settlements where most of the vulnerable groups live. This challenge continues to be complex as cities sprawl to the outer sub-burbs with services and employment located away from residents of the urban poor. This type of growth requires a well conceptualized spatial planning, mobility and access network which most African cities have only begun to discuss in the context of sustainable development.

Social exclusion has been noted as a major global challenge especially in cities. While it is often conceived at macro level, it should be understood in a multi-dimensional manner, including at institutional and individual levels. Globally, the Sustainable Development Goal (SDG) 11 specifically addresses improving cities and human settlements to make them “inclusive, safe, resilient and sustainable”. The seven specific targets for this goal includes affordable housing and slum upgrading and “access to safe, affordable, accessible and sustainable transport systems for all, improving road safety, notably by expanding public transport, with special attention to the needs of those in vulnerable situations, women, children, PWDs and older persons. The 2011-2020 decade of action for road safety also fits within the SDG framework and calls for safer roads and mobility with an aim of promoting needs of all road users as part of sustainable mobility.

The SDG frames the importance of addressing transport and social exclusion and has been embraced by regional and national governments, including the Kenya Government. The Constitution of Kenya provides for social inclusion by addressing the needs of those considered socially excluded. In addition, one of the principles of the National Urban Development Policy (NUDP) is embedded on cities and urban areas with a goal of catering for all segments of urban residents including marginalized and vulnerable groups. The vulnerable groups addressed in this paper are covered in the Bill of Rights which is the pillar for social, economic and cultural policies. The Bill of Rights aims at preserving the dignity of individuals and communities to enable them realize their full potential as human beings. This right is most threatened in low income slums and informal settlements where poor households struggle to access services, including efficient and affordable transport.

The PWDs, the elderly, women, youth, and children are often excluded in public transport irrespective of where they live, with the PWDs being the most disadvantaged. Article 54 (c) of

the Kenya Constitution provides as follows: 'a person with any disability is entitled to reasonable access to all places, public transport and information'. Furthermore, the National Development Fund was established through the Disability Act 2003 to support PWDs. The three Medium Term Plans (MTPs) of Kenya have continued to address the welfare of the PWDs by providing assistive devices and services such as wheelchairs, crutches, surgical shoes, hearing aid, white cane among others in order to improve mobility and access of PWDs. These interventions were informed by the results of the national survey for persons with disabilities conducted jointly by the National Coordinating Agency for Population and Development (NCAPD) and Kenya National Bureau of Statistics in 2008. In the national study, 64 per cent of PWDs listed access to transport as a big problem with 69 per cent in rural and 66 per cent in urban giving the same response.

The revised 2014 National Policy on Older Persons and Ageing acknowledges that there is limited accessibility for older persons for user friendly transport and built environment. The policy further notes that there will be review of transport policy to address the needs of older persons and ageing. Both the Constitutional provision and the legislation are still far from being realized, although progressive inclusion of PWDs in elective and appointive bodies has been effectively rolled out. The Kenya Vision 2030 is in sync with the Kenya Constitution in respect to addressing inequalities including those relating to the vulnerable groups.

The Vision 2030 has a goal of equity and resource mobilisation among the sexes and improved livelihoods for all vulnerable groups, including children and the youth. The social pillar of the vision further aims at improvement of public transport. The first, second and third MTPs have recognised infrastructure as one of the key priority areas. The plans advocate for new investments on the road network to provide a safe, efficient and cost effective transport. MTP 2 is keen on achieving equity in access, control and resource distribution for improved livelihoods for marginalised categories including women, youth and other vulnerable groups. However, the vision does not directly link the challenges facing these groups with transport. In the section dealing with housing and urbanization, the vision notes that 'with right urban planning strategy, it will be possible to change the lives of millions of Kenyans for the better'.

Kenya is a state party to many regional and international conventions on the rights and welfare of children. Key among these is the United Nations Convention on the Rights of the Child (UNCRC), including education for all. The UNCRC upholds the "best interest of the child" as the guiding principle to all matters concerning children. Despite these commitments, children with disabilities in Kenya continue to miss out on education due to costs of books, uniforms and the disability associated factors, including transport and mobility aids. Some areas in Kenya such as the North Eastern and Coastal regions have fewer schools, which are widely scattered and thus more difficult to access. Attendance is further restricted due to lack of transport facilities, especially by girl child. The nomadic pastoralists' girls do not access schools during the drought

seasons. Parents frequent mobility coupled with lack of transport and poor transport network make school attendance for nomadic girls' irregular or non-attendance forcing many girls to drop out of school (Dagane, 2014).

A study done by WHO in 2000 showed that in most developing countries due to poor rural transport infrastructure access to medical care (Nancollas, 1999), many women die before reaching the health facility (Ragwa, 2014). Older persons also face challenges accessing various services such as medical services, especially those living in rural areas where long distance to services often leads to limited access. In combination with the discrimination they face which often prevents them from earning an income, older persons struggle to pay cost of transportation to basic facilities such as medical facilities (UNHCR, 2016).

Conceptualization of Transport and Social Exclusion

This section focuses on understanding of the two inter-related concepts of social exclusion and low-income and how the concepts are related to transport. Transport and mobility are not controversial concepts given universal understanding of the movement of people and goods from one place to another. Transport avails opportunity for different cadre of people within a community to access employment, goods and services which are primarily seen as opportunities. If not well planned such opportunities can be skewed and unreachable to some members of a given community, be it a rural or urban community. Urban literature reveals that the urban low income groups and a large majority of the vulnerable groups do not have equal opportunities in accessing transport services. The services are either unavailable, or if available are too costly due the spatial location of activities away from the residential areas of these groups.

The growing popularity of the concept of social exclusion is its usefulness in providing novel insights into the nature, causes and consequences of poverty, deprivation and discrimination. Estivill in Mathielson et al (2008) argues that: 'Social exclusion must ... be understood as an accumulation of confluent processes with successive ruptures arising from the heart of the economy, politics and society, which gradually distances and places persons, groups, communities and territories in a position of inferiority in relation to centres of power, resources and prevailing values. England's Social Exclusion Unit (SEU) (1997), defines social exclusion as 'a shorthand for what can happen when people or areas suffer from a combination of linked problems such as unemployment, poor skills, low-incomes, poor housing, high crime environments, bad health and family breakdown'. Consequently, low-income is one of the manifestations of social exclusion.

In the International Labour Organization (ILO) case study of Tanzania, 'social exclusion was conceptualized as both a state and a process. As a state, it is equivalent to relative deprivation, while as a process, it refers to the socially determined structures and processes which impede access on the part of some members of society to economic resources, social goods, and to

institutions which determine their destinies' (Gore & Figueiredo, 1997). Linking social exclusion to both a state and a process is bringing out the dynamism of access which is closely related to transport in relation to its ability to facilitate or inhibit members of society acquire their economic and social needs, thus determining their status.

Transport-related social exclusion is 'the process by which people are prevented from participating in the economic, political and social life of the community because of reduced accessibility to opportunities, services and social networks, due in whole or in part to insufficient mobility in a society and environment, built around the assumption of high mobility (Kenyon et al 2002). Lukas (2012) further note that transport-related social exclusion is seen through socio-demographics, vehicle ownership and locational disadvantages (Lucas, 2012). Church et al (2000) groups factors that may limit the mobility of socially excluded people into seven main categories: physical, geographical, economic, space, time-based, fear-based and exclusion from facilities (appendix 1). Transport is an essential convenience with which people move around to access goods and services. Furthermore, it has rich historical connection to some people's progress, while retarding those who are unable to access either transport infrastructure or service. Consequently, transport can either work at people's convenience or inconvenience leading to social exclusion. This can include loss of income or low-income status due to dwindling opportunities to access goods or services or access to maximize on available opportunities.

Social exclusion is most commonly used in a policy context to describe a state of extreme disadvantage experienced by particular groups in a society. This limits the global relevance of the concept and restricts its value as a way of understanding the problems of inequality and developing policies and action to address these problems (Mathieson *et al*, 2008). Use of policy context in describing social exclusion, perhaps is the most commonly understood globally, where various efforts have been made by different governments in mapping out various disadvantaged groups. This is done in order to develop appropriate policies and strategies for addressing the needs of those who are socially excluded. In Kenya, the Government and development partners have mapped out various categories of community members who are seen as vulnerable and therefore likely to be excluded. They have either developed new or amended various legislations, policies and strategies to include those who are deemed to be socially excluded. The Kenyan government first and second MTPs dedicates a sector specifically to plan for gender, youth and vulnerable groups. This is viewed as a positive move towards inclusion of these groups, although challenges, especially in the area of transport are complex and will take a long time to resolve.

Policy and Legal Framework for Inclusion in Kenya

The Kenyan Constitution guarantees citizens the right against discrimination on the basis of their social status, as well as the right to inherent dignity which must be respected and protected (GoK, 2010). This right is spelled out in Chapter 6 of the constitution. Article 21 which establishes the

progressive realization of social and economic rights and obligates the State to “observe, respect, protect, promote, and fulfil the rights and fundamental freedoms in the Bill of Rights.” Article 53 focuses on Children; Article 54 on Persons with Disability; Article 55 on Youth; Article 56 on Minorities and Marginalised Groups; and Article 57 on Older Members of Society.

The Integrated National Transport Policy acknowledges the mobility challenges of women, children and elderly in rural and in urban informal settlements. The policy commits to create a conducive environment for the development and use of transport facilities and services that increases access by low income households and communities to basic needs. The National Transport and Safety Authority Act No 33 of 2012 provide for the establishment of the National Transport and Safety Authority (NTSA); to provide for the powers and functions of the Authority, and for connected purposes. The Act mandates NTSA to ensure the provision of safe, reliable and efficient road transport services; by developing and implementing road safety strategies; compiling inspection reports relating to traffic accidents; and co-ordinate the activities of persons and organisations dealing in matters relating to road safety among others.

The Traffic Act Cap 403 consolidate the law relating to traffic on the roads, including dealing with penalties for reckless driving, driving on pavement, and pedestrian walkway. Although the Act is not specifically directed to those who are socially excluded, it is of importance to the urban poor given that most of them do walk and are likely to be victims of such reckless driving. The threats that traffic poses to the vulnerable groups are addressed in Section 45A (1) which states that no person shall, in order to avoid a buildup of traffic on a road, drive a motor vehicle on, or through, a pavement or a pedestrian walkway.

Kenya Persons with Disabilities Act No. 14 of 2003 also provide for the rights and rehabilitation of persons with disabilities, including equal opportunities and establishment of the National Council for Persons with Disabilities. One of the functions of the council is to achieve equal opportunities for persons with disabilities by ensuring to the maximum extent possible that they obtain education and employment, and participate fully in sporting, recreational and cultural activities and are afforded full access to community and social services. Section 21 stipulates that persons with disabilities are entitled to a barrier-free and disability-friendly environment to enable them to have access to buildings, roads and other social amenities, and assistive devices and other equipment to promote their mobility.

Children Act No 8 of 2001 provides for parental responsibility, fostering, adoption, custody, maintenance, guardianship, care and protection of children. In addition, it makes provision for the administration of children’s institutions; giving effect to the principles of the Convention on the Rights of the Child and the African Charter on the Rights and Welfare of the Child and for connected purposes

The brief review of policy and legal framework shows Kenya's commitment to address the issues affecting vulnerable groups. A situation which is further intensified by the lack of information on the vulnerable groups, especially as relates to transport. The sub sections below tease out available literature in order to document the state of transport and social exclusion in Kenya using the cities of Nairobi, Mombasa and Kisumu.

Transport and Social Exclusion in Cities

This section discusses transport and social exclusion in three cities in Kenya, Nairobi the capital city, Mombasa the second largest city and Kisumu the third largest city. Although not much information exists on transport and excluded low income areas and groups, the sub sections below provide a glimpse of the situation in anticipation for future research in the area.

Nairobi

Nairobi owes its origin to colonial zoning which categorised the city into racial group silos with different levels of infrastructure and services. While this retrogressive colonial history is incrementally disappearing, it largely defines how the city is organized and the type of services and infrastructure provided in different locations. This skewedness is also reflected in the quality of transport services, and the profile of those who use particular road corridors. Walking along a number of road corridors leading to and out of low income areas, one confronts many residents walking as early as 4.30 am, while others wait for congested paratransit modes of transport to head to different travel destinations, including sources of employment. Another group remains hidden in the settlements either trading, running household businesses or taking care of children, the elderly and the sick, as they wait to fit their travel within their multiple roles. Not much is specifically written about this group of vulnerable residents, but sweeping statements of their disadvantaged transport situation is mentioned. However, their struggles relating to housing conditions, nature of service delivery and livelihoods are well researched and documented.

This sub section review limited information on the low income areas and the vulnerable groups in respect to transport, by first providing an overview of planning and transport in Nairobi. This is followed by analysis of transport and low income group, as well as PWDs, women, children and the elderly who are viewed to be equally excluded in public transport.

Overview

Over the years, the City County of Nairobi (CCN) and its environs has experienced rapid growth which has led to stress on its infrastructure and services. Among others, investments in road infrastructure and Non Motorised Transport (NMT) facilities which serve a significant proportion of the population and constitute a major mode of transport in the city has not matched the

demand. The city has a vision of being 'the city of choice to invest, work and live in'. In the current County Integrated Development Plan (CIDP) the city attributes the transport challenge in the city to inadequate means of mass public transport, the rapid increase in the number of private cars, poor enforcement of traffic regulations and lack of discipline on the part of motorists and pedestrians (CIDP, 2018/2022). Mitullah & Opiyo (2017) note how NMT users are ignored by traffic police as they control vehicles at traffic light intersections without giving adequate time to NMT users to cross.

The CIDP has traffic and city transport as one of the pillars with a target of 'achieving a congestion-free city in which pedestrians have safe walkways; children do not suffer injuries from road accidents and public transport is so seamlessly connected that private car are unnecessary in most parts of the city'. The city has transport infrastructure which include roads, rail and air as summarized in box 1.

Box 1: Transport Infrastructure in Nairobi

The city county is in charge of 3,054 km of roads and has 300 km of NMT facilities, 1,735 km of tarmacked roads, 1,867 km of earth roads, 2,600 km of constructed storm drainage system, 12,000 installed floodlights, 39,000 street lights, 52 surveillance cameras, 22 traffic light management system (signalized junctions), 41 flyovers, 75 km railway and 15 railway stations, 2 airports, 15 terminus and 96 traffic Marshalls.

Extracted from CIDP, 2018 – 2022)

The CIDP acknowledges the rapidly growing city population with a projected population of 4,941,708 and plans to increase the entire listed infrastructure during the plan period. In respect to roads, the plan aims at improving transport mobility and accessibility as well as improved integration of NMT and public transport. The governor of the City County of Nairobi in his 2017 Election Manifesto also committed to addressing traffic and city transport as well as youth, women and social inclusion. The Manifesto acknowledges that 'vulnerability is seen everywhere in our city particularly that experienced by street families, those living in informal settlements, and street traders. Youth, women and PLWDs are constantly exposed in never-ending cycle of poverty – harassment – more poverty followed by more harassment'. Through the Manifesto, the governor promised to create more walkways since most people walk to work and prioritize access to public transport vehicles over cars, noting that private cars transport people at the greatest congestion cost to all other commuters. The Manifesto further commits to paving revolution for safe footpaths beginning with the city key corridors, creating designated drop-off and pick-up points for pedestrians within the CBD, expanding the CBD to the neighboring areas,

deliberately strengthening the participation and inclusion of groups that have been historically marginalized, which include PWDs, women and youth.

Over the years, the city has been addressing traffic and transport issues, but to-date the challenge of social exclusion in planning and provision of services and infrastructure, including transport remains a major concern. Planning of the city dates back to 1948 when the colonial master plan was developed. The plan laid guidelines for Nairobi's future development and earmarked land for major uses as well as making proposals for extensions to the road network. This plan defined the major layout of the present city including the major road corridors. Since then, the growth of Nairobi has been accompanied by urbanization problems which mainly include transport, housing, water and sewerage, drainage and sanitation and congestion.

In 1973 the Growth Strategy study recommended decentralization and development of alternative service centers; modification, upgrading and extension of road network, extension of city boundary to the west and north west and growth of satellite towns among others. This strategy envisaged growth of industries close to the living quarters of workers, an aspect which was expected to address transport challenges facing the low income groups. However, the recommendations did not fully work and largely supported the interests of the elite. The colonial racial disadvantages remained with the interests of the majority not being addressed. Segregation was enhanced based on economic and class lines replacing the previous racial and class lines (Anyamba, 2004).

Due to the many challenges facing the city, the city was put under a Commission– Nairobi City Commission which developed a plan which included transport and public works but as with the 1973 Growth Strategy, the plan was not fully implemented. This prompted the Nairobi Convention which produced a strategy paper called, 'The Nairobi We Want' whose ideas were caught up in the post 1990s reforms which saw Local Authorities such as the City of Nairobi embrace the Kenya Local Government Reform Programme. The reforms included establishment of a Local Authority Transfer Fund (LATF) and its operational facility, the Local Authority Service Delivery Action Plans (LASDAPs). The latter was a participatory planning and budgeting tool for identifying priority needs of each and every local authority in Kenya.

The reforms brought a number of changes and improvement, but the city continues to face challenges, in particular those relating to inequalities and delivery of services. In the process of reforms, the government of Kenya acknowledged the importance of conceptualizing the city beyond its boundaries. This resulted in the establishment of the Ministry of Nairobi Metropolitan whose aim included the creation of an efficient transport system, addressing housing challenges, public services and infrastructure. The ministry has since been abolished and turned into a Directorate of Nairobi Metropolitan Area.

Nairobi Metropolitan Area Transport Authority (NaMATA), a regulatory governmental transport authority was established in 2017. The authority is charged with overseeing the establishment of an integrated, efficient, effective and sustainable public transport system within the Nairobi Metropolitan Area. The authority coordinates the on-going planning of the Mass Rapid Transit (BRT) System Project in Nairobi (2017 – 2021) aimed at developing and operating 5-line BRT system as well as a commuter rail system. The Nairobi Integrated Urban Development Master Plan (NIUPLAN) 2014-2030 also aims to transform the city into a globally attractive city that is iconic for regional integration and sustainability. The master plan aims at integrating all the existing Master Plans of various infrastructure within the city of Nairobi and its surrounding with urban transport and railway being part of the infrastructure.

Mobility in Nairobi is a major challenge, especially to the low income groups who cannot afford motorized transport and have to rely on Non Motorised Transport (NMT) which is not well provided for. Transport services in Nairobi city is mainly road based with railway transport limited to services during peak hours and between the CBD and the eastern and southern parts of the city. Walking and public transport are the main modes with private cars accounting for only 15 per cent.

Due to limited mass transit, the matatus and cars operating in the city cause serious congestion and grid lock which is costly to the city economy. According to the Kenya Institute of Public Policy Research and Analysis (KIPPRA) 2017 report, the cost of traffic jams in the Nairobi Metropolitan Region was estimated at Ksh. 1.9 billion annually. This includes additional time spent on travel due to congestion and decreased productivity and health risks caused by pollution and stress.

Public transport services in Nairobi rely heavily on walking and public transport which account for 47.1 and 32.7 per cent respectively. Private cars, cycling, train and institutional modes account for the rest percentage (Table 2).

Table 2: Trend in modal split in Nairobi

	Walking %	Public Transport %	Cycling %	Private car %	Train %	Institution %	Others %
2006	47.1	32.7	1.2	15.3	0.4	3.1	0.2
2005	47	36		16.5	0.4		

Source: (JICA, 2006; NUTRANS, 2005)

School trips account for a significant percentage of travel although it is often not officially catered for. In the NIUPLAN (2014) study, walking to school scored the highest (46.7%) compared to using

other modes such as matatus, bus, private vehicles, two wheeler and rail among others as indicated in table 3.

Table 3: Trend in trip purpose

Year 2013	Walking %	Matatu %	Bus %	Private %	2-wheeler %	Rail, others %
Home trip	34.8	33	12	13.9	5.8	0.5
Work Trip	27.7	35.2	11.3	18.6	6.6	0.6
School trip	46.7	26.7	15.3	5.7	4.1	1.5

Source: NIUPLAN, 2014

Majority of those in the middle class¹ prefer to drive to work regardless of the high costs and stress associated with it. Public transport is not popular with the middle class residents due to the embedded service inefficiencies. Matatus which are the dominant mode do not have schedules for operation, play loud music and are characterized by irregular routes, fares, and poor customer relations among other factors. The latter has been subject of discussion in particular, in relation to how female passengers are handled. Furthermore, due to their low occupancy and age they congest the city and increase Green Gas Emissions (GGE). This is further intensified by the private car owners who hardly have full occupancy but use the roads on a daily basis.

Overall, households spend many hours in traffic and on average lose one hour or more in traffic irrespective of whether they are using public means or private cars (IPSOS, 2015). The same study which categorized the sample into general public and private car owners notes that children of parents with cars travel long distance (between 11 – 20 km) to school compared to those from the general public. Such children use school bus or private cars to school. Both categories of the sample had concerns relating to road accidents by other vehicles, crime, including kidnapping, terrorism and robbery and traffic accidents.

Low Income Context

Low income households constitute more than 60 per cent of the city population, but often their needs are not effectively catered for. Salon and Gulyani (2010) in their study focusing on mobility, poverty and gender and travel choices of slum residents in Nairobi noted that the poor face a challenge of transport which limits their travel. They further note that those living within informal

¹ Comprises of households with monthly expenditure between Ksh 23,761 and Ksh 119,999 in October, 2005 (GoK, 2017:87)

settlements do not have travel 'choices', they walk because they cannot afford motorized transport. Furthermore, this burden is borne disproportionately by women and children. Mutiga (2014) notes that most of the poor informal settlement dwellers have been pushed to the city's peripheries, occupying only 5 per cent (Matrix Development Consultants, 1993) of the city's land area. Howe and Bryceson (2000) indicate that such settlements are located between 12 and 18 Km from sources of employment such as the CBD and industrial area. This forces residents of such areas to travel long distances to access services. For instance, thousands of workers from Kibera, a high density low income settlement walk up to 20 kilometers to work and back to their settlements every day (ITDP, 2013). Trip rates in Nairobi city especially along Jogoo and Mombasa roads have been increasing steadily and currently stand at 2.27 trips per person per day. This is due to casual laborers that walk to and from industrial area every day in the morning and the evening with the trip rate of male being higher than that of females.

Besides the group of low income workers who provide casual labour to the many formal businesses in Nairobi, there are the majority low income workers who work within the informal sector. These include own account workers running their businesses without any employee, those who employ less than five people to support their enterprises and those employed by other informal workers. These city residents face transport challenges and largely rely on walking and unpredictable matatus. Since most of them carry goods, they are often viewed by other passengers as a nuisance, especially during the morning when people are going to work. Some matatus have also created business out of their situation occasionally acting as goods transport, while others who cannot afford matatus use hand-carts which take hours to deliver goods to various destinations within the city. The hand-carts while serving these low income groups is often viewed as a nuisance by both motorized transport and other NMT users due the conflicts they cause as they pull the goods on both NMT and motorized infrastructure, changing from one infrastructure to the other depending on their convenience.

Studies, for example Khayesi et al (2010) have highlighted the neglect of pedestrians, cyclists and street vendors in transport policy and practice in Nairobi. Khayesi et al argues that transport planning has not adequately taken care of the informal economy and NMT such as walking and cycling which has resulted in competing use of pavements and roads exposing cyclists, pedestrians and street traders to insecurity and harassment. The study called for inclusive transport planning for multiple street activities by implementing 'streets for all policy'. Mitullah (2007: 121) highlights the interaction of street traders and mobility in terms of space. She notes that 'street trade takes place in strategic points where there is heavy human traffic – along main roads, in parks, on pavements, within shopping centers and at street and road junctions where traders are visible to pedestrians and motorists'. Khayesi's call for a policy which accommodates these low income workers is in sync with the UN-HABITAT Urban Agenda's call for safe, resilient, inclusive and sustainable cities. A call which cities such as Nairobi are grappling with on a daily

basis as low income groups struggle to survive through different entrepreneurial ventures within the city.

Vulnerable Groups

The vulnerable groups face major transport challenges since their needs are often not catered for in transport provision. This sub section discusses the situation of PWDs, women, children and the elderly.

1. PWDs

The PWDs face unique transport challenges in Nairobi, although the city authority has made a good attempt to retrofit wheel chair infrastructure in the Central Business District (CBD). The same is not applicable where the PWDs live and along the major corridors where they struggle and often have to be assisted to cross certain portions of road corridors. The same case applies to the deaf and blind. The crossing points in the city with traffic lights do not have audio applications and the blind are not able to know when the light is green for pedestrians. This essentially means that majority of the PWDs have to be supported to cross roads within the city. The CIDP - 2018/2022 acknowledges that the PWDs 'have been marginalized in all aspects of development'.

The county government commits to 'promote friendly environments to persons with disability in all institutions and facilities, including encouraging building developers to install lifts and escalators. This commitment is in line with the governor's election Manifesto which notes that PWDs have been invisible in planning of the county government. By-laws impose no access requirement whether in construction of passenger walkways or in the construction of offices. Few buildings in the city have wheelchair ramps and city roads have no warning to motorists to be on the look-out for PWDs at crossing points.

A study done on a recently improved Thika Super-Highway provided insights on how the PWDs negotiate their way in the city. The study revealed that like other road users their main trip purpose include work, personal business, school, and social purpose. What was unique was that 20.4 per cent of the sample of PWDs made trips to beg which reveals their poverty level and lack of care. The PWDs appreciated the improvement of the Super-Highway, although the numbers using NMT among them had reduced from 66.7 to 22.2 per cent. They noted that congestion and inappropriate NMT infrastructure and speeding vehicles made them unable to effectively use wheel chairs along the highway. It took so much energy to use foot bridges and there is no dedicated lane for wheel chairs nor assisted crossing. They thus have to mingle with other NMT users including motor cycles that invade NMT facilities. They also risk their safety by crossing the busy highway or covering an extra distance to get to the nearest footbridge which is equally challenging.

The other challenge faced by the PWDs on the highway is the challenge of inter-modal transfer. Over 50 per cent of those interviewed found it difficult to change from NMT to motorized transport and vis versa. They noted the lack of consideration for people living with disabilities, noting the absence of assistance during boarding of the vehicles which are not designed for PWDs and the reluctance of such operators to accommodate wheel chairs. These challenges require both long and medium city transport planning if the PWDs are to be effectively accommodated in the city public transport.

2. Women

Women with their multiple roles in society have been noted to face unequal burden in transport which warrant a gendered analysis. Their unique situation is informed by their new roles in urban areas which combine work, taking care of household chores and being tied to children and the sick whom they not only have to take care of but also take to school and hospital. In the low income areas health services and schools are not easily accessible, and women often have to travel to other neighbouring locations for such services. This situation is often more complex when women are expectant and have to attend clinic and later take infants to antenatal clinics located out of their low incomesettlements. Peters (2013) in a study prepared for the Global Report on Human Settlements provides a good summary of the complex situation of women (see Box 2)

Box 2: Women's Complex Urban Transport Situation

Women's travel situation is different from men's and these differences are characterized by deep persistent inequalities. Within any given urban setting women have inferior access to both private and public means of transport while at the same time assuming a higher share of their households travel burden and making more trips associated with reproductive and care taking responsibilities.

Patriarchy has followed women in urban areas with their multiple roles and complex travel patterns. The city of Nairobi was not planned for women and children but for male workers sharing one roomed units with planned single travel pattern to work in specific locations. This type of urban transport planning and policy making was influenced by transport planning standards drawn from industrial revolution biased towards individual journey to work trips, assumed to be undertaken by private motorized means of transport. This is no longer applicable, especially for women whose division of labour has changed. They have to make more complex

trips to work full time, take children and the sick to school and health facilities respectively, shop and also accompany children, the sick and elderly for recreation and places of worship. This pattern of travel is very different from that of men which is often single and more direct. A study done in UK highlights the need to understand women's life cycle as they shift from younger married adults without children, to families with pre-school children. This makes their travel pattern change as that of men remain relatively stable over their family life cycle (Jones et al, 1983).

In Nairobi, women do not only face the challenge of multiple travel patterns. Their travel is also encumbered by harassment and exposure to congested public transport that is difficult for anyone taking care of an extra person, in women's case, children, the sick and the elderly. There have been many cases of harassment in Nairobi but one 2014 landmark case is worth noting. In this case, three men stripped, robbed and violently assaulted a female commuter on a public transport and bragged about the crime by posting videos in social media. This case became a turning point for women and transport not only in Nairobi but Kenya and the entire African continent through the campaign of 'My Dress My Choice'. The crime generated protests across the city, including from high political offices and on 19th July 2017 the three men were sentenced to life in prison. They may appeal as the law allows but the message to the transport sector in respect to women is clear. The campaign has further influenced the city authorities who have acknowledged sexual harassment in public transport in its current CIDP - 2017/2022. The CIDP provides for creation of awareness and advocacy against sexual harassment in road transport system.

In spite of female harassment, the city is beginning to see women enter the transport sector as workers, a sector that has been dominated by men. New technologies, in particular taxi hailing using applications is enhancing women's entry and probably reducing exposure of ridicule which women who work in the industry in particular as conductors face from male colleagues. The last three years has witnessed development of electronic transport apps opening doors to women. One of the services, Little Cabs, operated by Safari Com is the only app offering riders choice of male or female driver. The firm has witnessed increase in number of women drivers. In June 2016, there were only 27 female registered drivers. The number has increased to 381 and the firm hopes to have 1000 women drivers by end of 2018 (Business Daily, 7/5/18).

On-line taxi hailing seems to provide conducive options for women. They choose when to work, where to work and which clients to work with. They are noted to choose riders with higher ratings and also opt for locations populated rather than isolated areas. The availability of tracking via GPS and an alert/SOS button on their apps for support if they need help is an additional safety measure. All these notwithstanding, new obstacles are emerging such as reluctance of cars owners to rent cars to women, dealing with drunkard male passengers and follow up calls from customers who want to date women after a trip is over. They also get sexist comments which

they have to live with. These challenges imply that on a comparative note, women may still face challenges which require addressing as they populate work in the taxi hailing industry.

New projects within the city are also beginning to accommodate women. For example, the Outer Ring Road Improvement Project funded by the African Development Bank (AfDB), Environment and Social Impact Assessment provided specific gender plan of action which include provision of ablution corners, adequate and secure accommodation for women as well as code of conduct to prevent abusive language from male colleagues among others.

3. Children

Transport for children has not been publicly provided in Nairobi but the private sector has been providing school transport for many years. This is done both through private school systems and private entrepreneurs who offer transport for parents who can afford the service. Both services are not available to the low income households whose children have to walk or use public transport. While there is not much written about these poor children and how they get to schools, most of them walk accompanied by parents during the early age but often start being on their own much earlier than the children coming from middle and high income households. It is normal within the city of Nairobi to see a child below eight years struggling to get into a public transport with a lot of difficulty. In isolated cases the matatus are reluctant to take them especially when they are many since they pay half fare but congest the vehicles. Box 3 provides a brief on the situation of children and public transport in Nairobi.

Box 3: Children and Public Transport in Nairobi

It is way past 6 PM. Two pre – teen girls sit on the kerb stones staring listlessly at the static traffic. Occasionally they poke each other and point at a matatu, daring each other to ask the conductor to let them in. Their request though, dies on their lips at the conductor’s glare. Bid lost. They stare on. A little boy, probably 6 years or so lies on the grass behind them, thumb in his mouth, fast asleep – overtaken by fatigue and the long wait. Four boys approach a conductor and before they can place their request, the driver shouts, “Na usibebe watoi, sitaki shida na macops”(do not let in the kids. I do not want trouble with the traffic police). The matatu conductor maintains closed doors. The boys go back to their games.

Extract from [enezaeducation.com/commuting-to-school-in Nairobi/](http://enezaeducation.com/commuting-to-school-in-Nairobi/)

The reluctance by matatu to carry children is also reported by Jeckonia Otieno(Standard Media 21/11/2016) who notes that his plea with the matatu touts to carry children after one matatus after another came but did not allow children to board, received a condescending response in Kiswahili, ‘hii gari si ya kubeba watoto washule’ (this vehicle is not for carrying school children, it is not a school bus). He further notes how children as young as five years have to board school

buses as early as 5 AM depending on where they live and how far they have to travel to school. A number of school buses seem not to comply with the Traffic Amendment Act of 2016 which require all school buses to operate between 6 am and 6 pm. However, the law is not clear on how children should be transported, and the matatu operators are free to decide whether to carry them or not. The school children do not only face the challenge of not being allowed to board public transport and early boarding of school buses, but they are also prone to accidents with high numbers recorded.

For those who manage to board the public vehicles, often there is no comfort. This also applies to some of the school transport provided by private schools. In the public transport, children are either standing or quizzed between adults, while in the private transport they are overloaded with more than two children in a seat with some standing. Furthermore, most of these transport services have no designated routes. They take children up and down as they pick others to school, with some beginning their journey as early as 5 am and not getting to school until at around 8am, exhausted and unable to effectively learn. This challenge is caused by a number of factors. Many middle class parents prefer schools not located within their residential areas for different reasons, including good performance, lack of faith in public schools near their residential areas and class related elite hang-ups. While the parents have their preference for schools which their children should attend, travelling away from residential area for schooling has effect on children. They have to wake up too early, take a long time getting to school and back home in slow and congested traffic. Some of the children carry packed snacks for break and lunch which never reach school after consuming the same during the long journey ends.

Although school transport has been viewed as a parents' issue, it is also a policy and planning issue for the city of Nairobi. Public schools are not enough and the available ones are not spread across the city. The low income settlements often do not have public schools and have to rely on schools in the neighborhood, which do not plan for extra numbers from neighboring informal settlements. This pushes parents to search for schools far away requiring travel which is a cost to households, especially among the low income groups. Prior to the launch of free primary education in Kenya, low income parents relied on informal schools run by Non-Governmental Organisations (NGOs) within low income settlements. However, such schools often did not run on national curriculum and also did not have qualified teachers which further marginalized children from low income households.

Historically, school transport was tried in Nairobi but the programme did not work and was withdrawn due to a number of reasons.

4. Elderly persons

The elderly persons are not catered for within the city of Nairobi with respect to transport. The elderly in low income areas are often living alone or with children below 15 years, while others

have physical disabilities or chronic conditions and can hardly take care of themselves. A study done in Nairobi's informal settlements (Ezeh et al, 2006) found out that a large proportion of the elderly people living in informal settlements live alone. This is contrary to the situation in rural areas where most of the elderly live in large homesteads where they get support from members of the larger family, in cases where they have no immediate family members.

In the area of public transport, apart from the majority not being able to manage their mobility, the existing public transport infrastructure do not have dedicated spaces for them. The neglect of the elderly could partly be due to the wrong assumption that the aged retire and get back to the rural areas. The city has many senior citizens, including some who were born in the city and have no alternative rural homes. The group if still strong enough have to struggle in the public transport with many of them limiting their travel due to the difficulty of negotiating public transport.

Conclusion

Nairobi has been grappling with issues of inclusion for decades which is intensified by inefficient transport system that undermine the income and employment opportunities for residents. The heavy traffic and congestion leads to loss of productivity as several hours are wasted on traffic jams. Many people lose an average of one to two hours on daily basis. This is largely due to poor spatial planning of the city, too many unmanaged vehicles on the roads, inadequate NMT infrastructure and lack of mass transit modes of transport. Investment in NMT and Mass Transit facilities are good investments which are likely to attract more people to walking, cycling and Mass Transit to their destinations, with many others combining the modes. Currently, the city is in advanced stage of developing BRT and light rail, while at the same time continuing to retrofit NMT infrastructure, but both processes have a long way to go before they can be fully realised, especially by the low income groups.

The review reveals that there is minimal attempt to cater for the low income and the vulnerable group although almost all policy and legislation documents mention them. The low income in general, women, children and PWDs have a few advocates and services, while voices are almost mute on the situation of the elderly. The vulnerable groups who live in low income areas have a double disadvantage beginning with their residential areas where services and infrastructure are limited to the challenges of mobility. Most settlements of low income groups are located far from sources of employment which undermine their employment and income capacities. This is due to the cost of transport which makes many of them walk full trip or combine walking with other public transport modes in order to reduce cost of transport. The walk part of the travel is limitedly provided for, and more available within the CBD and isolated road corridors. The infrastructure is inadequate and used by all NMT modes, including hand-carts. In recent years the infrastructure has been invaded by speeding motor cycles which cause conflict and compromise the safety of pedestrians and wheelchair users.

Many low income groups, in particular women engage in informal activities within their households and surrounding areas, although they make occasional trips to get supplies and access services not available within their settlements. Technology is beginning to improve services although the divide between the vulnerable groups and the middle and high income groups remain. Cab hailing has attracted women cab drivers, although this area is still a reserve of women who are comparatively well-off and are able to either own or hire a vehicle. The review indicates the reluctance of owners of vehicles to deal with women. There are also other operational challenges for women such as managing drunkards and the male gender calling after a ride with interest in nurturing relations. Besides these challenges, technology is enabling a number of households in low income areas and the vulnerable groups to order for goods for door delivery, which reduces travel. For women, this avails more time for other household and care tasks which are done within informal employment, albeit, technology based transport services such as cab hailing services are still beyond the reach of the low income groups. Furthermore, the big name cab hailing services are reluctant to operate within the settlements of the poor, although entry of other similar services, especially the motor cycle app is likely to change the situation in low income settlements.

Transport and Social Exclusion in Mombasa

Mombasa County is located in the South Eastern part of the Coastal region of Kenya. It covers an area of 229.9 Km² excluding 65 Km² of water mass which is 200 nautical miles into the Indian Ocean. It borders Kilifi County to the North, Kwale County to the South West and the Indian Ocean to the East. The County lies between latitudes 3° 56' and 4° 10' South of the Equator and between longitudes 39° 34' and 39° 46' east of Greenwich Meridian. The County also enjoys proximity to an expansive water mass as it borders the Exclusive Economic Zone of the Indian Ocean to the East (Mombasa CIDP, 2013-2017).

Roads: There are a total of 257.17Km of bitumen surface roads, 127Km of gravel surface roads and 91.29 Km of earth surface roads in the county. Main classified roads include Mombasa - Nairobi highway (A109), Mombasa - Malindi road (B8) and Likoni - Lunga Road A (14) connecting Kenya and Tanzania. Others include; Airport road (C110), Mbaraki Shimanzi road (C114) and Mtongwe road (C109). While the major roads are in a fair condition, access roads within the residential and industrial areas are in deplorable state.

Railway: The County has ten kilometers of railway line and three railway stations. The County government of Mombasa envisions having light commuter rail within the city in the long run. Recently constructed Standard Gauge Railway (SGR) Line from Mombasa to Nairobi has expanded traveling options to those visiting Mombasa, it is also reducing road freight transport.

Port: The port of Mombasa is also a key resource and the gateway to the East and Central African region, as it serves the entire region's export and import needs. In 2012, dredging was undertaken with a view of deepening the Likoni channel to facilitate usage of the port by larger vessels. The ongoing construction of a second container terminal at Kipevu will increase the capacity of the containers being handled to three times the current capacity.

Airports: The County has one international airport, the Moi International Airport within Changamwe sub-county. The airport is the second largest airport in Kenya and is used by both domestic and international flights. The airport is essential in the promotion of tourism and investment opportunities in the county and in the coast region.

Basic services such as healthcare and banking, as well as major trading markets are concentrated along the road networks. This has resulted in unequal distribution of basic amenities and services within Mombasa County, and hampered easy access to these services by the far-flung urban peripheral communities. This may contribute to physical, geographical and facilities exclusion of those living far from such facilities.

There are several modes of transport within Mombasa County, these includes both the motorized and the non-motorized means of transport. Motorized transport includes; tuk tuk, motorbikes, heavy trucks, matatus while the non-motorized transport; hand carts and bicycles.

According to the KNBS (2009), the total population of the county of Mombasa was at 1,391, 816 people. The population has been growing rapidly. The county of Mombasa launched the Integrated Strategic Urban Development Plan (ISUDP) 2015-2035 which is a 20-year master plan for the county containing all the sectors. Public transport is one of the key areas in the plan. The budget allocation for the transport sector has been increasing for the last three years. In the year (2014/15) the allocation was 929,466,374, (2015/16) 1,274,396,076 and 2016/17 1,318,628,464 respectively (County fiscal strategy paper, 2016). The transport and infrastructure budget item represents 13.3% of the total county budget. The ISUDP comes up with several transport projects which will help in addressing the mobility needs of those currently excluded.

Low Income Context

County still has a very large number of people who live in the city's slums of Mishomoroni, Junda and Kisumu ndogo in Kisauni Sub-county; Shika-Adabu and Ngomeni in Likoni Sub-county and Bangladesh in Changamwe Sub-County. These areas are least developed in terms of infrastructure such as road network, electricity and water supply. Education and health facilities are also scantily available in these areas making the inhabitants highly prone to poverty and disease incidences.

In terms of transport-related exclusion, through the Kenya Informal Settlement Improvement Project (KISIP), disbursement of Sh40 million to Mombasa County was done for the construction

of Ziwa la Ng'ombe Primary School and a further Sh106 million for the construction of roads. This will improve the accessibility to Ziwa la Ng'ombe slums.

Figure 1: Location of Informal settlements in Mombasa Municipality



Vulnerable Groups

The situation of the vulnerable groups in Mombasa is less known compared to the city of Nairobi. The search for literature during the scoping study found very few publications on these groups specific to Mombasa.

1. PWDs

Persons living with disabilities constitute about 0.58% of the total population, and their issues have not been adequately addressed in county planning or public transport facilities (CIDP, 2013/17). It is estimated that 40-45% of the population of Mombasa travel from, through and to the island on a daily basis. This is majorly due to employment and education reasons. With the exception of the Buxton footbridge, many transport facilities documented do not take into consideration the needs of the PLWDS therefore limiting their access to government and non-government services.

During the scoping, there was no specific study in Mombasa directly relating mobility status of low income PWDs but evidence from documents reviewed such as the Mombasa County Integrated Development Plan, Mombasa County Annual Development Plan (2016-2017) were all found to recognize PWDs accessibility challenges without relating them to their income levels. However, from the global literature it is important that the mobility needs of the low-income PWDs is given more attention, given the extra challenge they face in incurring extra cost during their mobility this at times is worsened with the nature of the disability in relation to the

condition of transport infrastructure provided and weather condition. For example, a PWD forced to crawl on a muddy road to access basic service such as medical services.

A low income PWD in Mombasa is likely to face serious mobility and accessibility challenge to health facility. The Mombasa CIDP (2013-2017) shows that there is only one level five hospital (Coast General Hospital) which is a referral hospital for the Coast region and two level Four hospitals in Tudor and Port Reitz and that the average distance to health facilities is 0.55km. It further notes that the doctor patient ratio in Mombasa is 1:11,875 as compared to recommended World Health Organization (WHO) standard of 1:600. This may mean that a low income PWD only affordable facility are the few public facilities which may not be located near their residential places hence have to incur extra mobility cost and compete for the attention of the few doctors to be attended.

2. Women

According to the 2009 population census, Mombasa population is given as 939,370, with women population counted as 452,446 which is 48.2% of the total population. The Mombasa CIDP (2013-2017) further indicates that 38% of the population is poor, which can be estimated to be around 171,929 women. Assuming that there are those who may not be part of this number but are of also low income, it thus shows that there is a higher number of women than officially documented who may not be able to meet their basic mobility needs. This is worsened by the fact that women have higher number of trips as compared to men including going to market, picking children and also working in support of their families. Inability to afford transport services in making these trips may expose them to other serious risks such as sexual abuse and rape especially if they have to walk in the wee hours of the morning and in the evening after sunset.

3. Children

Mombasa has a total of 95 public primary schools and 550 private primary schools, with 70,345 students enrolled in public primary and 76,301 students in private primary schools. The teacher pupil ratio for public primary schools is 1:41 which according to the Mombasa CIDP of (2013-2017) is favorable.

Public primary school is the likely to be the only available option for children of low income parents, since they don't charge tuition fee. Taking into account that most of these primary schools are located in planned formal settlements, the children from the low income settlements are likely to either walk long distances or pay extra transport cost to access education services. This may even be riskier to the young children attending Early Child Development (ECD) public facilities, which is also currently free in terms of tuition charges.

4. Elderly People

Older persons are an important segment of the national population whose rights must be recognized, respected, protected and promoted. It is clear that the population of the older persons is growing rapidly due to wealth, better health, improved nutrition, and advance technology in treatment, early intervention and cure of diseases that have increased life expectancy (GoK, 2014).

The 2009 National census indicate that the population size of those who had attained 60 years and above was 24,798 which is around 2.6% of Mombasa county population. Assuming that 38% of the elderly people in Mombasa are considered poor then at least an estimated population of 9,423 elderly persons may be considered poor, hence need to address their mobility needs. Elderly persons are vulnerable in terms of health and other needs including food and medical attentions which in most cases require immediate attention. So when they are unable to access transport services immediately due to their low income status they end up risking their lives and hence are likely to succumb to opportunistic diseases which may have been addressed satisfactorily with access to transport.

Transport and Social Exclusion in Kisumu

Kisumu city is the third largest city in Kenya after Nairobi and Mombasa respectively and it is in Kisumu County which sits on the shores of Lake Victoria which is the world's second largest fresh water body, providing it with the potential to be a major center for fishing as the economy is predominantly agriculture and fishing. Agriculture is also a common economic activity with sugar and rice irrigation industries employing a good number of its residents. Other important economic activities are small scale business/trade, subsistence farming, and informal businesses like boda, charcoal burning and domestic workers. Some of these activities provide low income and are not sustainable (NCPD, 2017).

The National Population and Housing Census of 2009 estimated that Kisumu city has a population of 409,928 inhabitants, 97,461 households and an annual population growth rate of 2.6% (KNBS, 2009; Government of Kenya, 2010c). The publication and enforcement of the Legal Notice Number 161 of 2003 (Government of Kenya, 2003b) led to the ban on the use of shared taxis that provided public transport in Kisumu. As a result, cycling received some attention that both promoted and banned cycling from the city centre (UN-HABITAT, 2004). Use of commercial motorcycling also came into being to offer similar services as the pedal bicycle-taxis. The Government removed import taxes on motorcycles during this period in order to encourage their use as they were seen to be more superior to pedal bicycles (IEA, 2008).

Unemployment and poverty rates are estimated at 30% and 48% of the city's total workforce and households respectively (NodalisConseil, 2014). The bulk of this poor population resides in the

slums and informal settlements of the city (NodalisConseil, 2014). Majority of this population either walks or cycles to their daily destinations. Commercial motorcycling bridged the service gap in the settlements dominated by the urban poor of Kisumu (Kola et al., 2012). Income levels in Kisumu vary across different settlements of the city. According to Lidahuli (2015), 16-31% of households in these settlements earn less than Ksh. 9,000 per month while 37-43% earn a monthly income of between Ksh. 9,000 to 20,000. The findings show that slum settlements contribute the bulk of the low income earners of Kisumu. Travel demand in the city has traditionally been met by walking, shared taxis, *matatus* and *bodabodas* (Kola, Onyango, & Oindo, 2012; NodalisConseil, 2014) with commercial motorcycling supplementing these traditional modes. Lack of an organised public transport just like in other cities is a conspicuous challenge to passenger mobility in the city.

Majority of cyclists in sub-Saharan African cities comprise the poor who are largely excluded by urban planning in its broader sense (Salon & Gulyani, 2010; Sietchiping et al., 2012). Evidence from cycling conditions in other cities further suggests that this exclusion of cyclists from the streets is reinforced by the social exclusion of cyclists due to their low socio-economic statuses (e.g. Khayesi et al., 2010). Cyclists in Kisumu region comprise the socially disadvantaged. Social exclusion is said to occur when a powerful class uses the social, cultural and institutional power it wields to restrict access to valued resources from the underprivileged (Silver, 2007). With high poverty levels in Kisumu (NodalisConseil, 2014), transport cost turns out to be one of the leading factors that keep the city's urban poor in poverty (Maoulidi, 2012). Transport-related social exclusion is seen through socio-demographics, vehicle ownership and locational disadvantages (Lucas, 2012).

Map 3: Kisumu City



Low Income Context

The lack of access to basic services, unemployment, low literacy and prevalence of communicable diseases, are critical indicators of the poverty in Kisumu County. The main economic activities are fishing, agricultural activities and some industrial activities in the main urban areas of Kisumu. This is a largely informal and low value economic set up that implies limited opportunities for the young and productive population to engage in gainful employment.

The dependency ratio was 88 in 2009 as compared to national's 84.2. Therefore, the overall economy faces a greater burden to support and provide the social services needed by dependent population consists of children and older people.

In order to improve the livelihoods of those living in informal settlements in Kisumu, KISIP is currently working on Obunga 1.4km of road, footpaths and drainage works along pamba road and 750m of road works, footpath and drainage works along Kudho road; 5kms of road works, footpaths and drainage works within Nyalenda A and B settlements; 1.7km of sewer line and associated works in Bandani and 1.35km of sewer line and associated works in Obunga. The KISIP initiatives will help in improving.

Kisumu County Poverty is estimated at 39.9% (GoK, 2011). With a total population of 409, 928 this translates to around 163,561 persons who are considered poor, hence whose income may not be sufficient to support their basic mobility needs. These people may hence be forced to travel on foot for long distance to access services such as health and even employment opportunities.

Transport and Vulnerable Groups

Kisumu like Mombasa was also found to have very few publications on transport and vulnerable groups. This shows that many studies tend to concentrate on the major city and there is need to ensure diversification of transport research to cover other cities and towns in Kenya.

1. PWDs

According to the Kenya Inter-Agency Rapid Assessment (KIRA, 2014), it estimated that the disabled population of Kisumu is 2.01%, which translate to a PWD population of 8,240 persons, assuming the poverty percentage of 39.9%, then 3,288 PWDs as per 2009 national census are considered poor. This is a sizeable number whose mobility is seriously hampered with limited and unaffordable transport services in Kisumu given that Kisumu public transport is not PWD friendly and most of the last trips is either by walking or motorcycles which is limiting to those who are disabled and beyond reach to those who are both poor and disabled. Given also that the doctor patient ratio for Kisumu is 1:15,000, the PWD low income earners whose only hope is public health facilities, are extremely disadvantaged when there is need to seek for any form of medical attention.

Kisumu County government has been feted as a front runner in the localisation of United Nations Convention on the Rights of Persons with Disability (UNCRPD) and Sustainable Development Goals (SDGs). Kisumu is the first county to ratify the Disability Act of 2016 (Business Daily, 6th November 2018). It is therefore hoped that this will influence how provision of transport services will be done in Kisumu so that the PWDs can gain and more so some special considerations extended to the low income PWDs given that they are in real captive mode and are unable to enjoy any existing alternative mode requiring any form of payment.

2. Women

According to GoK (2011) Kisumu population is estimated to be 388,311 and according to KIRA (2014) majority of the population (51%) is women which translate to 198,039 persons and given that this scoping is concerned with low income mobility, the number of women in Kisumu falling in this category can be estimated to be 67,136. This is quite a high number in relation to the number of family and community support and development trips made by women. They are thus likely to spend a lot of time trying to end meet by struggling to reach various multi-destinations just to access basic services which is compounded with either lack of facilitative transport or unaffordable transport service.

Women may also face issues of sexual harassment when travelling on public transport and they may feel more vulnerable when walking or waiting for transport at night in poorly lit areas. The impact of these factors on the poor is exacerbated by mono-functional land-use zoning regime, which locates key services and jobs at the city centres and key activity nodes (Diaz Olvera et al., 2013). Kisumu Integrated Strategic Urban Development plan borrows heavily from the Kenya Vision 2030 plan and is therefore a continuation of its desire for capital infrastructure projects with less emphasis on soft infrastructure. Traffic congestion and inefficiency traffic management and inadequate NMT infrastructure result to traffic injuries especially to the vulnerable road users.

In Kenya, it is only Kisumu County that has raised an issue regarding how to sit on a *bodavon* cultural grounds. There is a proposed motion by a member of Kisumu county assembly on how women should sit on a motorcycle. The motion aims at making women to have their legs together, face sideways that could soon be law regarding how women should sit on motorcycles or bicycles in Kisumu County (Nyachio, 2015). This is despite the law that requires one to sit astride (The Traffic Act section 59 (2) (1). However, from the low income perspective, wider enjoyment of transport services is likely to be attained if the unique needs of low income and poor women are factored in transportation infrastructure and services to improve accessibility to basic services.

3. Children

Kisumu children use various modes of transport to school, majority walk, and others use public transport. Motorcycles are emerging as one of the modes preferred by students. Due to unreliable public transport and poor accessibility to some residential areas the motorcycles are overloaded and the school children do not use helmets as required by law, hence forced to risk their lives with the full knowledge of their parents and guardians as shown in the photo below.

Photo: Risky School-Children Transport around Riat Area



Photo by Jacob Owiti, 2014

Just like in Mombasa, some children from low income families in Kisumu tend to have difficulties in accessing education facilities because of the distance to schools in most cases public schools and inability of their parents to pay for required transport services.

Conclusion

Mobility and social exclusion in Kenya like many other countries has three main layers, namely: socio-economic condition, income levels and limited infrastructure. Reliable and affordable transport services tend to be concentrated where there is good infrastructure thereby disadvantaging the low income areas. This scoping study has discussed mobility of the socially excluded groups by using the low income variable as the common denominator for understanding mobility and discussing the vulnerable groups. The study reveals that such groups are more predisposed when living in low income settlements where incomes are low, basic services are limited and infrastructure minimal or absent.

The low income and the vulnerable groups play important roles in development. However, they live in difficult circumstances and are likely to be in captive mode due to lack or inadequate ability to meet the cost associated with mobility ranging from basic transport to recreational mobility. Affordable and reliable transportation enables the vulnerable groups to access important opportunities such as education, employment, health care, housing, and community life, which in turn reduces their vulnerability. Low income areas and informal settlements often lack critical services such as quality healthcare, water supply and education. In most cases such services are located outside their settlements. This requires transport infrastructure and services, which are in most cases either lacking, inadequate or unaffordable to low income groups. The situation is worse for those who are already vulnerable due to other socio-economic factors such as the PWDs, children, women and the elderly.

Overall, there is dearth of knowledge on transport and mobility needs of the low income and vulnerable groups, which undermine efficient targeting and planning. Addressing mobility challenges of these vulnerable groups requires an understanding of the groups and integrated planning of urban settlements. The commonly used excuse of settlement being unplanned and illegal is no longer viable considering the resilience of such settlements and the percentage of the urban population who live in them.

References

- Anyamba, T.J.C. (2004), Informalisation of a planned neighbourhood in Nairobi. A paper presented at the international conference on “Future vision and development for urban development”, Cairo, Egypt, 20-22 December, 2004.
- Business Daily (2018). Kisumu County Feted for Enacting Law on Disability. <https://businesstoday.co.ke/kisumu-county-feted-for-enacting-law-on-disability/>. 6th November 2018.
- Church, A., Frost, M., Sullivan, K., 2000. Transport and social Exclusion in London. *Transport Policy* 7, 195–205.
- Dagane, S.M. (2014). Environmental Factors Influencing Girl-Child Access to Quality Primary Schools in Ijara District, North-Eastern Kenya. University of Nairobi unpublished, MA Project Report.
- Delbosc, A. and Currie, G. (2011). The Spatial Context of Transport Disadvantage, Social Exclusion and Wellbeing, in *Journal of Transport Geography* 19(2011), 1130 - 1137
- Diaz Olvera, Lourdes & Plat, Didier & Pochet, Pascal, 2013. "The puzzle of mobility and access to the city in Sub-Saharan Africa," *Journal of Transport Geography*, Elsevier, vol. 32(C), pages 56-64.
- Ezeh, C. Alex, Chepngeno Gloria, Abdhahah, Zirabu, Kasiirad Zewdu Woubalem (2006). Nairobi: National Academy of Science.
- Gannon, C.A. & Lin, Z. (1997). *Poverty and Transport*. (Oaper No TWU-30). World Bank: Washington DC
- Gore, C., & Figueiredo, J. B. (1997). *Social Exclusion and Anti-Poverty Policy: A Debate*. Geneva: International Institute for Labour Studies, ILO.
- Government of Kenya (GOK). The Big Four” Plan. The National Treasury. 19th of January 2018. <http://www.treasury.go.ke/budget/send/2-budget/694-draft-2018-budget-policy-statement.html>
- Government of Kenya (GoK, 2018). 2018 Budget Policy Statement: Creating Jobs, Transforming Lives. “The Big Four” Plan. The National Treasury. 19th of January 2018. <http://www.treasury.go.ke/budget/send/2-budget/694-draft-2018-budget-policy-statement.html>
- Government of Kenya (GoK, 2014). National Policy on Older Persons and Ageing. Ministry of Labour, Social Security and Services. http://www.partners-popdev.org/ageing/docs/National_Policy_on_Older_Persons_and_Ageing_Kenya.pdf

GOK. 2007. Kenya Vision 2030: A Globally Competitive and Prosperous Kenya. Nairobi: Government Printer

GOK. 2008. The First Medium Term Plan, 20078 – 2012: The Kenya Vision 2030: A Globally Competitive and Prosperous Country. Office of the Prime Minister, Ministry of State for Planning National Development and Vision 2030. Nairobi: Government Printer

GOK (2009). Traffic Act (Chapter 403). Government Printer. Nairobi, Kenya.

GOK. 2012. National Transport and Safety Authority Act. Nairobi: Government Printer

GOK (2012). Integrated National Transport Policy. Government Printer. Nairobi, Kenya.

GOK. 2013. Second Medium Term Plan 2013 – 2017: Transforming Kenya: Pathways to Devolution, Socio-Economic Development, Equity and National Unity. Nairobi: The Presidency, Ministry of Devolution and Planning. Government Printer

GOK. Kenya Constitution. 2010. Nairobi: Government Printer

GoK (2011). Kenya County Fact Sheets. Commission of Revenue Allocation. http://siteresources.worldbank.org/INTAFRICA/Resources/257994-1335471959878/Kenya_County_Fact_Sheets_Dec2011.pdf

Howe, J.D.G.F and Bryceson, D.F. (2000). Poverty and Urban Transport in East Africa: Review of Research and Dutch Donor Experience. Washington, DC: World Bank

Institute of Economic Affairs (IEA) (2008). Budget 2008/2009: Reaching Out to Build The Nation.

IPSOS Ltd. (2015). Transport Sector Survey: Nairobi City County. Nairobi: IPSOS Limited (Kenya).

ITDP (2013). ITDP: The Institute for Transportation and Development Policy. Retrieved from <https://www.itdp.org/>

Japan International Cooperation Agency (JICA) (2006). *The Study on Master Plan for Urban Transport in the Nairobi Metropolitan Area in the Republic of Kenya*, Tokyo/the Netherlands: Katahira & Engineers International/RECS International. Final Report

Jones, P. M., Dix, M. C., Clarke, M. I. and Heggie, I.G. (1983) Understanding travel behaviour. Gower Publishing: Aldershot.

Kenya Institute for Public Policy Research and Analysis (KIPPRA, 2017). Kenya Economic Report 2017: Sustaining Kenya's Economic Development by Deepening and Expanding Economic Integration in the Region.

Kenyon, S., Lyons, G. and Rafferty, J. (2002) Transport and social exclusion: Investigating the possibility of promoting inclusion through virtual mobility. *Journal of Transport Geography*, 10 (3). pp. 207-219. ISSN 0966-6923 Available from: <http://eprints.uwe.ac.uk/8903>

Kenya Inter-Agency Rapid Assessment (KIRA). (2014). Kisumu County Data Review. Nairobi.

Khayesi, M., Monheim, H., Nebe, J. M. 2010. Negotiating "Streets for All" in Urban Transport Planning: The Case for Pedestrians, Cyclists and Street Vendors in Nairobi, Kenya." *Antipode: A Radical Journal of Geography* 42 (1): 103–26.

Kisumu County Government.(2013). Kisumu County Integrated Development Plan.

Kola, M. O., Onyango, G. M., & Oindo, B. O. (2012). The Status of Public Transportation in unplanned suburbs of Kisumu Municipality, Kenya. *International Journal of Arts and Commerce*, 1(1).

Lucas, K. 2012. Transport and Social Exclusion: Where are we now? In *Journal of Transport Policy*, 20, 105 – 113.

Mathieson, J., Popay, J., Enoch, E., Escorel, J., Hernandez, M., Johnston, H., & Rispel, L. (2008). Social Exclusion Meaning, Measurement and Experience and Links to Health Inequalities. A review of Literature. WHO Social Exclusion Knowledge Network Background Paper 1. http://www.who.int/social_determinants/media/sek_n_meaning_measurement_experience_2008.pdf.pdf

Maoulidi, M. (2012). Kisumu Millennium Development Goals Multi-Sector Household Survey. Millennium. Earth Institute, Columbia University. Cities Initiative <http://mci.ei.columbia.edu/>

Matrix Development Consultants. 1993. Nairobi Informal Settlements: An Inventory. Nairobi: USAID/REDSO/EASA.

Mitullah, W.V. & Opiyo, R. 2017. 'Institutional framework for walking and cycling provision in Cape Town, Dar-es-Salaam and Nairobi', in Mitullah, W.V, Vanderschuren, M and Khayesi, M. (eds) Non Motorised Transport Integration into Urban Transport Planning in Africa. Routledge: London & New York

Mitullah, W.V. 2007. 'Street vendors and informal trading – the struggle for right to trade', in Patrick Burnett and Firoze Manji (eds), from slave trade to 'free' trade: How trade undermines democracy and justice in Africa. Oxford: Fahamu.

Mombasa County Government (2013) Mombasa County Integrated Development Plan – 2013-2017. Mombasa County Government.

Mombasa County Government (2016) The Integrated Strategy Urban Development Plan Mombasa Vision 2035.

Nairobi City County (NCC). 2018. County Integrated Development Plan (CIDP) – 2018-2022. Nairobi: NCC.

Nairobi County Manifesto. 2017 - Sonko NA Igate 2017 Election Manifesto. 2017. Making Nairobi Home: Beautiful, Prosperous, Safe. Nairobi: Nairobi City County

Nairobi City County Government (2015). Non Motorized Transport Policy: Towards NMT as the Mode of Choice.

National Coordinating Agency for Population and Development (NCPD) and Kenya National Bureau of Statistics (NCAPD) (2008). Kenya National Survey for Persons with Disabilities. <http://www.ncpd.go.ke/wp-content/uploads/2017/09/2007-Kenya-National-Survey-on-Persons-with-Disabilities.pdf>

Nodalconseil. (2014). Kisumu The Integrated Strategic Development Plan (ISUD-Plan). Part 1 Understanding Kisumu.

NUTRANS 2005: National Urban Transport, 2005, The World Bank

Nyachieo, G.M. (2015). Socio-cultural and Economic Determinants of Bodaboda Motorcycle Transport Safety in Kisumu County, Kenya. PhD Thesis. Kenyatta University.

Otieno, J. 2016. Standard Media of 21/11/2016: <http://www.standardmedia.co.ke/article/2000224155/schol-children-s-daily-struggles-in-hostile-pub>

Ohnmacht, J, Maksim, H, & Bergman, M.M. (eds). (2009). Mobility and Inequality. London: Ashgate, Aldershot.

Peters, D. (2013). Gender and Sustainable Urban Mobility. Official Thematic Study for the 2013 UN Habitat Global Report on Human Settlements.

Ragwa, S.M. (2014). Influence of Transport on Maternal Mortality. A Case Study of Tharaka Sub-County, Tharaka Nithi County, Kenya. University of Nairobi unpublished, MA Project Report.

Salon, D and Gulyani. S. 2010. Mobility, Poverty and Gender: Travel 'Choices' of slum dwellers in Kenya', in Transport Reviews 30(5) 641-657

SEU (Social Exclusion Unit) (1997) Social Exclusion Unit: Purpose, work priorities and working methods, London: SEU.

Sietchiping, R., Permezel, M. & Ngomsi, C. (2012). Transport and mobility in sub-Saharan African cities: An overview of practices, lessons and options for improvements. Cities. 29. 183–189. 10.1016/j.cities.2011.11.005.

UN-Habitat. (2018). Retrieved from <https://unhabitat.org/year/2004/> Government of Kenya, 2010c

United Nations. 2015. 'Transforming the World: The 2030 Agenda for Sustainable Development', General Assembly Resolution 70/1. New York: UN.
<https://sustainabledevelopment.un.org/content/documents/21252030%20Agenda%20for%20Sustainable%20Development%20web.pdf>

United Nations High Commissioner for Refugees (UNHCR) (2016). UNHCR Age, Gender and Diversity Accountability Report 2015.
<http://www.unhcr.org/protection/women/5769092c7/unhcr-age-gender-diversity-accountability-report-2015.html>

Appendix 1: Factors Limiting Mobility of Socially Excluded

- a. Physical exclusion - Physical barriers related to the nature of the transport system and the built environment inhibit accessibility and certain groups of people are excluded from using the transport system because of physical and psychological difficulties. These physical barriers have wide ranging effects on many groups of people including small children, older people, people with impaired mobility or hearing, visually impaired people, and people with learning difficulties
- b. Geographical exclusion - Cited peripheral, poor transport provision and resulting inaccessibility as factors which contribute to urban social exclusion and deprivation.
- c. Exclusion from facilities - Residents in areas with high levels of social exclusion often lack access to good shopping, financial, leisure, health and education facilities because of time and income constraints in the use of transport services. Land use trends such as the growing popularity of out of centre facilities and supermarkets can make it difficult for people without a car to access these facilities. Changes in the way in which public facilities such as hospitals, and schools provide their services, has also increased the difficulties that people may have in physically accessing these services.
- d. Economic exclusion - Income and transport network constraints on accessing labour market information can limit the geographical extent of job search and on work travel patterns. It is increasingly accepted that, while many of the factors limiting the capacity of unemployed people to identify vacancies and secure employment stem from their lack of social networks connecting them to employed people and to deep-seated prejudices on the part of employers, problems of physical access and travel costs (both monetary and temporal costs)
- e. Time-based exclusion - The difficulties of organising commitments to allow adequate time for travel given network constraints effects many individuals, particularly care givers. Studies have indicated that decisions to participate in the labour market were influenced by the interaction between household structure, supporting social networks, and the nature of jobs including their location.
- f. Fear-based exclusion - Indicates how the nature of individual 'fear' in public spaces varies markedly according to social characteristics, especially gender, strongly influences how public spaces and transport facilities are used.
- g. Space exclusion - Contemporary security and space management strategies often discourage certain socially excluded individuals from using public and quasi-public transport spaces. The design, surveillance and management of public spaces can increase accessibility to vulnerable people by reducing 'fear' (Oc and Tiesdell, 1997).