Local Public Markets:
the empirical evidence on their quantity and quality in Arusha, Tanzania





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Acknowledgements

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1. Introduction

Public space is a vital component of a prosperous city and well-designed and managed public spaces have a positive impact on a city's economy, environment, safety, health, integration and connectivity (UN-Habitat, 2014; 2015; UN-Habitat, 2016). Providing public spaces enhances community cohesion and civic identity and supports the levels of urban density required for environmentally and economically liveable and sustainable cities. There is enough empirical evidence that shows public spaces and streets are multifunctional areas for social interaction, economic exchange and cultural expression among a wide diversity of participants (*ibid*). It is worth noting that public space takes many spatial forms, including parks, local public markets, streets, sidewalks and footpaths that connect, beaches where they exist, and playgrounds. Additional public spaces include edge spaces between buildings and roadsides, which are often important spaces for the urban poor. Francis and Griffith add that that local public markets are public spaces where a variety of people feel safe and comfortable "hanging out" and are the hallmark of good and healthy urbanism (Francis and Griffith, 2011*,* p.263).

Local public markets, as with other public spaces, are a vital ingredient of successful cities and are the places in a city that provide access to food while also building a sense of community, culture, social capital, and community revitalisation (Daniel and Nestico, 2015). In many small and large cities and towns around the globe, local public markets are much more than the fixed locations for trading. Despite their benefits, and perhaps because they are so common, municipal authorities sometimes take them for granted. Local public markets are flexible spatial and temporal organisations that provide vibrant and inclusive public spaces. Markets act as places that move people, goods and information and facilitate a spontaneous synergy of urban residents and communities, which is at the core of everyday life of the city (Janssens and Sezer, 2013).

Though there is no consensus in food system and public space scholarship on what constitutes local public markets (Brown and Miller, 2008; Hand and Martinez, 2010; Ekanem, Mafuyai and Clardy, 2016). This report adopts the definition that local public markets are public spaces or designated locations where locally produced food is marketed, sold and consumed (*ibid*). Local food clearly refers to a geographic production area that is demarcated by boundaries and in close proximity to the consumer. This area may represent an existing or imagined "foodshed", which refers to the area where a locality derives its food supply (Hand and Martinez, 2010). By the term local in this report, we mean that the produce is made or produced within the country and is not imported. Our definition of local public market is a place where the trading of locally produced agricultural food product takes place. Any agricultural food product that should be raised, produced, and distributed within the locality or region or country in which the final product is marketed (Hand and Martinez, 2010). Until the latter half of the 20th century, most food was purchased at local markets, a trend which continues in Tanzania today.

Local public markets have many community benefits including:

Health: local public markets help create food environments that encourage healthy eating. In other words, local public markets play a vital role in promoting urban public health through access to healthy food. As developing countries experience the nutrition transition, whereby local traditional foods are being replaced with energy-dense, highly processed foods, the role of markets has become increasingly important. In order to eat healthy diets, people must be able to easily access healthy foods, including fresh fruits and vegetables, at affordable prices. Local public markets are the main distributer of healthy foods in many cities throughout the world and are particularly important for the urban poor to procure healthy foods.

Livelihoods: local public markets improve urban livelihood activities and creating active public spaces. They are important for the livelihood of traders and small local retail business. Local public markets are hospitable for small traders, especially when compared to shopping centres that favour larger businesses. They offer job opportunities for the poor, especially women. This is particularly important for rural women migrants to the city, for whom few other job opportunities are available. In addition, local public markets act as centres of jobs creation and entrepreneurial skills development, a unique role in many cities.

Affordability: local public markets, provide fresh and affordable food for urban residents and economic opportunities for those with less access to the labour market, (Janssens & Sezer, 2013). According to Daniel and Nestico, urban residents' preference for local public markets is not only because of their ability to obtain healthy, fresh food, but also because of the affordability of the food available. The urban poor rely on local public markets in order to be able to buy smaller food quantities, negotiate lower prices and request credit opportunities (Daniel and Nestico, 2015 citing Figuie and Moustier 2009).

A place for people: local public markets are "places for people" (Mbisso, 2017) and are often places that support social inclusion. Local public markets bring people together, foster public life, and act as places to mingle and socialize in areas that lack such facilities. Interaction, seeing and being seen, and informal conversations are frequently cited as the primary reason for their success ahead of buying and selling of fresh produce. It is clear that what makes local public markets meaningful and memorable is their unique role as social spaces (Francis and Griffith, 2011, 276).

Urban tourism: nowadays local public markets are also sites for urban tourism (Hardesty, 2008; Kristie Daniel and Nestico, 2015; Naicker and Rogerson, 2017; Asante and Helbrecht, 2020). They also offer precisely what many tourists now feel is missing from huge conventional supermarkets – "food with a face". Local public markets attract tourists who care about product quality and market ambiance as well as convenience and price (Gillespie et al, 2017, 69).

Food Visibility and Security: fundamentally local public markets make locally produced food visible and available in a city's public space on a regular basis thereby contributing to the community's food security. Profiling local food cultivates public awareness of the importance of local food production and producers, which makes local food more viable to produce and easier to sell. Locally produced food is an important contributor to both urban food security and community food security and markets therefore provide a key mechanism for delivering this food (Short, Guthman and Raskin, 2007). Importantly, they ensure people can access safe, nutritious food and hence contribute to the attainment of the Sustainable Development Goals (Caramaschi, 2014; UN-Habitat, 2014a, 2014b, 2016).

Linking Rural and Urban Communities: local public markets also provide benefits that extend beyond the individuals and their households who frequent them. Traditional markets foster sustained links between rural and urban communities, via flows of goods and migrants who journey between the two, either regularly throughout the year, or seasonally.

Despite the above-mentioned advantages, local public markets are facing significant challenges. First and foremost, local public markets are under growing pressure from city or municipal officials who characterise them as a problem in terms of health and safety (Janssens and Sezer, 2013; WHO, 2006). They also face challenges from other competing urban land uses, and often lack integration and connection with the public realm (Francis and Griffiths, 2011). Their economic, social, environmental and political impact has been undervalued (Caramaschi, 2014). Lastly, in Tanzania, urban researchers have paid scant attention to studying the contribution they can make in bringing cities and towns to life (Janssens & Sezer, 2013; Mbisso, 2011) and their role in the local food system, community food security, and well-being of urban residents.

2. *Purpose of the Study and Methodology*

2.1. *Purpose of the study*

The long-term goal of this research is to protect and preserve local public markets in Tanzanian cities and towns. This will safeguard a healthy food supply for urban residents and will ultimately contribute to the health and well-being of urban residents. The purpose of this study is to create a greater understanding of the quantity, location and quality of public markets and the policies that protect (or destroy) public markets in Arusha, Tanzania.

2.2. *Methodology*

This study used both qualitative and quantitative methods, commonly called mixed research methods. Mixed research methods encourage the researcher to use both qualitative and quantitative data. By doing so, the researcher is provided with "multiple ways of seeing and hearing, multiple ways of making sense of the social world, and multiple standpoints on what is important to be valued and cherished" (Creswell and Plano Clark, 2018, p. 4). In using mixed methods in this study, we were able to combine "quantitative and qualitative research techniques, methods, approaches, concepts or language into a single study" (Johnson and Onwuegbuzie, 2004, p.17).

Policy Review: the first objective of this research was to understand the policy environment under which local public markets operate. To achieve this objective, we reviewed existing relevant national and local urban policies that have impact on local public markets in Tanzania with a particular focus on the city of Arusha as the main case study. The policy documents were then analysed with the intention of identifying strengths and weaknesses so we could make recommendations about where policy can be developed or improved. We reviewed national and local plans and policies related to urban public space and its governance. These included: The National Human Settlement Policy of 2000; the Local Government (urban authorities) No. 8 of 1982; the Public Health Act No.1 of 2009; Urban Planning Act Number 8 of 2007, the Land Use Planning Act No 10 of 2007 and the Arusha City Council (Environmental Protection and General Sanitation regulations).

Market Availability: our second objective was to better understand the spatial distribution of markets in the city. To achieve this objective we identified, located and mapped local public markets within each ward or neighbourhood in the city. It should be noted that the administrative area of a city council in Tanzania is divided into wards (or neighbourhoods). The process started by securing a research permit from the Director of the City Council before visiting and introducing the project to individual Ward Executive Officers of each visited ward. The names of all visited wards and identified markets are presented in Table 3. During the mapping exercise, the identified local public markets were categorised as either formal, informal, temporary or mobile evening local public markets. Usually formal local public markets have a physical location that does not change from day to do. They may, or may not, be open every day. They may, or may not, be covered. These markets have a number of vendors who are the same every day the market is open. The government usually recognises these markets. While informal local public markets are not officially recognised, they may have similar characteristics of a formal market in that they may, or may not, be open every day but often have the same vendors. Figure 2 presents all the markets identified and their geographical locations in Arusha.

The spatial data for local public markets for this project were stored using a cloud-based data management service called KoboToolbox. The market coordinates were download from KoboToolbox in *.kml* format, and the remaining information was exported as a *.csv file*. The market coordinates were then converted to *.csv* in Microsoft Excel. Both sets of *.csv files* were imported into QGIS (one containing the market coordinates and the other information such as name and market type) were then merged. This produced a final table containing all markets in Arusha, as well as their names, locations (coordinates), and types. The market locations were then mapped as points.

The other data that were necessary for producing the market maps were acquired from OpenStreetMap.org. These were downloaded as shapefiles —a data format developed by Esri that allows geospatial data to be represented graphically using Geographic Information System (GIS) software —and included data for the Tanzanian road network, rivers and bodies of water, and urban green spaces. All these data, as well as the market locations, were mapped using QGIS, and were transformed to the WGS / UTM zone 36S coordinate system (EPSG: 32737). Fixed distance buffers of 400 and 800 meters were generated around each market, which were set to merge when overlapping. Markets were divided according to type, allowing buffer zones to be generated for all the markets in Arusha, as well as for each market type individually.

Market Quality: our third objective was to better understand the quality of the markets. To achieve this, we undertook an assessment of the markets by conducting a physical audit of each selected market. The study adopted a purposive sampling method in selecting representative markets. In total 6 markets were selected as representatives and the samples size of interviews for user perceptions and vendors was increased to make these cases rich for the quality assessment survey. Enumerators or surveyors walked to each selected market and completed the physical audit form using Kobo Toolbox. The survey consisted of the following sections: Overview, Access, Accessibility, Users, Activities, Comfort, Safety, Products, and Produce. The form also required photographs from various corners of the markets, as well as an observation of the certain activities in the market.

User Perceptions: our fourth objective was to better understand what customers thought about their market experience. Enumerators /Surveyors used a Kobo Toolbox survey to ask consumers' perception of the market experience, to identify the things consumers like and do not like about the market and suggestions for improvements. A total of 553 interviews were conducted with a random sample of customers selected from each of the 6 selected markets after they were observed buying items from stalls. Vendors also assisted in inviting their costumers for the interviews.

Vendors: our fifth objective was to better understand what vendors thought about the markets. We interviewed a total of 559 vendors using a Kobo Toolbox Survey to identify issues such as products sold and origin of products, how vendors and goods are transported, income and overall satisfaction. This was complemented by Focus Group Discussions (FGDs), which were composed of fresh foods, fruits and vegetable vendors randomly selected from the selected markets identified in the market availability mapping exercise. The purpose was to seek their satisfaction with the market and their interest in creating improvements.

Market Managers: Our final objective was to better understand management and operational issues within the markets. To achieve this, we interviewed a total of 5 market managers (and one declined) to identify issues including overall management of the market, maintenance issues, security issues and overall safety issues.

The analysis of the market quality, vendor, market manager, and user surveys were all conducted via Kobo Toolbox using simple frequencies.

3. Research Findings

3.1. Review of Tanzania Urban Policies that impact on local public markets

The purpose of this section is to analyse the information and identify strengths and weaknesses in Tanzanian urban policy documents and make recommendations about where policy can be developed or improved. In Tanzania, there are several specific laws related to urban public space and its governance: *The National Human Settlement Policy; the Local Government (urban authorities) No. 8 of 1982; the Public Health Act No.1 of 2009; Urban Planning Act Number 8 of 2007; the Land Use Planning Act No 10 of 2007* *and the Arusha Environmental regulations.* These are summarised and reviewed below and show clearly the role of urban governments vis-à-vis urban public spaces and local public markets in their areas of jurisdiction. In Tanzanian urban planning practice, open spaces are designated areas for multiple future uses including playgrounds, recreational sites and local public markets. The details of urban design considerations are formulated in detailed general schemes, which may take into account the basic services needed in given planning areas.

3.1.1. The Local Government (Urban Authorities) Act No.8 of 1982

The Local Government (Urban Authorities) Act No.8 of 1982 is a national level policy that enables the establishment of urban authorities for the purposes of local government, and provides for the functions of those authorities and for other matters connected with or incidental to those authorities. *Section 54, article 1* stipulates that it shall be the responsibility of each Urban Authority as local a local government authority, to undertake the following roles:

- To provide, maintain, supervise and control public markets and pounds, and cold-storage depots, mineral water factories and public or private slaughterhouse, and all such matters and things as may be necessary for the convenient use of such markets, pounds, cold storage depots, mineral water factories and public or private slaughterhouses and to improve fees, rents, and tolls in respect of the use of public markets, pounds or slaughterhouses by any person.

Made under *section 55, article 2*, the schedule states the functions which Urban Authorities may perform, and these include the following:

- Establish, regulate and control markets, regulate and control trade therein, construct market buildings and let stands or plots in that matters
- Prohibit, regulate or control trade otherwise than it established markets.
- Regulate and control the fixing of and collection of stallages rent and tolls in markets

3.1.2. The Human Settlements Policy of 2000

The Human Settlements Policy of 2000 is a national level policy that outlines the responsibilities of local authorities. There is no reference to “local public markets” or “marketplace” in any section of the human settlement policy, which may indicate lack of vision on market area as one of the basic amenities needed in urban settlements. The policy clearly states that urban authorities are responsible for protecting open spaces and similar areas for general use once designated in land use plans. Ultimately these lands could be used to support local public markets, although there is no specific provision in the document that permits this use of the land.

Section 4, sub section 3 deals with urban development issues and policies. This section has a special subsection for open spaces, other recreational areas and hazardous lands. The government promises the following in its policy statements:

- Public open space, other recreational areas and hazardous areas are protected from encroachments and are used for the intended purposes;
- Local Authorities, CBOs, NGOs and private/public institutions develop open spaces and other recreational areas for public use;
- No title is offered to people who intrude into hazardous, open spaces or other protected areas;
- Derelict lands are reclaimed and used for appropriate land-users.

The policy also recognizes that some urban developers invade public spaces and develop them for their private business. Public space invasion steps on the rights of the general public to have more open spaces. These spaces could be future local public market spaces provided markets are listed as a permitted land use on local documents. However, care needs to be taken when considering "hazardous areas" as these may be inappropriate places for the provision of food items. The National Human Settlement Policy's overall goals are to promote development of human settlements that are sustainable; and facilitate the provisions of adequate and affordable shelter to all income groups in Tanzania. The policy's main objectives include: making serviced land available for shelter and human settlements to be developed in general to all sections of the community including women, youth, the elderly, disabled and disadvantaged; improving the level of the provision of infrastructure and social services for sustainable human development; promoting and including the participation of the private and popular sectors, Community Based Organisations, Non-Governmental Organisations, Co-operatives and communities in planning, development and management of human settlements. The policy further encourages the development of housing areas that are functional, healthy, aesthetically pleasant and environmentally friendly.

3.1.3. The Land Use Planning Act No 10 of 2007

The Land Use Planning Act No 10 of 2007 is a national level policy that directs local governments about how to prepare, administer and enforce land use plans. *Section 28 (1)* stipulates that all land use plans prepared by relevant planning authorities under this Act shall be relevant at each level, including proposals on matters relating to determination or designation of land for various uses; and preservation of open spaces.

This means the power to designate land for local public markets rests within the hands of local governments.

If considered broadly, this *Act* could provide the legal foundation needed to address the spatial inequality of location of local public markets, hence shortening travel distance by planning and designating markets within walking distance. Particularly, the second schedule under *section 31 of the Act* directs matters to be included in the regional and direct land use framework plans which include among other things existing and proposed land uses (including space for local markets); population growth, projections, distribution and movement; employment and income including characteristics of employment, income distribution, the labour force, potential of the informal sector, and their locations; strategies for livelihoods with respect to land resources.

3.1.4. The Urban Planning Act No 8 of 2007

The Urban Planning Act N 8 of 2007 is a national level policy that gives authority to the local governments for planning, while outlining keep principles the local governments should consider. The Act clearly directs the urban local governments to consider specific issues when preparing general schemes that must promote health, safety, good order, amenity, convenience and general welfare. It is expected that in preparing such general schemes, urban local governments will consider all necessary amenities and basic infrastructure, such as local public markets, and their locations for their walkability. Although walkability is not defined in the Act, as a general rule, we would want urban residents to be able to walk to a market that is located between 400 meters and 800 meters, which equals 5 to 10 minutes of a walk.

The Urban Planning Act No 8 of 2007 is designed to provide for the orderly and sustainable development of land in urban areas, to preserve and improve amenities, to provide for the grant of consent to develop land and powers of control over the use of land and to provide for other related matters in areas of jurisdiction of urban authorities or urban local governments. *Section 7, subsection 1* directs that every city council, municipal council, town council and township authority shall each become a planning authority in respect of its areas of jurisdiction. *Section 7, sub section 5 (e)* explains that a planning authority shall in that capacity prepare general planning schemes, and detailed planning schemes for implementation in its area of jurisdiction.

Section 9 (1) stipulates that the purpose of a general planning scheme is to coordinate sustainable development of the area to which it relates in order to promote health, safety, good order, amenity, convenience and general welfare of such area as well as efficiency and economy in the process of such development. *Section 9 (2)* reaffirms that without prejudice to the *subsection (1)*, the purpose of a general planning scheme be to improve the land and provide for the proper physical development of such land, and to secure suitable provision for transportation, public purposes, utilities and services, commercial, industrial, residential and recreational areas including parks, open spaces, agriculture and reserves and for the making of suitable provision for the use of land for building or other purposes.

3.1.5. The Public Health Act No.1 of 2009

The Public Health Act No.1 of 2009 is a national level policy that provides for the promotion, preservation and maintenance of public health. *The Act* ensures there is comprehensive, functional and sustainable public health services to the general public and provides for other health related matters in the country. *The Act* defines a marketplace (which means the same as a local market in the context of this report) as premises or a designated place for buying or selling of fruits, vegetables or any food, animal or materials. The fifth part of *the Act* is solely dedicated to food, food hygiene, nutrition and local public markets. This is clearly stated in *section 114 (1)*, which directs that the Urban Authority shall set areas within its jurisdiction to establish, build, operate and manage shops, supermarkets and markets or allow any person to do so on conditions to be prescribe on it. *Section 114 (2)* states that shops, supermarkets or markets established under *subsection (1)* may be set specifically for certain type of trades, as the Authority may consider fit.

The policy goes further to direct urban local governments to make by-laws for every day management of local public markets. *Section 149* states that the Authority may make by-laws prescribed for:

- Regulation for shops, supermarkets, markets and their building, keeping order, preventing obstructions and maintaining cleanliness
- Goods which may be sold and other specific conditions
- Conditions under which goods may be brought into the markets, shops, and supermarkets;
- Layout of stalls for sale of different articles
- Prohibitions of sale of articles or activities that may impair proper management of markets shops and supermarkets;
- Regulations in respect of fire and safety requirements;
- Setting of times and days of operations;
- Service charges
- Governing of the good performance of markets, shops and supermarkets;
- General provision for good performance and effective carrying out of the provisions of this Act.

Although the Act provides clear direction, the act does to require local governments to create bylaws. This Act simply gives them the authority to do so if they wish.

3.1.6. By-laws for environmental protection of the city of Arusha

The by-law of the city of Arusha is a local level policy that has been approved by the Minister of State in the President's Office in charge of Regional Administration and Local Government on 23rd June 2018 and gazetted on 20th July 2018 with Government Gazette No. 327. The document gives directions on all issues in the area of jurisdiction of the Arusha city council on every day basis. This is a compilation of various regulations made by the city council under the name of environmental protection. On revenue, the by-law refers to the *Local Government (Finance) Act, section 290* which gives the urban authority mandate to collect various fees within its area of jurisdiction. The by-law states the opening and closing time (6:00am to 6:00pm) of local public markets in *section 4, sub section 1*. In *section 5*, the by-law stipulates that there will be a market manager to be nominated by the city council. In *section 10*, the by-laws direct that all formally established markets will be under the management/ administration of the city council, and *section 15* gives a mandate to the city council to set rental fees of stalls in different local public markets within the area of jurisdiction of the city council. However, the by-law remains silent on establishing new local public markets in other areas of the city council as directed by national laws.

In summary, there are strong policy statements in both the public health act and in the Arusha bylaws that regulate local markets. But these policies impact mainly formally established local public markets. Informally established markets are not officially regulated by these policies as they are run outside the city government system. The national human settlement policy is largely silent on local markets. The Urban Planning Act considers implicitly that market is one of the essential land-uses for a city or neighbourhood. However, it is clear through the national level policy documents that true responsibility for markets rests with the local governments. As such there seems to be a weak policy implementation or enforcement, which could be of paramount importance in both improving quantity and quality of markets and addressing the spatial inequality.

3.2. Market Availability

3.2.1. Location of identified local public markets in Arusha

This section of the report discusses the findings of the mapping exercise in all 25 wards visited during the fieldwork. The mapping results reveal that 15 of the 25 wards have neither formally nor informally established marketplaces. The fieldwork observation has indicated that the majority of the city residents frequently use three local public markets, which stand as the major local public markets that serve all other small local public markets. The major local public markets are: Arusha main or central market (*Soko Kuu*), NMC/Samunge, and Kilombero market. These three markets are open daily from 6:00 am and close at 6:00 pm. In addition to the formal markets, we observed that many areas of the city are served by groupings of stalls or Kiosks commonly known in Swahili as *'Genge',* which are not considered as local public markets by the city administration. These kiosks or *Genge* are located in strategic areas, mostly at bus stops or stations of minibuses or along busy streets of the ward. The *Genge* are plentiful through the city and we decided they would be too challenging to map given their numbers. We also learned that city residents visit other major weekly local public markets located outside the city boundaries including Tengeru and Ngaramtoni markets. Apart from Krokon market in Levolosi ward, which is specialized in selling non-food items, all other markets are generally food markets. Table 3 presents a summary of all wards and identified local public markets. Figure 1 shows the location of Arusha city while Figure 2 presents all the maps identified in the city of Arusha.

Table 3 and 4 present a summary of categories of local public markets grouped as formal covered and uncovered, informal uncovered and temporary or mobile evening markets. The mapping findings show that there are eight formally established and covered local public markets, three formal but uncovered and one informal uncovered markets. There is one temporary evening market. There is a high possibility of having more evening markets around the city, though we managed to map only this one. Figure 3 shows the walking radius of 400- and 800 metres for all identified markets.

s/n	Ward's name	Marketplace identified	s/n	Name of ward	Marketplace identified
1	Baraa	-	14	Olasiti	-
2	Daraja Mbili	-	15	Olmoti	-
3	Elerai	Maize (Mahindi) market	16	Oloirien	-
4	Engutoto	-	17	Osunyai	-
5	Kaloleni	-	18	Sakina	Giriki Market
6	Kati	Main Markets, Samunge NMC market, Friends' Corner Evening/Temporary Market	19	Sekei	Sanawari market, Jacaranda market
7	Kimandulo	Kijenge market	20	Sinoni	Mjinga market
8	Lemara	-	21	Sokoni I	-
9	Levolosi	Kilombero and Krokon markets	22	Sombetini	Mbauda Market
10	Moivaro	-	23	Terrat	-
11	Moshono	-	24	Themi	-
12	Murriet	Mrombo market	25	Unga Limited	Mapunda market
13	Ngarenaro	-			

Table 1: Identified local public markets in the city of Arusha

Source: Fieldwork, June 2018

Type of market	Count	Description
Formal covered market	8	Formal local public markets have a physical location that does not change from day to day. They may or may not be open every day. They have a permanent structures or buildings. These markets have a number of vendors who are the same every day the market is open. The government usually recognises these markets.
Formal uncovered market	3	Formal uncovered markets have the same characteristics as formal covered markets. The difference is that these have no permanent structures or buildings.
Informal uncovered market	1	Informal local public markets are not officially recognised but may have similar characteristics of a formal market in that they may or may not be open every day.
Temporary or evening or mobile market	1	These markets have permanent structures and usually operate outside the city regulations and working hours. Mostly after 5:00 pm.

Table 2: Summary of all categories of maps in Arusha

Source: Fieldwork, June 2018.

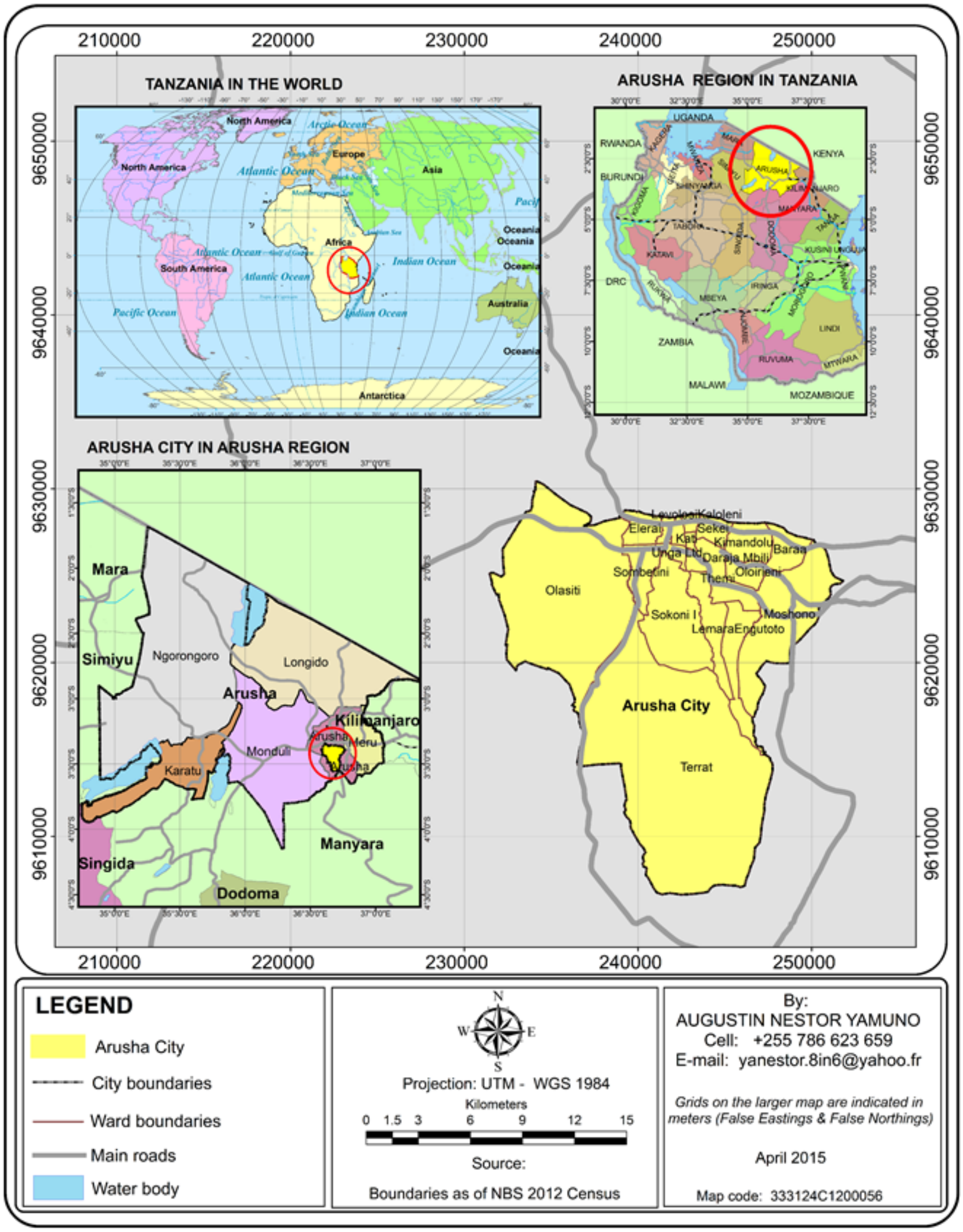

Figure 1: Location of the case study: Arusha city
Source: own construct (with help from Augustin Yamuno, 2015)

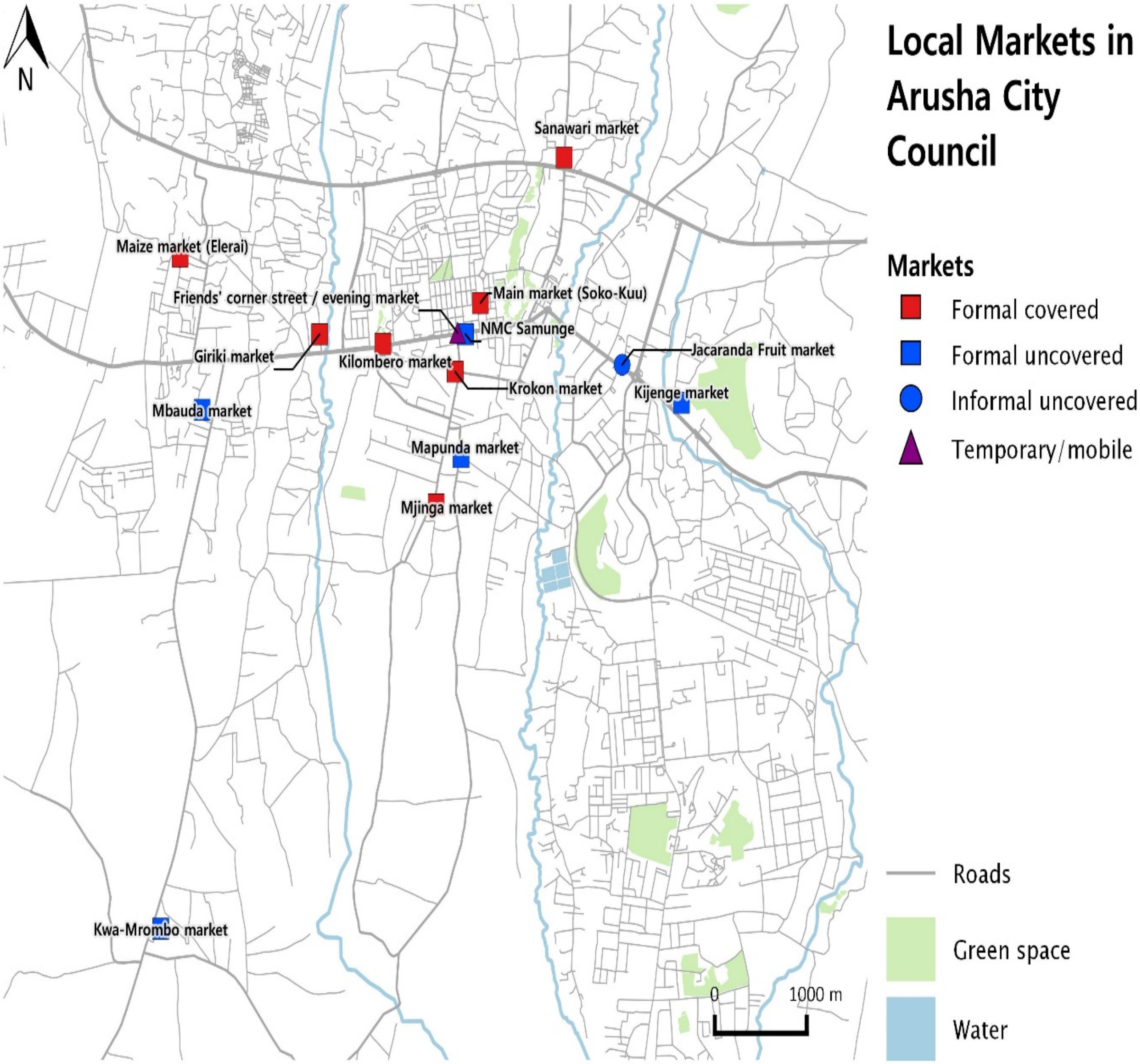

Figure 2: Geographical distribution and location of all identified local public markets in Arusha
Source: Fieldwork, June 2018

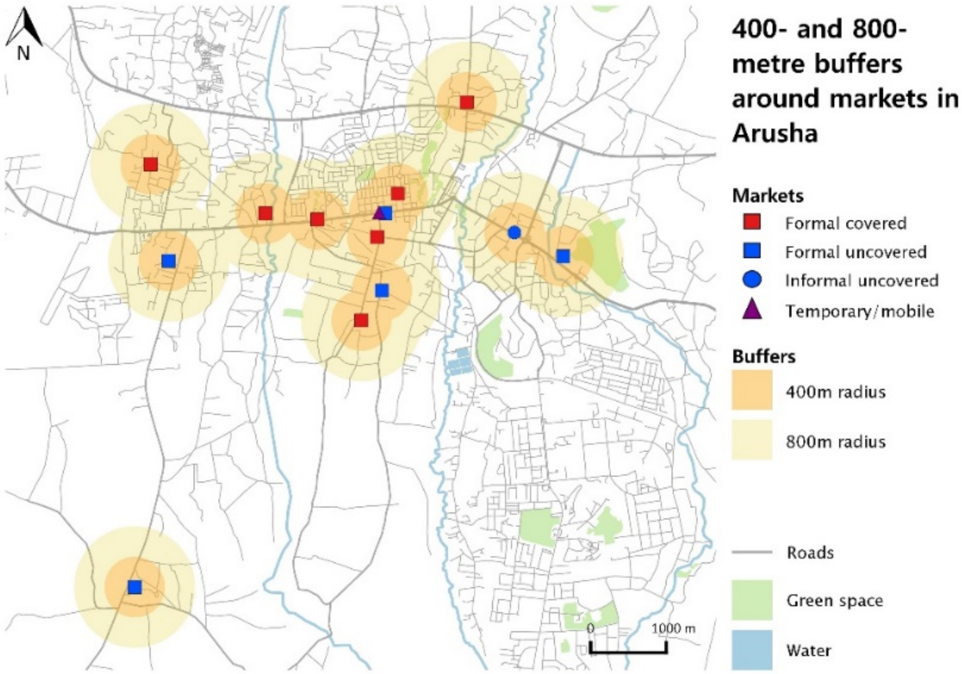

Figure 3: Walking radius 400- and 800-metres of all identified local public markets in Arusha
Source: Fieldwork, June 2018

3.2.2. Formal covered markets

This section presents geographical distribution and locations of formal covered markets in the city of Arusha, and the 400- and 800- metre radius that are assumed to be five to ten minutes' walk for the average person. The eight identified formal covered markets are: Soko Kuu (Main Market), Kilombero market, Krokon market, Sanawari market, Mahindi market, Giriki market, Mjinga market and Kijenge market. Figure 4 shows Mjinga market and Figure 5 shows Kijenge market as samples of formal and covered markets while Figure 6 shows the distribution and location of formal covered markets in the city of Arusha. The fieldwork observation showed that most residents travel long distances to go to a certain market given its niche of local products. We learned that the majority of people reside outside the walking radius of 400 – and 800 meters.

Figure 4: Picture of Mjinga market: formal/ covered
Source: Fieldwork, June 2018

Figure 5: Picture at Kijenge market: formal/ covered
Source: Fieldwork, June 2018

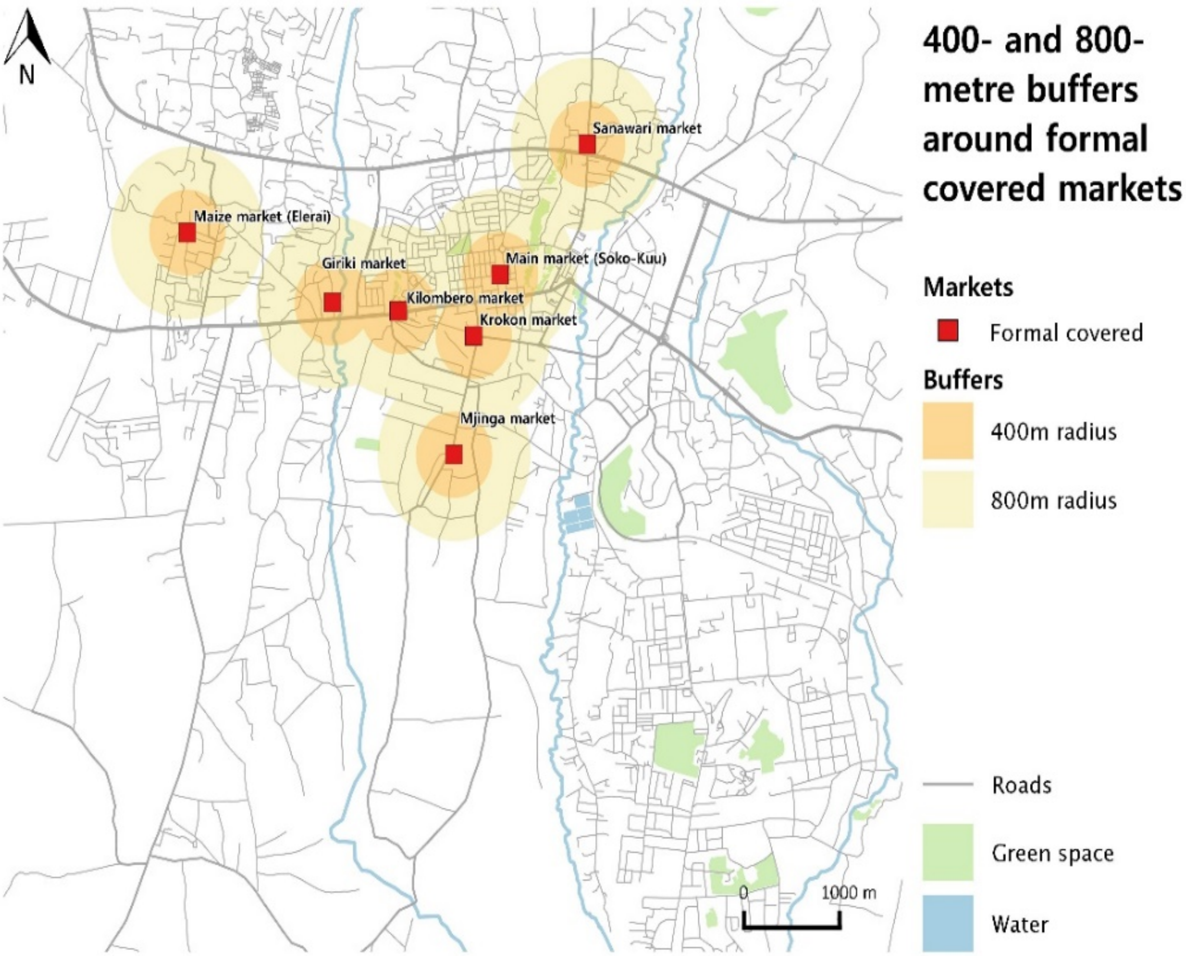

Figure 6: Formal covered markets and their Walking radius 400- and 800-metres
Source: Fieldwork, June 2018

3.2.3. Formal uncovered markets

This section presents geographical distribution and locations of formal uncovered markets in the city of Arusha, and the 400- and 800- metre radius that are assumed to be a five to ten minutes' walk. The five identified formal uncovered markets are: Mbauda market, NMC-Samunge market, and Mapunda market. See Figure 7 and 8.

Figure 7: Pictures at Mbauda market: formal/uncovered selling live animals (goats) and Masai *blankets*
Source: Fieldwork, June 2018

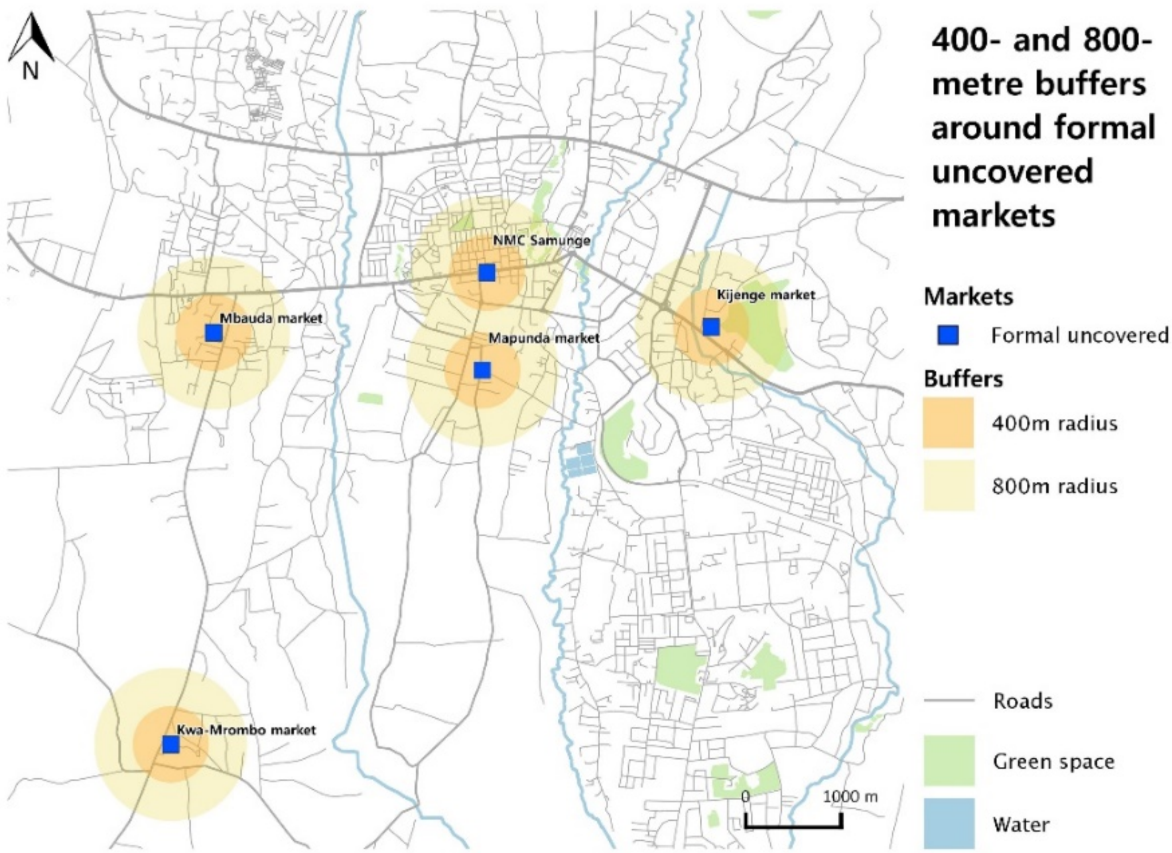

Figure 8: Formal uncovered markets and their Walking radius 400- and 800-metre
Source: Fieldwork, June 2018

3.2.4. Informal Uncovered markets

This section presents the geographical distribution and locations of informal uncovered markets in the city of Arusha, and the 400- and 800- metre radius that are assumed to be a five to ten minutes' walk. The identified informal uncovered market is: Jacaranda fruit market. See Figure 9.

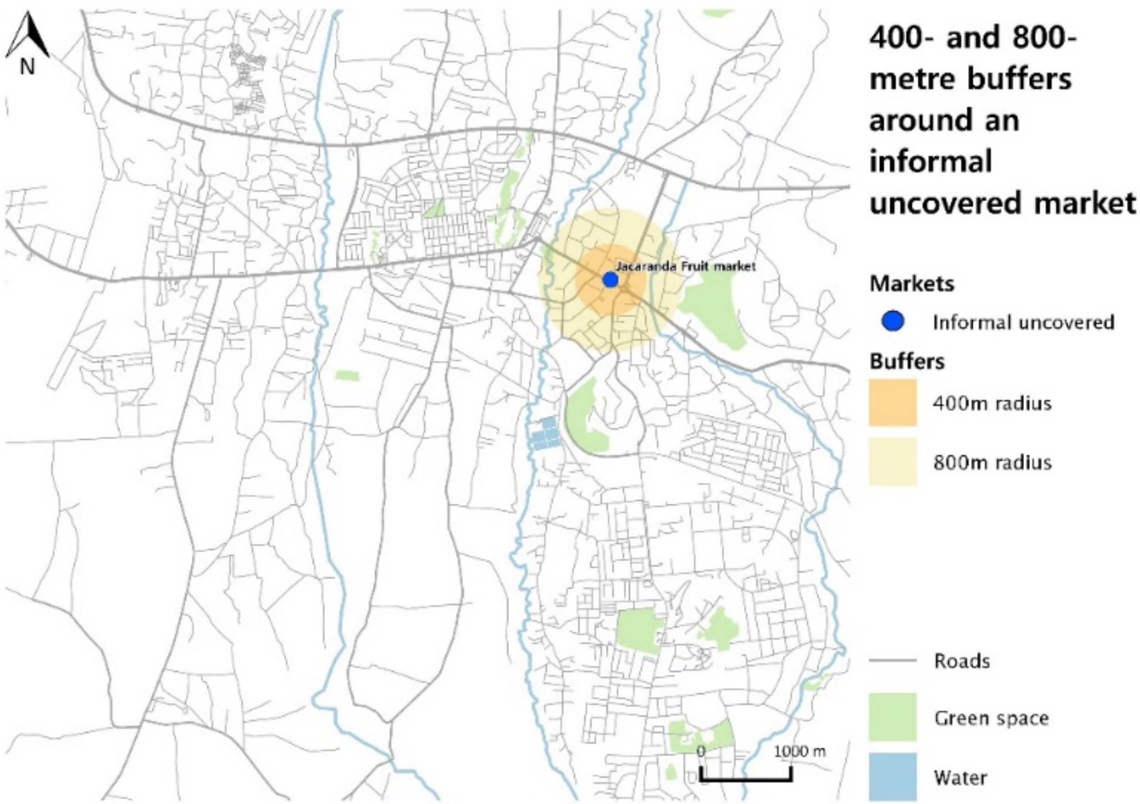

Figure 9: Informal uncovered markets and their Walking radius 400- and 800-metres
Source: Fieldwork, June 2018

3.2.5. Temporary or evening market

The temporary or evening market identified is called Friends' corner and is not far from NMC Samunge market, which is a special market for informal traders. The walking radius of 400- and 800- metres is also shown on the map of which are assumed to be a five to ten minutes' walk. Figure 11 shows the geographical location of the temporary or evening market, and Figure 10 shows vegetables sold along Sokoine road in Arusha.

Figure 10: Pictures at Friends' Corner Evening market: Temporary/evening selling live vegetables
Source: Fieldwork, June 2018

Figure 11: Temporary or evening markets and their Walking radius 400- and 800-metres
Source: Fieldwork, June 2018

3.3. Market Quality

Six local public markets (LPMs) were purposively selected as representative samples of other LMPs for in-depth study. The key aspects considered for each of the LPMs included access, accessibility, comfort, products, produce, safety and type of users. The LMPs chosen for in-depth study are Central Market, Kilombero Market, NMC-Samunge/ Market, Mbauda Market, Kwa-Mrombo Market and Sokoni I Market.

3.3.1. Types of markets

Four out of the six selected local public markets are permanent and open daily, and two are temporary markets and operate in the same location on same period. All the markets are formally established, and still informal trading occur both inside and outside the market. On type of market by scale, five of these markets are city level and one is neighbourhood level markets.

The major adjoining land uses included: commercial land use such as markets, shops, malls cover (87.5%); high density residential (62.5%), office buildings (62.5%); institutional land use (50%); places of worship (37.5%); fuel station (25%); educational institutions; recreational parks and the related; small scale industries such as small workshops, abattoir and others (each 12.5%). Informal vending takes place in and outside all the markets. See Figure 12:

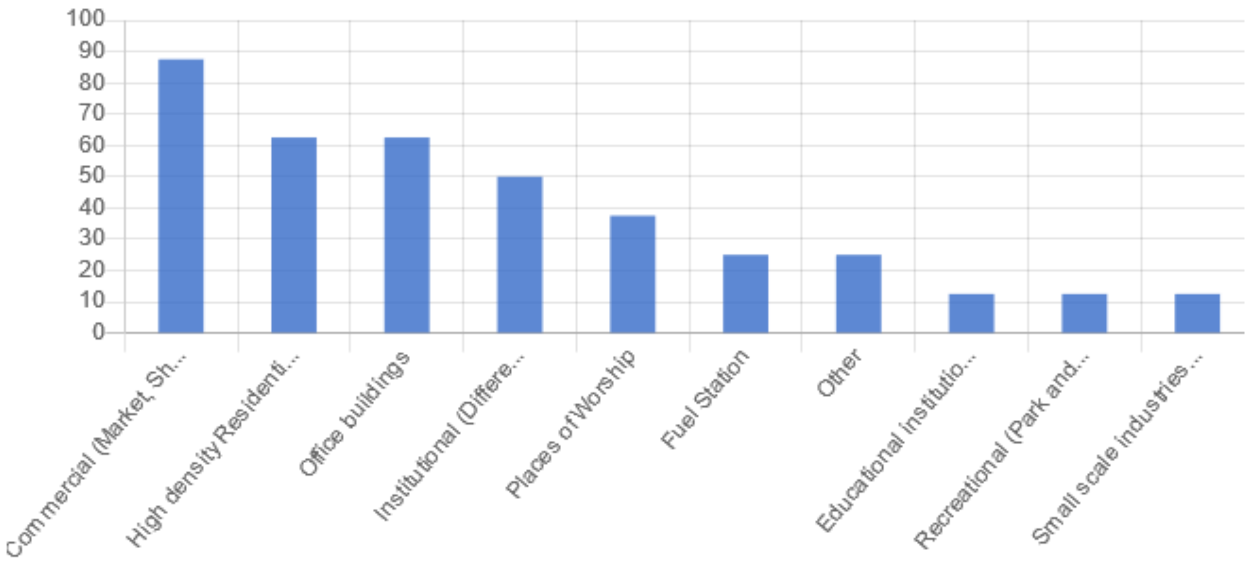

Figure 12*: Major adjoining land uses*
Source: Fieldwork, April 2019

3.3.2. Market Structures and Access

Three of the six selected markets for in-depth study are fully covered, but outside stalls are part and parcel of the markets. These are Central Market, Kilombero Market and Sokoni I Market. Three others are not covered at all and it was interesting to learn that all the stalls have been built by the vendors themselves. For those markets that have buildings, the majority of the built structures were built with concrete (75%), steel, bricks and timber (62.5%).

Voices (findings) from the market vendors' FGDs, particularly from Mbauda, NMC-Samunge and Kwa-Mrombo markets echoed their high need of built structures and permanently built stalls with cement floors. Vendors who participated in the FGDs complained that during rainy season, the market floors and walkways become wet and muddy.

The three markets with built structures have restricted access, i.e. the market is only accessed from 6am to 6pm. The other three markets have unrestricted access and remain open beyond 6 pm.

3.3.3. Investment in improving markets

Market vendors unanimously expressed their willingness to contribute towards upgrading their stalls. Some supported the idea of individual contributions directly or through a development fund, while others preferred being supported to access loans, or working with organisations willing to invest in upgrading the market. However, they cautioned of the need to first sensitise all stakeholders and involve all vendors in the planning process.

3.3.4. Cycle ways, Sidewalks to and inside the markets

Although some urban residents use bicycles to reach the markets, no specific and paved cycle ways exist in the entire area surrounding local public markets. The survey revealed that most markets have pedestrian ways, however none of those pedestrian ways are paved. The existing paths are mostly or completely obstructed by vendors and cars that prevent pedestrians from being able to walk safely. Most sidewalks are of moderate condition as they have some damage, but this does not interrupt pedestrians from using them. In all the markets, walkways are not wide enough to accommodate people using them; in addition, they are not friendly to those with disabilities. Voices from most vendors complain about the narrow sidewalks in their markets as illustrated by this participant:

"*One thing that I would like to be done in this market is the expansion of these narrow sidewalks". Paulina, NMC/Samunge Market.*

3.3.5. Bus stop

All the markets in Arusha are within walking distance of bus stops, although people have to walk a bit longer distance from the nearest bus stop to the Central Market. Kilombero Market, which feeds other local markets with supplies in whole and retailed sales within and outside the city, is strategically located as the final destination of all buses/ taxi (*daladala*) from all corners of the city and the neighbourhoods. With the exception of the bus terminal at the center of the city, the conditions of all other bus stops are poor without appropriate facilities for people to wait and buses are not scheduled as they appear to arrive randomly.

3.3.6. Delivery of goods to markets and parking spaces

Kilombero and Central Markets are the only markets with clearly defined areas for the delivery of goods to the markets. The observation shows that NMC-Samunge also has a space used for deliveries. The other remaining three markets do not have defined areas for delivery. Thus, the deliveries take place at any convenient area of the market. The delivery area for the two early mentioned markets (Kilombero and Central Markets) seem to have sufficient capacity to accommodate all deliveries to the markets. The deliveries are mostly made early in the morning (before 8 am) and it was noted that deliveries have no impact on connections into the surrounding streets/city such as blocking roads.

Delivery providers use various means of transportation, mainly lorry/ trucks (100%), motorbike (87.5%), taxi (75%), walking (50%), tricycles and pushcarts (37.5), bicycles and private cars (12.5%) respectively. The survey reveals that three of the six surveyed markets have parking space for all users, mainly vendors, customers and deliveries. The observation shows that the parking lot is mainly used for loading and offloading, parking cars or motorbikes, vendors selling in the markets, and garbage collection. See Figure 13:

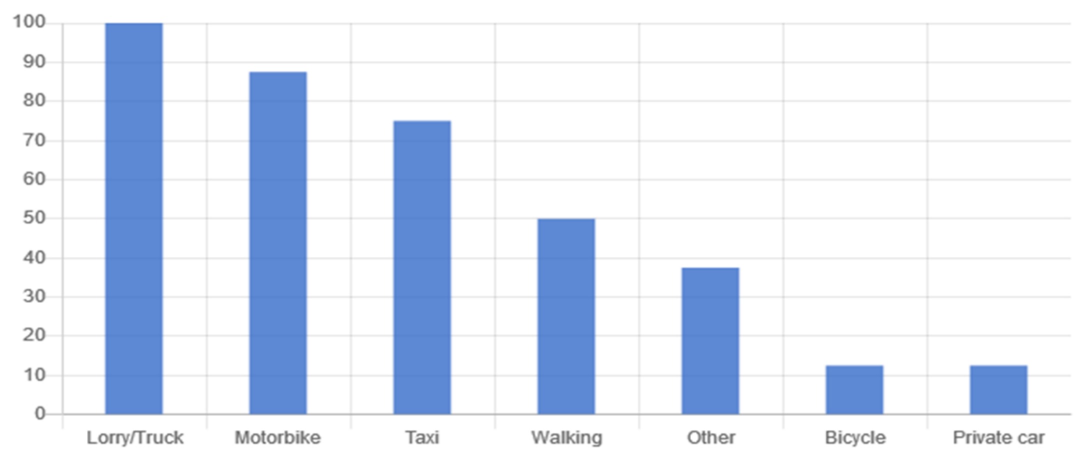

Figure 13: Delivery of goods to markets
Source: Fieldwork, April 2019

3.3.7. Accessibility: Entrance to the market

Kilombero and Central markets have clearly designated entrances and they are in fairly good conditions. The remaining four markets are open with no clearly defined entrances. The range of entrances particularly for these two major markets is between five and eight. The conditions of the entrances for the two markets are good with defined entrances and with no evidence of damage or lack of maintenance. However, the markets cannot be accessed by people living with disabilities, despite the entrances being wide. There is no evidence of facilities available in the markets for people with disabilities to freely and comfortably move when using mobility equipment such as wheelchairs. Thus, the level of access for people with disabilities is mostly difficult and the condition is poor. The challenge intensifies inside the markets as people with disabilities cannot navigate easily.

3.3.8. Comfort

The survey assessed comfortability of market users by determining the level of smell and loud noise. Although the researchers indicated there were bad smells in four of the six markets, the smell was not strong to the extent of disturbing market users and it was in a small section of the markets. Some loud noises were heard in Kilombero, Mbauda and Kwa-Mrombo markets. However, the noise was normal while in Mjinga and Central Markets the noise was low.

3.3.9. Garbage disposal

Although there are no garbage bins observed around in most of the markets, there was little garbage seen dumped in and around the markets. Mjinga and Central markets seemed a bit clean and organised in terms of waste management. However, the level of garbage disposal can be described as insufficient at all the six markets surveyed. Insufficient here suggests a situation where designated garbage collection points were full of garbage surrounding the bins or just a small amount could be seen.

3.3.10. Public toilets and Water taps

All the surveyed six markets of Kilombero, Mjinga, NMC-Samunge, Mbauda, Kwa-Mrombo and Central markets have public toilets available for markets users and vendors. The condition of these toilets in five markets is moderate as most of the toilets seemed well maintained with some evidence of damage. However, the toilet at Mjinga market seemed poor. Users in all markets need to pay to use the toilets except at Mjinga market. The fee is Tanzanian Shillings 200 for single use. This applies even to regular vendors. In addition, water taps are available at Kilombero, Kwa-Mrombo, and Central markets and their conditions are moderate. Mbauda, Mjinga and NMC-Samunge markets have no water taps.

3.3.11. Seating facilities and Signage

No seating facilities were available in any of the six surveyed markets where market users could sit and wait. No signage was seen in any of the markets with the exception of the Central Market.

3.3.12. Products

All the surveyed markets (100%) sell fresh produce. It was also revealed that 87.5% of markets sell prepared food; 75% sell consumer goods such as clothes, products for the house, stationary, and books; 62.5% sell meat or poultry; 37.5% sell fish; 37.5% sell used products; 37.5% sell antiques; 37.5% sell artisan products; 25% sell processed food; and 12.5% sell live animals.

3.3.13. Produce

***Fruits**:* All the surveyed markets sell fruit: oranges, watermelons and bananas (100%), pineapples (87.5%), and mangoes (62.5%) were the most commonly available fruit during the time of the survey. In all the surveyed markets, oranges are sold either in heaps or per unit counting. No market was found selling oranges in kilograms. The price of oranges per unit counting is TShs 100.00 – 200.00/=. The price per unit for watermelon is TShs 800.00 – 5000.00/= depending on the size and weight of the item. Another fruit that is easily available in the surveyed markets is bananas. The price for bananas per unit is TShs 100.00 – 150.00/=. At the time of survey, all the fruits were mostly of average quality as most of them were a few days old and perhaps a little soft and not as fresh. Very few fruits were of good quality and in peak condition with good colour, fresh, firm and clean. This could be explained by the fact that most the fruit originated from outside the city of Arusha, but were cultivated locally within the region and/or neighbouring regions in the country.

Vegetables: During the survey, vegetables were being sold in all the markets. Onions, cabbages, carrots, tomatoes and greens were available in all surveyed markets. The price of vegetables varied. Onions were sold at TShs 500.00/= per heap or pile. A heap of tomatoes varied from TShs 200.00 – 500.00/= depending on the quality and size. It should be noted that the price of tomatoes changes per season. The greens were sold at TShs 100.00/= per heap/pile. Carrots were sold at TShs 1,800.00/= per kilogram while cabbages were sold between TShs 300.00 and 1,000.00/= per unit depending to the size and weight of the cabbage. At the time of survey, quality of the vegetables was average, mainly for onions, cabbages, carrots, tomatoes and greens. This can be explained by the fact that vegetables can take up to 2-3 days before they are sold out or lose the acceptable quality. Unfortunately, only some of the fruit and veggies past their prime are given to livestock keepers. The rest are thrown away as garbage.

3.3.14. Safety: general safety and lighting in the markets

No noticeable anti-social behaviour was happening in any of the markets during the survey period. Anti-social behaviour includes activities that are not wholly accepted by a society and, in normal circumstances, would not be expected in a market such as smoking, alcohol consumption, gambling, obscene language and residing in the markets. The safety level of the market during the day was 100%. However, a few people suggested they felt only partially safe and therefore are careful when going around the market. None of the surveyed markets open at night. As such there were no lighting facilities observed in any of the markets. Narratives from vendors who attended FDGs suggested that lack of lighting in all the markets was problematic. The following statements attest:

“The city government should install lighting facilities to enhance security in the market”. Edmond from Arusha Central market.

3.3.15. Drainage

Three of the six surveyed markets have some drainage ditches and they are in good condition; however, they were also considered insufficient. The three other markets have no drainage ditches, hence causing difficulties during the rainy season. One of the participants contributed the following:

“During rainy season, the entire market floods”. Mama Olympia.

3.3.16. Fire or emergency exists and Security personnel

In accordance with local or international best practice building codes, there were sufficient fire / emergency exits in all the surveyed markets. However, there were insufficient or no fire extinguishers that were easily seen in any of the surveyed markets. While a fire truck can gain easy access to the outside of the markets, it would take more than 30 minutes for the local fire response team to get to a specific market. In addition, a fire truck would have difficulties in moving easily inside the market area. Security personnel (police and security guards) were seen in almost all the markets except Mjinga and Mbauda markets. However, most participants in the FGDs stressed the importance of having sufficient security personnel in and around the market to enhance security for both vendors and buyers.

3.3.17. Market users

All the surveyed markets had female children (0-13) present. Male children (0-13) were present in all the markets and four of those markets had 30 or fewer male children present. Women (25-59) were present in all of the markets and all of the markets had 50+ women present. While five of the markets had male and female youth (14-24) of those markets, all the markets had more than 50 male and female youth present during the survey. Elderly women (60+) and elderly men (60+) were present in all the surveyed markets. Only two of the markets had people with disabilities, although that could be related to the fact that none of the markets were hospitable to people with disabilities.

3.4. Market Users' Perceptions

A total of 553 market customers were interviewed from the six selected markets as part of the quality assessment to better understand their habits and wishes for market improvements. The randomly selected respondents were distributed as follows: Kwa-Mrombo (107), NMC-Samunge (104), Mbauda (101), Kilombero (97), Central Market (96) and Mjinga Market (48).

3.4.1. Age and gender of market users

The survey indicates that the majority of interviewed market users were adults aged between 25-60 years and they were 65.8 per cent of all users surveyed. Twenty-eight per cent of market users surveyed were youth aged between 16-24 years, three per cent were children under 15 years, and finally elderly people were two per cent only. We found that more women were in the market than men and we therefore have a sample that is more heavily weighted to women; as the survey reveals that 63 per cent of all the market users were women and 37 per cent were men. See Figure 14:

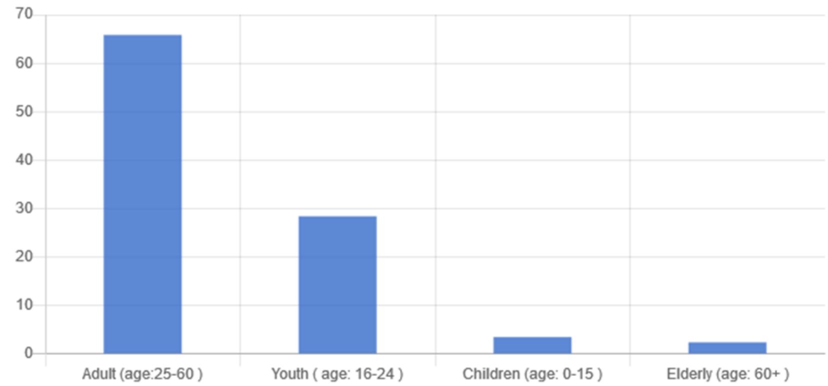

Figure 14: age of market users in Arusha city
Source: Fieldwork, April 2019

3.4.2. Market closeness to users' residences

In order to estimate the distance between the market and user's residence, respondents were asked the time they spent travelling from home to the market. The findings reveal that 56 per cent of all users spend over 25 minutes to reach the nearest market; 11 per cent spend between 11 to 15 minutes; nine per cent spend between 0-5 minutes, eight per cent spend 21-25 minutes; eight per cent spend between 16-20 minutes; and eight per cent spend 6-10 minutes. This implies that the majority of Arusha market users travel much farther than the recommended 800 m walking radius to the nearest market. See Figure 15. Fifty-five per cent of respondents visit markets nearest to their homes, and 45 per cent do not.

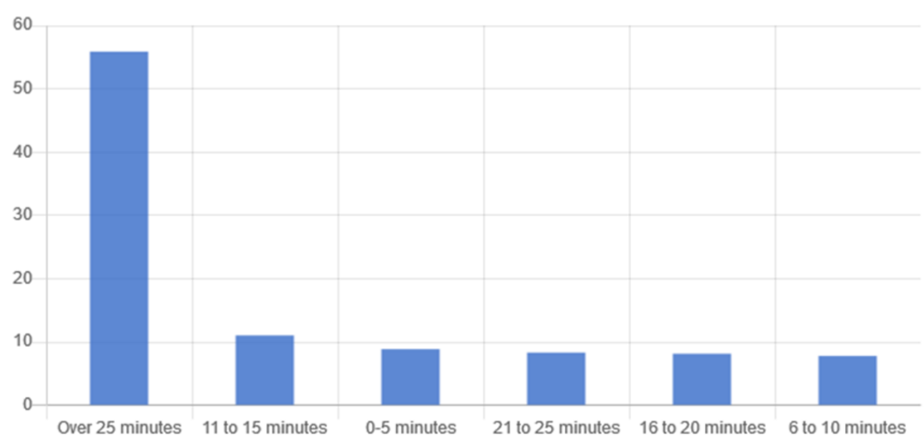

Figure 15: Closeness of market to users in Arusha city
Source: Fieldwork, April 2019

3.4.3. Means of transport to the market

The market users were asked to state the means of transport that they do use to reach to the nearest market and the findings reveal that 46 per cent of them use taxi (public transport) commonly known as *daladala in Swahili.* Forty-two per cent walk to the market, six per cent use motorbike, six per cent use private cars, and one per cent use bicycles. See Figure 16:

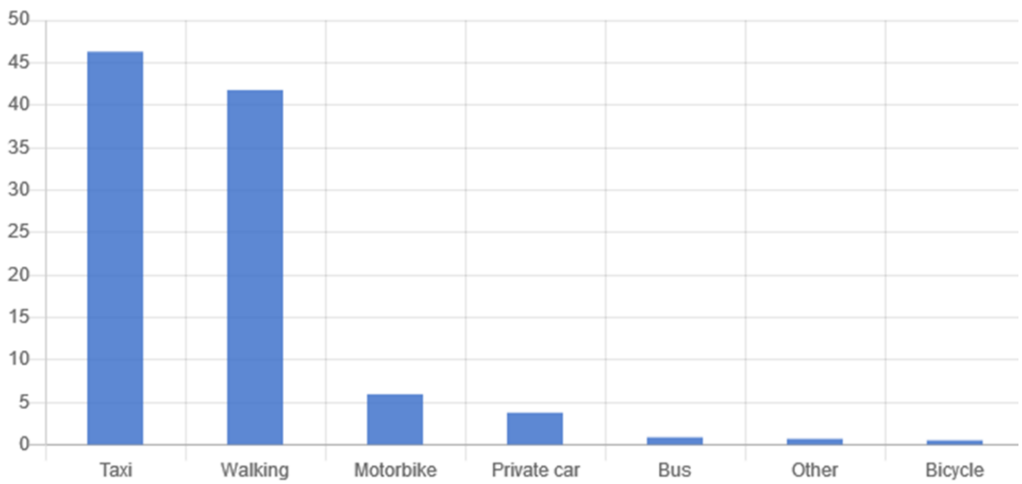

Figure 16: Means of transport to the market in Arusha city
Source: Fieldwork, April 2019

3.4.4. Motivation for visiting market

Market users were asked to explain what motivates them to visit their nearest market and it was found that 45 per cent were motivated by good prices, 43 per cent were motivated by the variety of products, 35 per cent said vendors sell products that they like, 25 per cent said good quality of products attract them, 20 per cent said it was closest to their house or it was easy to reach and 18 per cent said it was closest to their work place. Other motivations included friendships or good relationship with vendors (9%); seeing friends at the markets (6%); market feel safe (5%); selling local products (4%) and market hygiene (4%). See Figure 17:

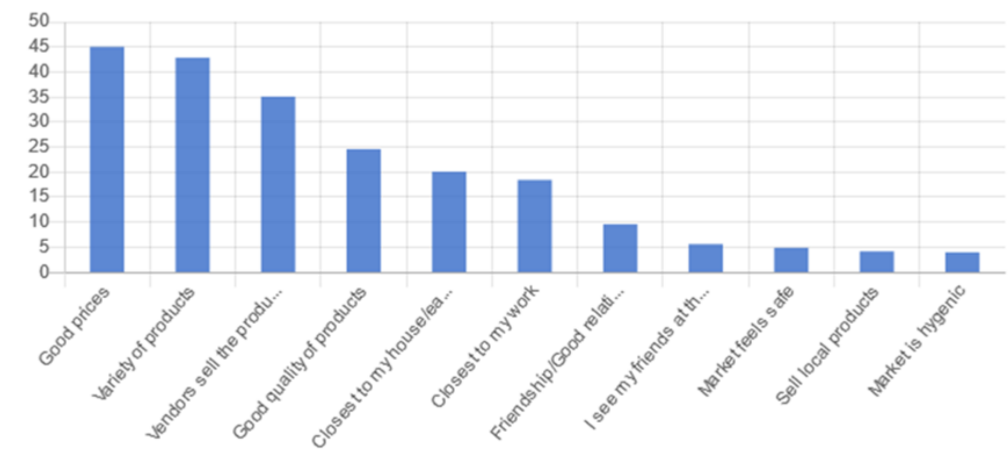

Figure 17*: Motivation for visiting market in Arusha city*
Source: Fieldwork, April 2019

3.4.5. Frequency of visiting market

The market users were asked to say how often they visited the market, the findings reveal that 45 per cent visit a few times a week, 19 per cent every day, 16 per cent a few times a month, and 14 per cent once a week. Sixty-seven per cent of market users do not visit the same vendors while 33 per cent do visit the same vendors.

3.4.6. Products bought

Market users were asked to state the products they typically buy at the market and the findings reveal that 71 per cent buy fresh produce, 45 per cent consumer goods, 21 per cent fish, 20 per cent buy used products, 15 per cent buy meat or poultry. Other common items included processed food (7%), animals (5%), prepared food (3%), antiques and artisan products accounted for less than one per cent of respondents. See Figure 18:

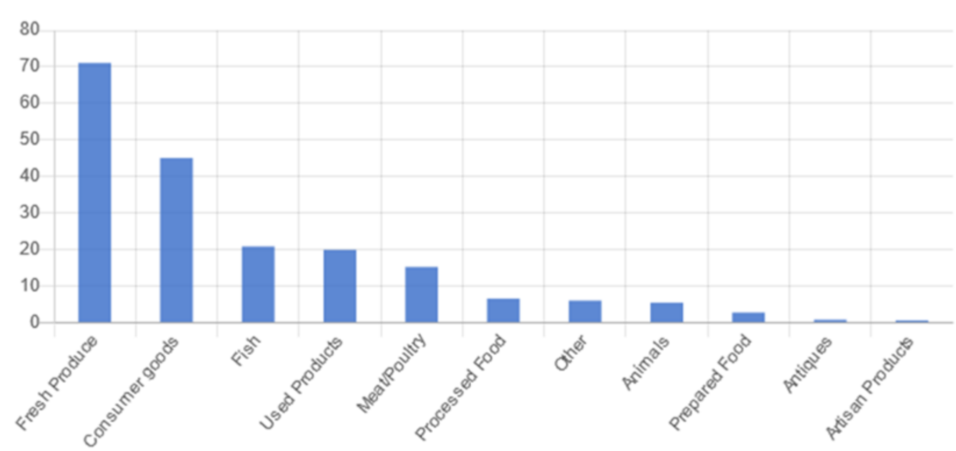

Figure 18: Products bought by market users in Arusha city
Source: Fieldwork, April 2019

3.4.7. Desired improvements

Market users were asked if there was anything that would encourage them to visit the market more often, the results show that 42 per cent indicated improvement in the hygiene of the markets would encourage them to visit more often. Other desired improvements included lowering prices of products (28%), widening variety of products (26%), and another portion (21%) mentioned the following improvements: building a permanent structure and cement floor, improve basic infrastructure such as drainage ditches, lighting, improve stalls, parking space, improve toilets, waste collection point, fencing the market, widening and paving sidewalks and removing street vendors around the markets. These voices of the users expose the reality of the situation on the ground. See Figure 19:

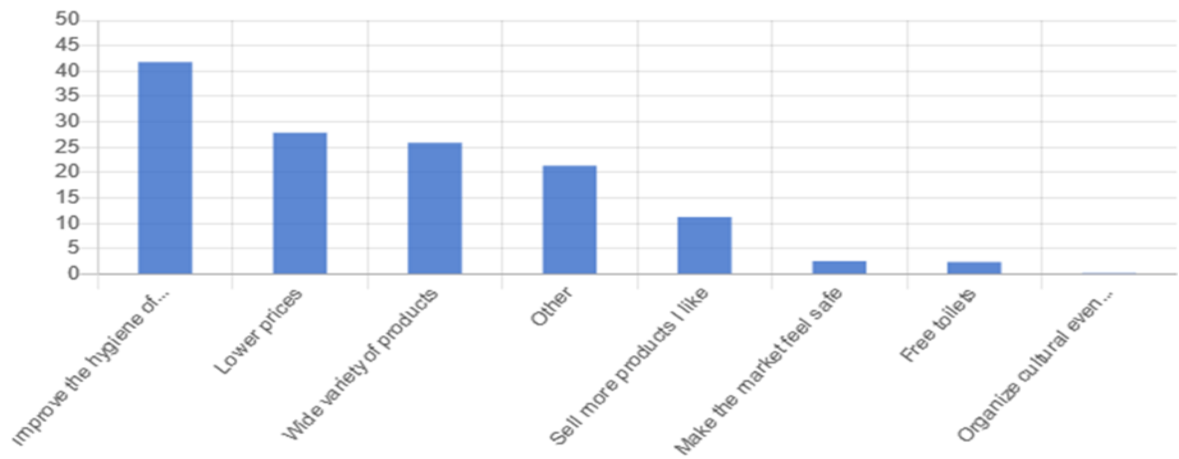

Figure 19: Desired Improvement by market users in Arusha city

Source: Fieldwork, April 2019

3.5. Market Vendors' Survey

A total of 559 market vendors have been randomly interviewed for all the six selected markets in the city of Arusha which were distributed as follows NMC/Samunge (106); Kwa-Mrombo (106); Central market (101); Mbauda (101); Kilombero (97); and Mjinga market (48).

3.5.1. Items or products sold

The findings reveal that more half (56%) of the interviewed vendors sell fresh produce; 24 per cent sell consumer goods; 18 per cent sell used products; five per cent sell processed food; four and a half per cent sell fish and three per cent sell prepared food. See Figure 20:

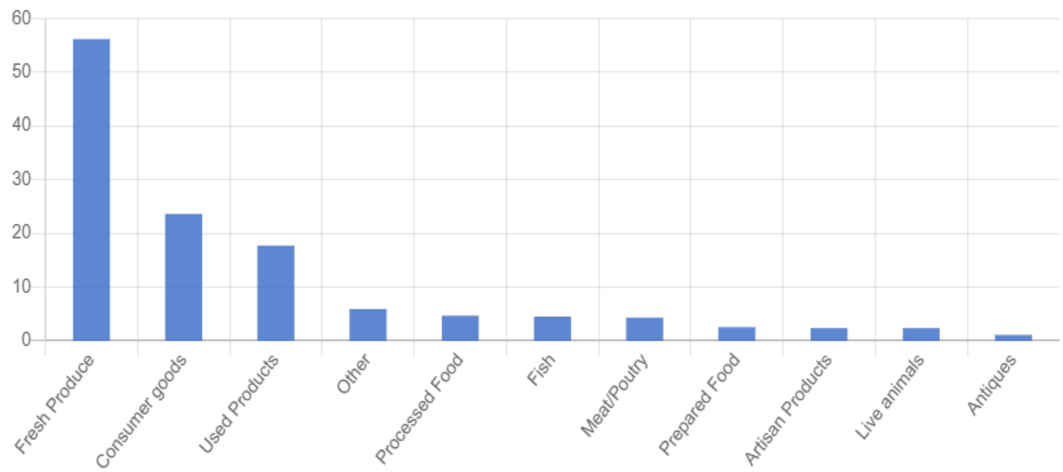

Figure 20: Items or products sold in Arusha city
Source: Fieldwork, April 2019

3.5.2. Where items are purchased

The survey reveals that 60 per cent of the vendors purchase their stock from other markets, 16 per cent from a dealer, 12 per cent from local shops and two per cent from neighbouring villages. Others (10%) buy within the same markets or other towns or regions. See Figure 21. The findings further indicate that more than half (51%) of the products come from rural areas of the same country, 28 per cent come a city or town and 15 per cent come from local rural area. See Figure 22:

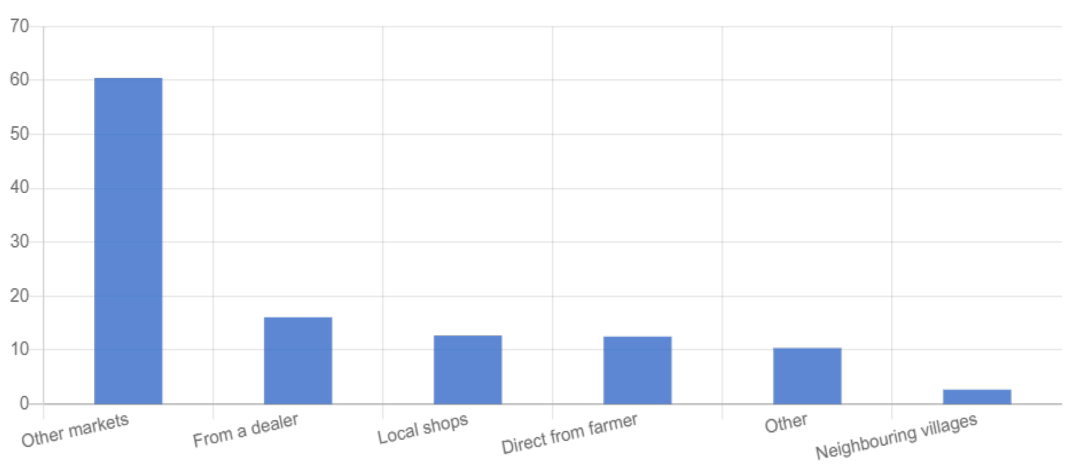

Figure 21: Items or products sold in Arusha city
Source: Fieldwork, April 2019

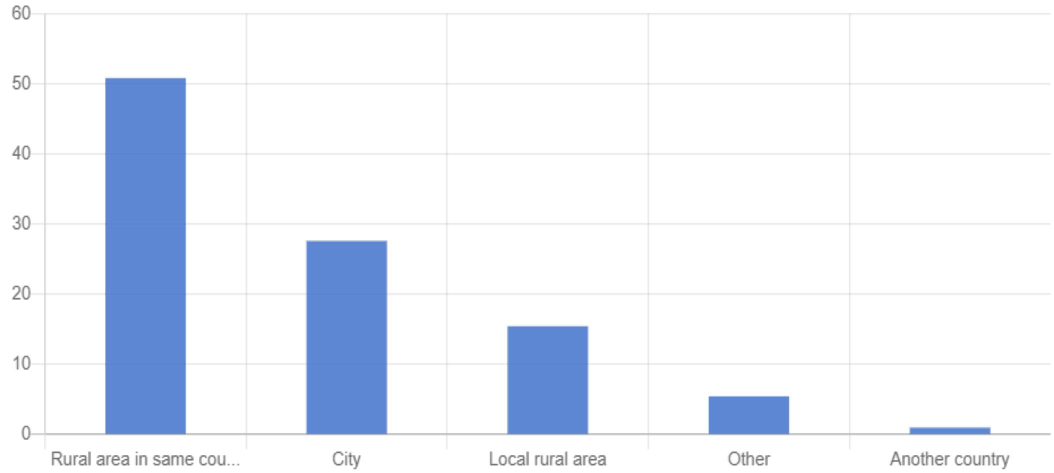

Figure 22: location where most product originate
Source: Fieldwork, April 2019

3.5.3. Distance travelled with products

In total, 26 per cent of the vendors travel between 1001- 9999 m, 21 per cent travel more than 50 km, 19 per cent travel between and 20 km, 16 per cent travel between 501- 1000 m, 14 per cent travel less than 500 m, and four per cent travel between 20 and 50 km. See Figure 23. In addition, the survey results show that there are many forms of transport that the vendors use to transport their goods to the markets. Twenty-eight per cent use taxi/daladala, 27% use other means such as use tricycles, wheel barrows, mini buses head and/or shoulder carrying; 26 per cent use lorry/trucks/pick-ups, 19% use motorbikes, 16 per cent walking, none per cent use buses, two per cent use bicycles and 0.4% use private cars. See Figure 24:

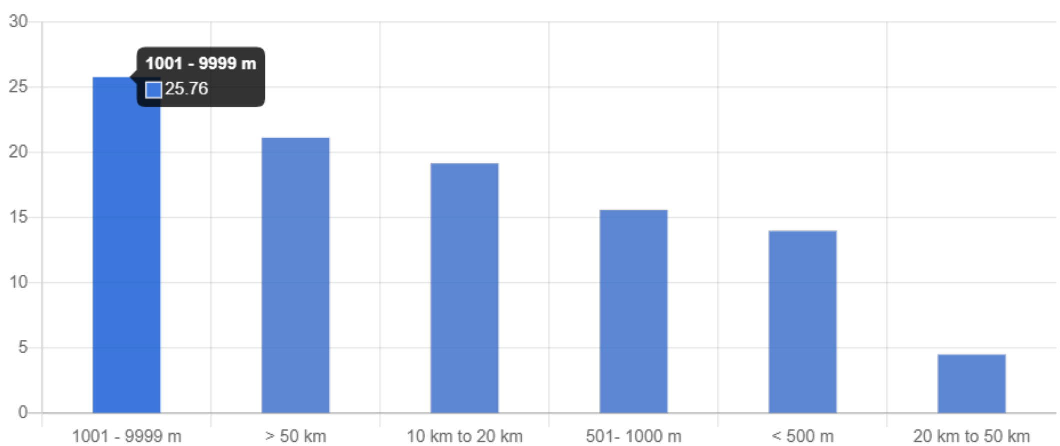

Figure 23: Distance travelled with products
Source: Fieldwork, April 2019

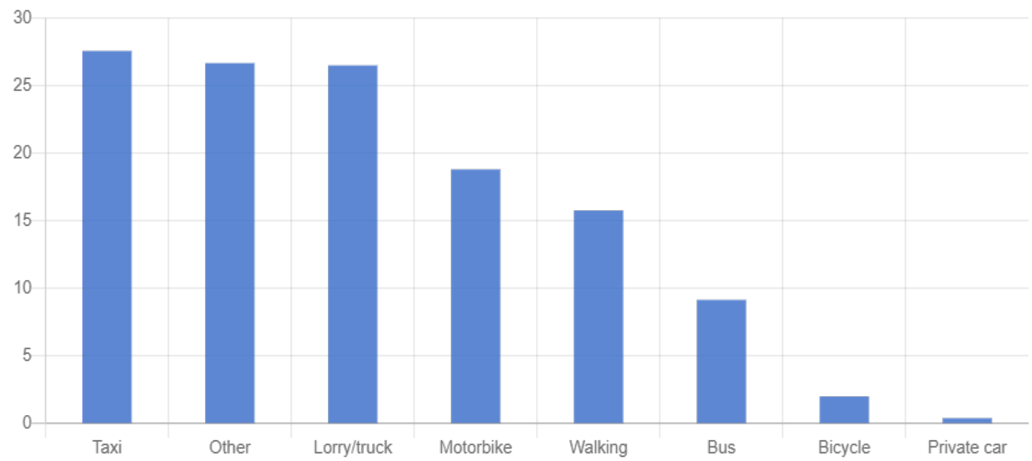

Figure 24: Means of transporting goods to the markets
Source: Fieldwork, April 2019

Of these, the vendors were asked to mention the main form of transport that they use to transport their goods to the market. The results show that 23 per cent use truck/lorry/pick-ups, 23 per cent taxi/daladala, 22 per cent use other means such as use tricycles, wheel barrows, mini buses head and/or shoulder carrying; 13 per cent use walking, 12 per cent use motorcycles, six per cent use buses and one per cent use bicycles.

Moreover, the survey asked the form of transport that the vendors use to travel to the market when not transporting goods, the findings indicate that most of the vendors use principally taxi (75%), walking (22%) and motorcycle (14%) among others.

3.5.4. Rental fees for stalls

When asked about fees for renting stalls, 81 per cent of vendors confirmed they do pay and only 19 per cent said they do not pay. The fees ranged between TShs 500.00/= per day or TShs 15,000/= per month. Those who do not pay said that they only pay for a Presidential Special Street Vendors Identification Card for TShs 20,000.00/= per year. This seems affordable to many vendors, particularly for street vendors and the card provides them relief from hustles and harassment of local security guards.

3.5.5. Types of customers

More than half of vendors (56%) have no regular customers with the other 43 per cent indicating they do have regular customers. Nearly one per cent was not able to answer the question. Ninety-eight (98) per cent of these customers are people passing-by and two per cent tourists and hotel managers.

3.5.6. Capital, expenses and sales

Fifty-six (56) per cent of vendors used their own savings as the initial working capital to start up their business, 16 per cent borrowed from friends or relatives, 13 per cent were given funds by their husbands/relatives and/or on taking goods on trust and pay later (a practice known as *Malikauli is Kiswahili*), 10 per cent borrowed from an informal financial institution, five per cent borrowed from a formal financial institution, and one per cent from a microfinance project.

The survey indicates that the majority of the vendors spend less than Tshs 200,000.00/= per day on their goods while a few spend between 200,000/= and 1,000,000/=. Nearly half of market vendors (49%) have an estimated sale of between TShs 0-25,000/= on an average day of vending, 29 per cent between TShs 25,000-50,000.00/=, 12 per cent between TShs 50,000.00 – 100,000.00/=, five per cent between 100,000.00-150,000.00/= and five per cent more than TShs 150,000.00/=. See Figure 25:

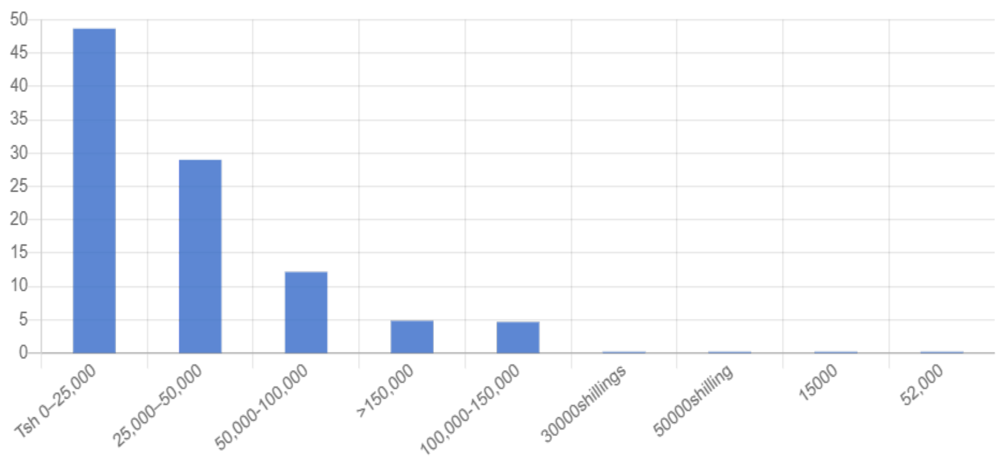

Figure 25: Estimated sales on an average day of vending
Source: Fieldwork, April 2019

3.5.7. Household income

Vendors were asked about the sources of income in their household and 90 per cent depend on vending in the formal market, 18 per cent refused to answer, 15 per cent in vending in informal markets, and six per cent depend on vending in the street. Eighty-three (83) per cent of the vendors stated that the vending in a formal market was the main source of their households, vending in informal market (6%), other employment of family members (5%) and 4 per cent stated other sources such as farming or poultry, other business, and masonry.

The survey findings reveal that the income from the markets provides for the daily needs of the vendors as follows: food (72%), clothing (52%), education (29%), transportation

(48%), housing (47%), and healthcare (35%). However, 38 per cent say the income is not sufficient. See Figure 26:

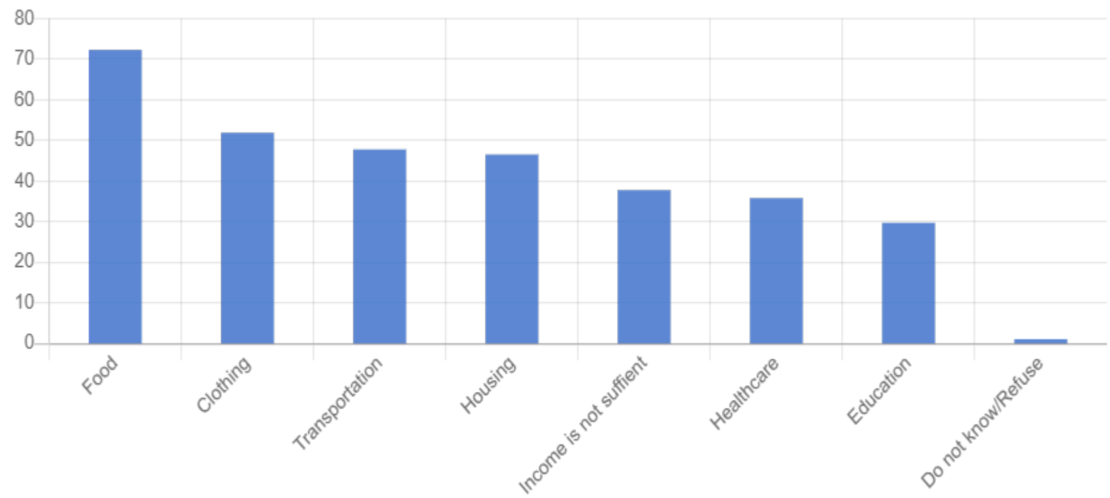

Figure 26: Estimated sales on an average day of vending
Source: Fieldwork, April 2019

When asked to rate how much they like the work they are doing, the survey reveals that nearly half of all the interviewed vendors (49%) are very happy with the work they are doing, 34 per cent are happy, 11 per cent are neutral, five per cent unhappy and one per cent very unhappy with they are work. See Figure 27:

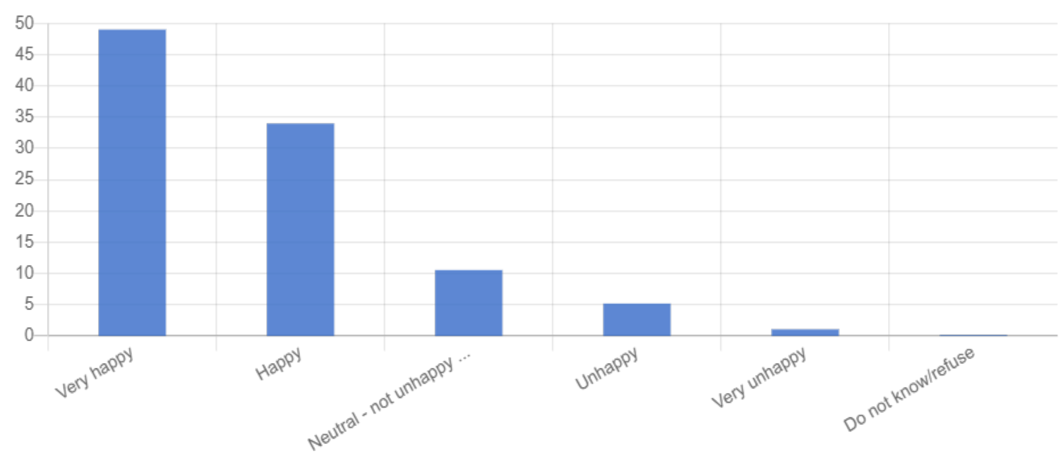

Figure 27: Estimated sales on an average day of vending
Source: Fieldwork, April 2019

3.5.8. Children spaces in the market

Our observations during the survey and the voices from Focus Group Discussions (FDGs) with vendors confirm that some vendors bring children to the markets and there are no designated spaces for children to play and learn while in the markets with their caregivers. In addition, other children seen in the markets are unaccompanied who do not attend or who avoid school sessions and engage themselves in petty businesses. Participants expressed mixed feelings concerning designation of children's spaces in the markets. Some suggested that there should be specific space and other do not recommend that. Those who did not recommend, argued that they do not like to see children in the market area as they should be in schools.

3.6. Market Managers' Survey

This section presents findings collated/collected from five market managers of the six selected market for the survey as part of the market quality assessment. One refused to be interviewed.

3.6.1. Market opening hours, ownership, and management

All the markets in Arusha open between 6am and 6pm. None of the surveyed markets open at night. The survey findings indicate that all the surveyed markets are under government ownership and management, mainly under the authority of the city council of Arusha. The results show that all the markets have management committees that involve both vendors and government officials. The narratives show the management committees have the capacity to implement the plans and there are sufficient funds and people to carry out required maintenance. The vendors are responsible for maintenance of their own stalls and the vendor and market management committees are responsible for maintenance outside the markets. All the 5 interviewed market managers said that the markets are part and parcel of the wider city/municipal level management plan including other markets in the city. Each market has at least five management staff.

3.6.2. Number of vendors and Stalls

In the interviews with market managers, it was revealed that each market has 1,000 vendors on average. However, there are markets with more than 1,000 vendors, including Kilombero and Kwa-Mrombo markets. Three of the six markets have permanent stalls; the remaining have temporary built stalls.

3.6.3. Waste management and Utilities

All the market managers confirmed that each market has a place for waste removal system. Three markets have their wastes removed once a week and two have waste removed once a day. All market managers suggested that the waste removal system is sufficient. Only three markets have a waste removal system for the individual stalls. The findings show that in three markets, vendors are responsible for paying for the waste removal system, and the city government pays for the remaining two markets.

In terms of available utilities within the marketplace, five out of six markets have water connected to the markets and vendors are responsible for paying directly to the water company. Furthermore, it was said that four markets have electricity connections and vendors are responsible for paying to the utility company.

3.6.4. Security and other Services to Vendors

Only one of the five interviewed market managers reported that the market has been subjected to vandalism. While three said that they had heard of some acts of robbery committed at the market. Managers listed additional services available for vendors within the markets as savings and credit, hair salons, free parking for owners, police/security and canteens. Moreover, additional services available for vendors within the adjacent areas include areas of religious practice, parks or public spaces, medical facilities and accommodations.

3.6.5. Activities within the market

According to four of the five interviewed managers, markets are seen as a tourism attraction and the main types of activities are selling and buying, and sports. Managers said that those activities are mainly organised (market used for occasional different activities).

3.6.6. Rates for Stalls

According to four out of the five interviewed managers, vendors pay for their stalls except at the NMC-Samunge market, which has been built by vendors themselves. With the exception of one market, the fees paid by the vendors are not formalized through a license agreement. It was learned that the city government determines rates in four markets and that the management committee determines the rates in one. The stalls are leased on a permanent basis and vendors return to the same stall each day. At two markets, the lease is yearly, at one the lease is monthly, and at another one the lease is weekly and for the other it is not applicable. The rental rates are updated in three markets and the other ones are not updated. With regards to vendors paying taxes in addition to lease, the results show that vendors do so in two markets only.

4. Discussions of Key Findings, Recommendations and Concluding Remarks

4.1. Discussions of Key Findings and Recommendations

The key findings of this research are categorised by policy, market availability, market quality and market management.

4.1.1. Urban Policy Review: Is there a missing ingredient?

The policies reviewed show that the responsibilities for local public markets rests almost entirely with the local government. The *National Human Settlement* policy is largely silent on local markets. However, the *Urban Planning* considers implicitly that markets are one of the essential land-uses for a city or neighbourhood. Importantly, the national policies give authority to the local government for urban planning issues including markets. The policy review has shown that open spaces, for example, are designated areas for multiple future uses including playgrounds, recreational sites and local public markets. While the national policies made general statements, the *Public Health Act* and the *Local Government (urban authorities)*, in addition to the Arusha bylaws, make strong pronouncements with regards to everyday management of local public markets. These policies address the health and safety of market operations. Given the most recent pandemic, there is reason to update the existing policies with regard to the sale of live animals, an issue that is largely ignored in the reviewed policies.

However, it has been established that these policies impact mainly formally established local public markets and hence isolate informal public markets. Informally established markets are run outside the city government machinery. In addition, despite the presence of strong policy statements on local public markets, it appears the enforcement of those policies is extremely weak and the government, thus far, is not considering markets as a wholistic system. For example, we could find little evidence of an overall plan that identifies where in the city new markets will be located. The use and enforcement of these policies could be of paramount importance in both improving quantity and quality of markets and in addressing the spatial inequality that has been revealed in this research. For instance, the Local Government Act directs that urban Authorities or urban local governments may establish, regulate and control markets, and that they may construct market buildings and let stands or plots. Moving forward it will be important to ensure that existing and future markets are identified in Arusha city land use plans.

Another area of consideration is community food security, which examines the food system for a city and determines whether a city can supply food to its citizens on a regular basis and during a major disruption. None of the policy documents reviewed addressed community food security. However, as the recent pandemic has illustrated, a secure food supply is not a given in many communities. The city should consider developing a food system policy that may include the promotion of peri and urban agriculture as a way of ensuring access to food.

Lastly, in addressing the issue of informal and/or street vendors the Central Government, through the President's declaration, introduced Street Vendors' Identification Card (commonly known as *Machinga*'s ID Cards) as a sign of legitimising and giving vendors freedom of doing business in any place they want in cities and towns. However, there is no local policy document backing up the President's will to assist these vendors. Strengthening this policy locally will have benefits to both the vendors and the local food supply.

4.1.2. Market Availability

When we mapped the quantity of local public markets in the city of Arusha, it reveals that 15 of the 25 wards have neither formally nor informally established marketplaces. The mapping of local public markets reveals high spatial inequality as many neighbourhoods/wards do not have access to local public markets. These findings were confirmed when we interviewed the customers at the markets. The results show that 64% of residents spend between 20 minutes or more to reach the nearest market and this is despite the fact that 55 per cent of users visit the market closest to their house. This implies that the majority of Arusha market users travel much farther than the recommended 800 m walking radius to the nearest market.

When asked what types of products market users typically purchase, our research found that most of the market users visit the local public markets to buy perishable goods such as fresh produce, fish, and meat or poultry. These would be items that people would need to buy at least several times per week. It is important for the city to address this spatial inequality as access to food is an essential service. Arusha should consider establishing a more neighbourhood-based local public market system.

Because several parts of the city have no formally established markets, residents visit Kiosks/food outlets commonly known Swahili as *'Genge'* which are not considered as local public markets by the city administration. These kiosks or *Genge* are located in strategic areas, mostly at bus stops or along busy streets of the ward. We did not include the Genge in our mapping, which would have illustrated the important role they play in improving access. However, it is clear that these Genge are a critical part of the food distribution system in the city. Due to fear of COVID-19, the *Genge* have become more important and popular as they are within a walking distance of where people live, and are particularly important in poor neighbourhoods. In order to address the spatial inequalities, the government can look to the *Genge* to play an important role in ensuring food access and they should therefore be recognized and strengthened through supportive policies.

4.1.3. Market Quality

We assessed the quality of six markets in total as a sample to better understand the quality of the market environment. Several challenges and opportunities surfaced as a result of our assessment:

Physical Structures

It is clear there is a need to improve the physical conditions of these markets, particularly those without built-up structures. The findings revealed that three of the six studied have structures/ buildings and that they are fully covered, but outside stalls are part and parcel of the markets. Three others are not covered at all and it was interesting to learn that all the stalls in the uncovered markets were built by vendors themselves. Narratives of the interviewed vendors through Focus Group Discussions, particularly from Mbauda, NMC-Samunge and Kwa-Mrombo markets identified the high need for market structures and permanently built stalls. This desire for permanently built stalls was supported by local users who identified this as an improvement that would encourage them to visit the market more often.

Of particular importance is the need for cement floors and drainage/ditches. Three of the six surveyed markets have some drainage ditches and they are in good condition. However, they were also considered insufficient in that there were not enough of them. The three other markets have no single drainage ditches, hence causing difficulties during the rainy season. It was noted by one of the vendors during a focus group discussion that during the rainy season the market is often flooded, creating an unpleasant and perhaps unsafe environment for both vendors and market customers.

In addition, the markets sidewalks within the market are insufficient for the amount of people walking in them to be comfortable and they are not friendly to those with disabilities. In the focus group discussions, vendors made a point to explain how the narrow sidewalks in their markets are a problem for their business. Although this is seen as an issue for everyone, this would be particularly problematic for people living with disabilities. It was felt that people with disabilities would be unable to access the market, despite the entrances being wide and the challenge intensifies inside the markets as people with disabilities cannot navigate easily. There are no facilities available in the markets for people with disabilities to freely and comfortably move when using mobility equipment such as wheelchairs. Therefore, the level of access for people with disabilities is mostly difficult and the condition is poor. As improvements are made to the markets, the insufficient walk ways is an important area to address.

Importantly, market vendors unanimously expressed their willingness to contribute towards upgrading their stalls. This could take many forms and suggestions from the vendors included individual contributions directly or through a development fund, accessing loans, and working with organisations willing to invest in upgrading the market. However, they cautioned of the need to first sensitise all stakeholders and involve all vendors in the planning process.

Transportation and Deliveries

There were several issues related to transportation that the survey identified. In terms of the customers, there were many ways they arrived at markets. However, the vast majority arrived either by local taxi (public transit: 46%), or by walking (42%). Only 12 per cent arrive by private vehicle such as motorbikes (6%) and private cars (6%). Despite this, the quality of the pedestrian environment surrounding the market is poor. Although most markets have pedestrian ways, none of those pedestrian ways are paved. The existing paths are mostly or completely obstructed by vendors and cars that prevent pedestrians from being able to walk safely. In addition, the conditions of bus stops are poor without appropriate facilities for people to wait and buses are not scheduled as they appear to arrive randomly. It may be challenging to address the spatial inequality of the markets in the short term. Therefore, the city should look for ways to improve the bus stations and pedestrian pathways in the short term.

Although the survey revealed that only one per cent of customers accessed the markets using bicycles, this could be because there are no specific and paved cycle ways exist in the entire area surrounding local public markets. There is an opportunity to encourage greater levels of cycling by adding bicycle infrastructure including bicycle lanes, safe crossings, and bicycle parking. Although this should be part of a larger city-wide bicycle improvement program, there is strong potential to have markets be a key destination for bicycle trips.

Improving the bicycle, walking and public transit environment would also support vendors and delivery providers. For example, although there is a wide variety of ways that goods are delivered to the market, taxi (75%), walking (50%), tricycles and pushcarts (37.5%) and bicycles (12.5%) are important methods. Although there may be calls to improve parking and infrastructure for automobiles, the number of customers and vendors arriving by private car is very low. Improved paths, bicycle lanes, and public transit stops has the potential to create a healthier transportation environment in the city and would be a better investment.

Only two of the markets have designated delivery areas (Kilombero and Central Markets) and they seem to have sufficient capacity to accommodate all deliveries to the markets. The deliveries are mostly made early in the morning (before 8 am) and it was noted that deliveries have no impact on connections into the surrounding streets/city such as blocking roads. Consideration should be given to how deliveries are accommodated in the other markets and look for ways to improve.

Health and Safety

The level of garbage disposal can be described as insufficient at all the six markets surveyed. Insufficient here suggests a situation where designated garbage collection points were full of garbage surrounding the bins or just a small amount could be seen. Although garbage collection was seen as adequate by the market managers, our observations told a different story. Uncollected garbage, especially food waste, creates an important hygiene issue, especially during the rainy season and was a concern noted by market customers. Markets can explore many opportunities to address food waste including looking for opportunities to use the past ripe fruits and vegetables (to be discussed under the vendor section) and composting, which could have an added benefit for local food suppliers.

Users in all markets need to pay to use the toilets except at Mjinga market. The fee is Tanzanian Shillings 200 for single use. This applies even to vendors. So, although the research found that there were toilets of fair condition in each of the studied markets, vendors, the fact that and customers and vendors needed to pay for these toilets creates a barrier to usage. Instead, vendor fees should be used to create more toilets that are free to use.

Several safety issues were identified through the survey. Based on local or international best practice building codes, we found that there were sufficient fire / emergency exits in all the surveyed market. However, there were insufficient or no fire extinguishers at all the surveyed markets. While a fire truck can gain easy access to the outside of the markets, it would take more than 30 minutes for the local fire response team to get to a specific market. Once at the market, a fire truck would have difficulties in moving easily inside the market area. Worse enough, one of the markets was burnt into ashes and the fire department failed to come for rescue due to poor infrastructure. Clearly more work needs to be done to improve the fire procedures within and for the markets.

Security personnel (police and security guards) were seen in almost all the markets except Mjinga and Mbauda markets. However, most participants in the FGDs stressed the importance of having sufficient security personnel in and around the market to enhance security for both vendors and buyers.

4.1.4. Market Operations

Overall, it appeared that the markets were well managed. All the surveyed markets are under the government ownership and management, mainly under the city council of Arusha. All the markets have management committees that involve both vendors and government officials. The narratives show the management committees have the capacity to implement the plans and that there are sufficient funds and people to carry out required maintenance. The vendors are responsible for maintaining their own stalls and vendors and the market management committees are responsible for maintenance outside the markets. All the 5 interviewed market managers said that the markets are part and parcel of the wider city/municipal level management plan including other markets in the city. Each market has at least 5 management staff. It would be interesting to further investigate the everyday role of market manager and what change they have been able to make within the tenure of office. In addition, this strong management would only be the case for the formal markets. It is realistic to assume that informal markets would not have the same budgets and supports as the formal markets. This could be strengthened through policy.

An interesting area that emerged when surveying the markets was the quality of the fruit and vegetable sold. When surveyors examined the fruits and vegetables sold in the markets, very few were of good quality and in peak condition. This could be explained by the fact that most of the fruit transported from a distance outside the city of Arusha, resulting in them losing acceptable quality. This could also be related to the fact that most vendors appear to buy their products from other markets and shops, thereby creating additional layers of middle people between "field and mouth". There may be opportunities to better link vendors and producers, to be discussed in the Supports for Vendors section. But an additional opportunity may be to add a kitchen incubator[1] to every local market and support a local business to take past prime fruits and vegetables and process them for future sales. This would benefit the market as it would reduce organic waste, it would benefit the vendor as they would still be able to sell their past prime produce, it would benefit local food businesses by creating opportunities, and it would benefit customers as

[1] "A shared-use kitchen is a licensed commercial space that is certified for food production. Renters or members can use the kitchen by the hour or day to produce food while fulfilling regulatory compliance." See: http://chiknegg.com/what-is-an-incubator-kitchen/

they indicated that a desired improvement was a widening of the products supplied in the market.

4.1.5 Supports for Vendors

The surveys demonstrated that there are many opportunities to provide additional support to vendors and thereby improve the customer experience as well. First, as stated earlier, much of the produce vendors are selling are not in peak condition. The interviews with the vendors revealed that 60 per cent of the vendors purchase their stock from other markets, 16 per cent from a dealer, 12 per cent from local shops and two per cent from neighbouring villages. Others (10%) buy within the same markets or other towns or regions. These two findings point to the need to better connect vendors with local farmers, thereby reducing the supply chain. This would improve the condition of the fruits and vegetables as they would arrive at the market in more peak condition. Other issues that may need to be considered are refrigeration and storage of products, the lack of which may account for produce not being in peak condition.

An added advantage to reducing the number of middle people in the food supply chain is providing more financial supports to vendors. Eighty-three per cent of the vendors depend on vending in a local market as the main source for their household's income; and that the income from the markets provides for the daily needs of the vendors as follows: food, clothing, education, transportation, housing, and healthcare. However, 38 per cent say the income is not sufficient. On the opposite side, 28 per cent of users indicated that they would like to see the prices of the products lower. Although, such a request is not surprising, and may be particularly important for the urban poor, it would be challenging for vendors to make a living if prices were lowered. However, if there are fewer people in between the customer and the farmer it may result in both improved prices for customers and improved income for vendors.

Lastly, markets are often female dominated spaces and the Arusha markets are no exception. With that, it makes sense that there would be many children in the market. Of those markets surveyed all had male and female children (ages 0 to 13) present. Unfortunately, the market environment provides little, if anything, for these children to do. There are examples from other markets around the world of play spaces being provided to the children in the markets and this should be explored in Arusha as well. When specifically asked about this idea, many of the vendors did not recommend this approach, and argued that they do not like to see children in the market area as they will not be able to stay in schools. Although it is true that school aged children should be in school, this does not take into account the children who are under school age, of which there would be many.

4.1.6. Markets as public spaces

Markets are a vital ingredient of successful cities and are the places in a city that provide access to food while also building a sense of community, culture, social capital, and community revitalization. Markets are important public spaces in the community, but it seems clear that markets are not viewed as public spaces when we examine policies. Most of the policies deal with health and hygiene and pay little attention to the features of a market that would encourage it to act as a community and neighborhood gathering place. For example, none of the markets had any seating for customers to sit and relax.

However, market customers, when they explained what motivated them to visit the nearest market to them, spoke of issues related to friendships developing a good relationship with vendors (9%) and seeing friends at the markets (6%). In addition, markets were viewed as a main tourism attraction and a place when unstructured sports occurred. There is an opportunity to build on these important functions and consider all the ways that a market could act as a public space moving forward.

4.2. Recommendations

4.2.1. Policy

Address the spatial inequality in locating local public markets: a neighbourhood-based local market system can help address this spatial inequality. Every ward should have a local market within 15-minute walking distance of residents. As most poor urban residents purchase their food in frequent, and in small quantities, ensuring food availability at the neighbourhood level is an opportunity to reduce the transportation burden for all residents, especially the poor. As people are afraid of COVID-19 in public transport, the *genge* have proved to be significant in a time of crisis as they facilitate access to food in a reasonable walking distance. We can leverage the *genge* as an existing community asset by both strengthening their capacity and expanding their ability to meet the neighbourhood's everyday needs. This will, hence, create a collection of local public markets which will function as a system and will reduce spatial inequality and spatiality of cities.

Formalize Street Vendors Identification Card (Machinga's ID): deliberate efforts should be made to back up the will of the President of the United Republic of Tanzania to assist the street vendors by incorporating Street Vendors' Identification Cards (commonly known as *Machinga*'s ID Cards) into national urban policies and city by-laws. This will strengthen the local community food supply and security and will also enhance livelihoods of vendors.

Control sales of live animals: despite of strong pronouncements with regards to everyday management of public markets, including health and safety of market operations, all the policies are silent on the sale of live animals. This is particularly important in light of the most recent COVID-19 pandemic. There is a need to update existing policies with regard to the control of sale of live animals for public health interest.

Promote peri- and urban farming: Arusha city should consider developing a food system policy that include the promotion of peri and urban agriculture as a way of ensuring access to food and community food security. This policy should link farming with markets as a way of strengthening the 'field to mouth' connection.

Prepare city land use plan: since all local public markets are under the city council administration, it would be wise to have city land use plans identify on maps all the existing and future local public markets. This will allow the city to visualization the existing spatial inequality and provide the necessary information needed for future management plans.

4.2.2. Market quality

Construct market built-up structures: this research has clearly shown that there is a need to improve the physical conditions of some of the studied local public markets, particularly those without built up structures. The desire for permanently built stalls was also supported by customers who identified this as an improvement that would encourage them to visit the market more often. There is further a need for cement floors and drainage/ditches to avoid an unpleasant and perhaps unsafe environments for both vendors and market customers during rainy seasons.

Widen and build concrete sidewalks: sidewalks play a vital role in reaching and navigating within local markets. As a conduit for pedestrian movement and access, they enhance connectivity and promote walking for both customers and vendors from various points of the city to the markets. Many people walk to the markets, but many markets have no pedestrian paved sidewalks. As indicated in this report, people with disabilities would be unable to access the market, despite the entrances being wide the challenge intensifies inside the markets as people with disabilities cannot navigate easily. The city council should plan to build concrete sidewalks and widening the narrow ones. These issues should be addressed both in land use/urban plans and in urban transportation plans.

Designate access for emergency exists: this research found that there were insufficient or no fire extinguishers visible in all the surveyed markets and a fire truck would have difficulties in moving easily inside the market area. To protect vendors' livelihoods and assets and customers safety, there is a high need to improve the fire procedures within the market and designating emergency exists.

4.2.3. Market operations

Establish a kitchen incubator: This would benefit the market as it would reduce organic waste, it would benefit the vendor as they would still be able to sell their past prime produce, it would benefit local food businesses by creating opportunities, and it would benefit customers as they indicated that a desired improvement was a widening of the products supplied in the market.

4.2.4. Support for vendors

Better connect vendors with local farmers: This research found that many vendors purchase their stock from other markets, from a dealer, from local shops, from neighbouring villages and within the same markets or other towns or regions. Better connecting vendors with local farmers, would reduce the supply chain. This would improve the condition of the fruits and vegetables as they would arrive at the market in more peak condition. Moreover, if there are fewer people in between the customer and the farmer it may result in both improved prices for customers and improved income for vendors.

Improve storage of fresh products: to maintain quality of vegetables and fruits, there is a need of considering supplying refrigeration and improve storage in the local markets, as the lack of which may account for produce not being in peak condition.

Develop children's play spaces in the market: as it is widely known that markets are often female dominated spaces and the Arusha markets are no exception. With that, it makes sense that there would be many children in the market. Unfortunately, the market environment provides little, if anything, for these children to do. Although many of the vendors did not recommend this approach, and argued that they do not like to see children in the market area as they should stay in schools. Although it is true that school aged children should be in school, this does not take into account the children who are under school age, of which there would be many.

4.2.5. Market as public Spaces

Install seating facilities in markets: some people go to markets just to meet up with their friends and others for tourism purposes. Installation of features in market that would encourage it to act as a community and neighborhood gathering place. For example, as part of the design of markets, seating facilities for customers to sit and relax. There is also a need to better connect the markets to the local community and have them act as public spaces. This is especially important given Arusha[2] has a lack of public spaces. A community engagement process would help identify what types of activities local residents need and the ways the market can be adapted to support those activities.

4.3. Concluding Remarks

This research shows that local public markets serve the Arusha community in several ways, including provision of both an economic and social good. For instance, local public markets are places where people feel safe and comfortable "hanging out" and are the hallmark of good and healthy urbanism. They are places in a city that build a sense of community, culture, social capital, and community revitalization, they facilitate an improvised and spontaneous synergy of urban residents and communities, which is at the core of everyday life of the city. They are also a place where people can earn a living, have access to fresh local food, provide a safe open area to engage in physical activity, creates a social space in neighbourhoods for locals to meet and interact with one another. Local public markets foster sustained links between rural and urban communities. In addition, local markets can be used to make local produced food visible in the public space on a regular basis.

Given the trends of changes in life styles and in people's diet in Arusha as in other cities and towns in Tanzania, and the pressures from both urbanization and globalization, and based on the findings of this research, there is a great need to reinforce the implementation of national urban policies and emphasize on the importance of investing in, and strengthening already existing local public market infrastructures in order for them to continue to serve local urban residents.

[2] See https://healthbridge.ca/images/uploads/library/FINAL_REPORT_Mapping_Perception_Arusha.pdf

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