

HCP REPORT NO. 2: THE URBAN FOOD SYSTEM OF MAPUTO, MOZAMBIQUE

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THE URBAN FOOD SYSTEM OF MAPUTO, MOZAMBIQUE

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OF MAPUTO, MOZAMBIQUE

ABEL CHIKANDA AND INÊS RAIMUNDO

SERIES EDITOR: PROF. JONATHAN CRUSH

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No 1 *The Urban Food System of Nanjing, China*

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1. BACKGROUND

Maputo, the capital and largest city of Mozambique, is located on Maputo Bay in the southern part of the country and covers an area of 300km² (Figure 1). The initial colonial settlement from the mid-16th to the late 19th century was on the northern side of the estuary, on a sandy island cut off from the mainland by swamps, to provide a line of defence against land invasions (Jenkins 2010). In 1858, the settlement had only 900 residents (Jenkins 2012). Called Lourenço Marques by the Portuguese, it was elevated to town status in 1876 and city status in 1887 (Newitt 1995). Its growth was largely spurred by its relative proximity to the goldfields of the South African Witwatersrand. Towards the end of the 19th century, the construction of a railway line linking Maputo and Johannesburg made the port of Lourenço Marques an important commercial hub (Katzenellenbogen 1982), and it was capital of the Portuguese colony from 1898 until Mozambique's independence in 1975, following a protracted liberation war (Munslow 1983).

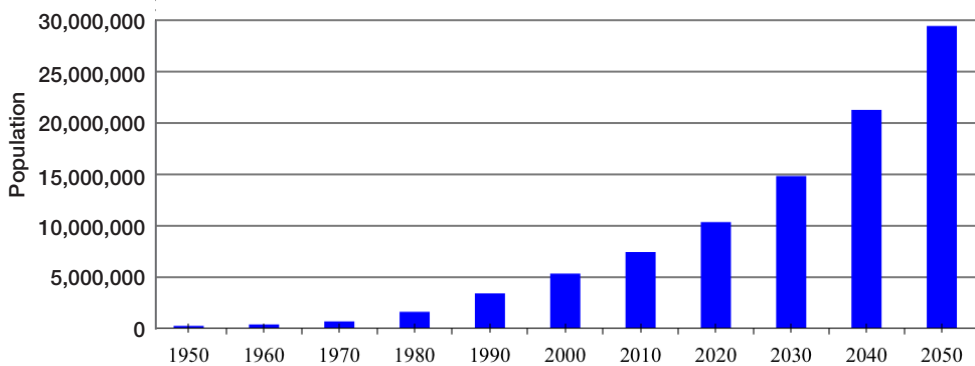
The colonial period saw growth of the city primarily as a result of economic expansion and industrial diversification in South Africa, for which it remained a major port. Also, Portuguese settlers arrived in the colony in considerable numbers. At the same time, the Portuguese authorities placed restrictions on the movement of Mozambicans into urban areas. The local population referred to urban areas as *xilunguine* (meaning “where white people live” in XiRonga, a language spoken in southern Mozambique) (Penvenne 1995). The Portuguese, like their South African neighbours, pursued policies of strict urban racial segregation. Mozambicans were employed mostly as unskilled labour in the railways and port, or domestic workers in the “white” city. They lived in areas outside the planned city centre in growing *caniço* informal settlements to the north-west (Penvenne 1995).

At independence in 1975, Portuguese settlers left the city *en masse* for Portugal and South Africa. By 1980, Maputo's population had reached a quarter of a million and grew rapidly as the country descended into civil war in the 1980s (Hanlon 1984, 1986). Over one million people sought refuge in neighbouring countries and as many as three million were internally displaced by the war. Many sought shelter in safer urban areas such as Maputo thereby “creating huge unplanned settlements on the city's periphery” (Kihato et al. 2013: 70).

only 224,000 in 1950, but had tripled to 660,000 by 1970. By 1990, 3.4 million people or 25% of the country's population were living in urban centres (Figure 2).

The urban population in Mozambique is estimated to have grown to 8.5 million in 2014, representing 32% of the country's population. From 2010 to 2015, the urban population of the country grew at a rate of 0.8% per year. According to the UN, almost half of the country's population (49%) will live in urban areas by 2050. If this prediction is accurate, more than 29 million people are expected to be living in Mozambican cities by 2050.

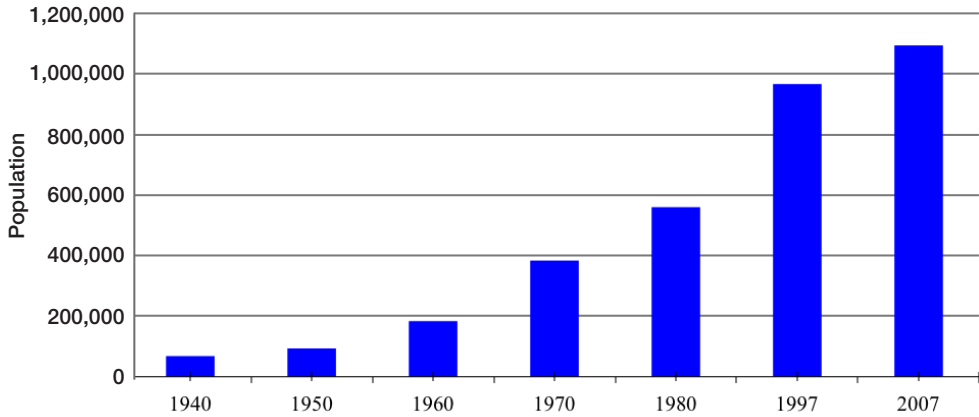
FIGURE 2: Mozambican Population Residing in Urban Areas, 1950-2050



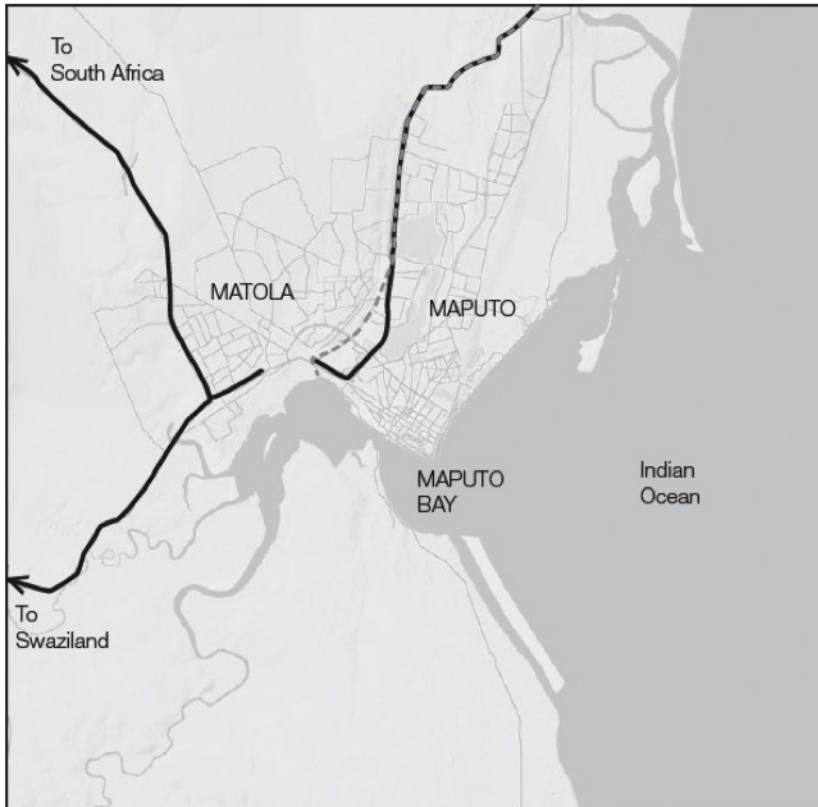
Source: UN (2014b)

The city of Maputo has been at the forefront of urbanization in Mozambique. In 1940, Maputo was a small urban centre with 68,223 inhabitants and, a decade later, its population was 93,516 (UN 1955) (Figure 3). By 1960 the city's population had risen to 183,798, before reaching 383,775 in 1970 (UN 1965, 1986). Maputo's population further increased to 560,160 in 1980, and had reached 966,837 by 1997 (Da Silva 2011, INE 2009, Jenkins 2013). Currently the city's population is around 1.3 million (UN 2013), and population projection models suggest that it will exceed 1.8 million by 2025 (UN 2012).

The Greater Maputo region includes Matola, an industrial satellite town that was developed in the 1960s and 1970s (Jenkins 2000) (Figure 4). Matola has become popular with new arrivals from the countryside and those relocating from the crowded neighbourhoods of Maputo (Paulo et al. 2007). However, the two cities have had separate administrations since 1987 and Matola is the provincial capital of Maputo Province. According to the 1997 Census, Matola had a population of 440,927, which increased by 53% to 675,422 by 2007 (INE 2009). At this rate of growth, the city's population is projected to exceed 1.1 million by 2020 (UN 2012) (Figure 5).

FIGURE 3: The Growth of Maputo, 1950-2007

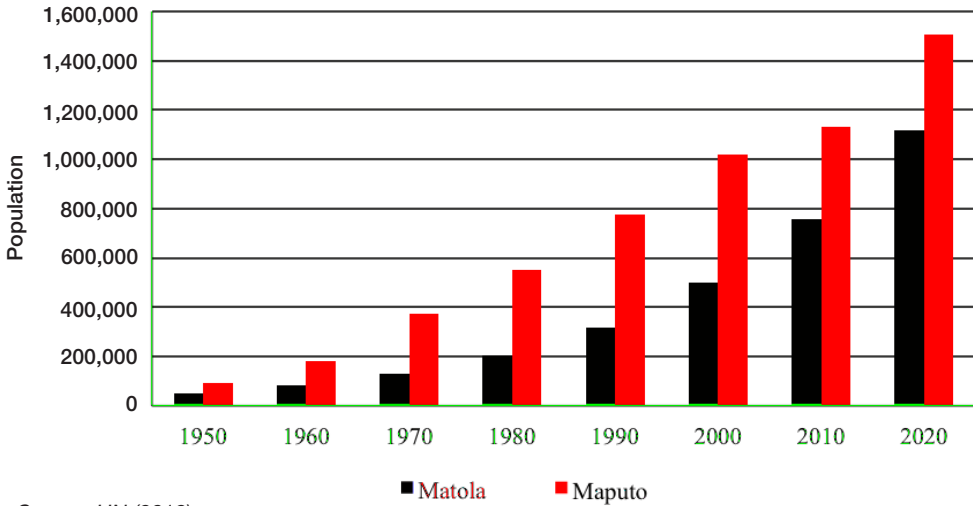
Sources: Da Silva (2011), INE (2009), Jenkins (2013), UN (1955, 1965, 1986)

FIGURE 4: The Greater Maputo City-Region

— Main roads - - - Matola/Maputo boundary

Source: Raimundo et al. (2014)

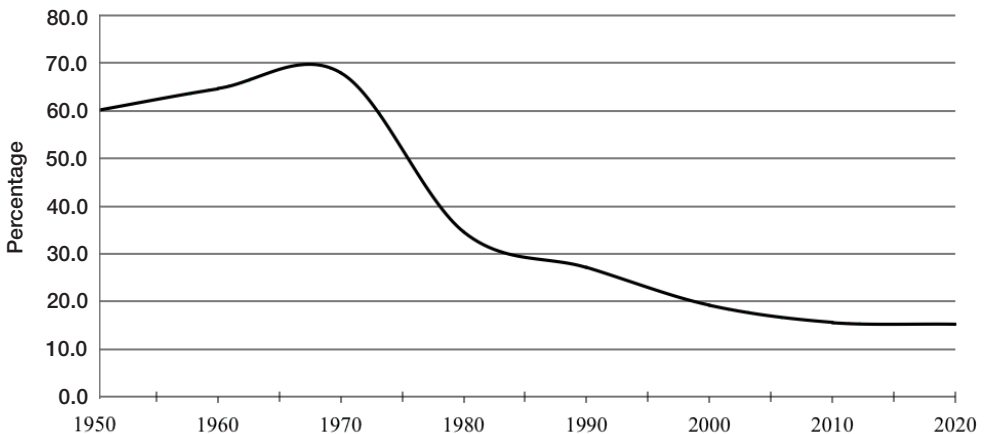
FIGURE 5: The Growth of the Greater Maputo Region, 1950-2020



Source: UN (2012)

Even though Maputo is by far the largest and most important city in Mozambique, its relative position has been steadily declining as smaller cities across the country continue to grow more rapidly. As recently as 1970, Maputo’s share of the total urban population was nearly 70%, but this had declined to 16% by 2010 (UN 2012) (Figure 6). Even though the city of Maputo continues to grow at a fast pace, internal migrants are considering smaller cities where prospects for employment are better than in overcrowded bigger cities. This largely explains the fall in the proportion of Maputo’s population relative to the country’s urban population.

FIGURE 6: Proportion of Mozambican Urban Population in Maputo, 1950-2020



Source: UN (2012)

2.2 Gender and Age of Population

Census data shows the growing feminization of Maputo's urban population over time. In 1980 males (52%) slightly exceeded females, but by the time the war ended females were in the majority (Raimundo et al. 2014). The proportion of women increased further, from 51% in 1997 to 51.4% in 2007 (Table 1). Feminization is a product of increased in-migration from the countryside and the fact that migration streams to neighbouring South Africa are dominated by men. However, the projected population distribution of Maputo by age and gender for 2015 shows that women outnumber men in all age groups except infants (Table 2).

TABLE 1: The Feminization of Maputo, 1980-2007

	1980		1997		2007	
	No.	%	No.	%	No.	%
Male	382,933	51.8	473,728	49.0	532,570	48.6
Female	356,144	48.2	492,109	51.0	562,058	51.4
Total	739,077	100.0	966,837	100.0	1,094,628	100.0

Source: Raimundo et al. (2014)

TABLE 2: Projected Population Distribution of Maputo by Age and Sex, 2015

	Male	Female	Total	Sex ratio
0	13,733	13,692	27,425	100.3
1-4	53,909	54,196	108,105	99.5
5-9	68,576	69,250	137,826	99.0
10-14	67,626	68,859	136,485	98.2
15-19	67,630	70,900	138,530	95.4
20-24	66,582	70,343	136,925	94.7
25-29	59,209	64,530	123,739	91.8
30-34	48,171	53,929	102,100	89.3
35-39	37,430	43,555	80,985	85.9
40-44	30,379	36,521	66,900	83.2
45-49	24,510	29,182	53,692	84.0
50-54	18,543	21,901	40,444	84.7
55-59	14,832	16,892	31,724	87.8
60-64	10,906	11,185	22,091	97.5
65-69	7,162	7,720	14,882	92.8
70-74	3,947	4,923	8,870	80.2
75-79	2,255	3,311	5,566	68.1
80+	1,709	3,704	5,413	46.1
Total	597,109	644,593	1,241,702	92.6

Source: Instituto Nacional de Estatística (2009)

3. POPULATION DISTRIBUTION

3.1 Land Use

Together, Maputo and Matola occupy a land area of 675km², although 96% of the total urban population occupies only 320km² (Jenkins 2000). The rest of the land fits into the rural category. Current land-use data is not available, but data from 1998 shows that residential areas accounted for 35%, economic activities for 5%, and green/agricultural zones for 12% (Jenkins 2000) (Table 3). Jenkins (2000) notes that post-colonial Maputo and Matola have not expanded significantly in size, but have experienced densification of land use and infill, with the latter dominated by informal residential occupation of areas reserved for other uses or unsuitable for housing, such as ecologically sensitive areas.

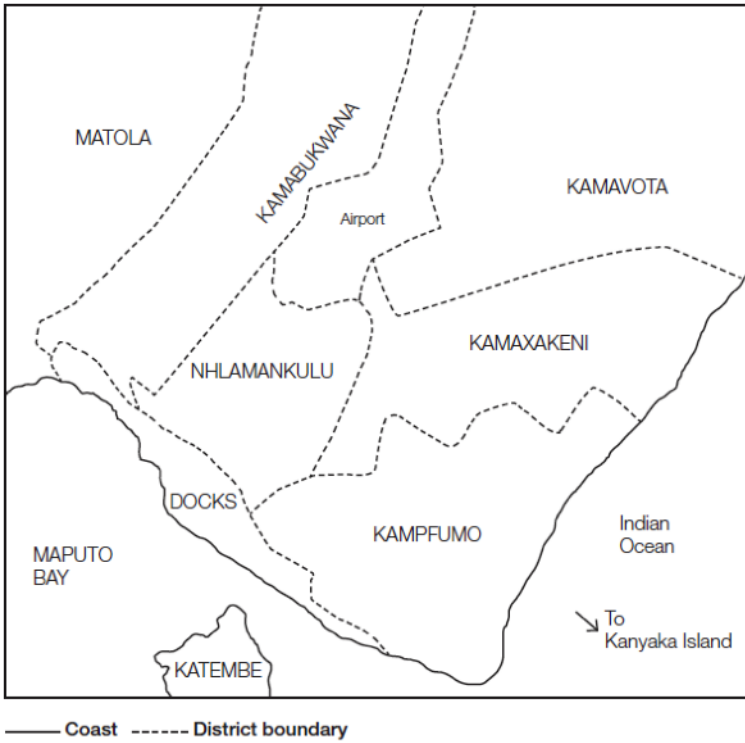
TABLE 3: Major Land Uses in Greater Maputo, 1998

	Matola		Maputo		Total	
	Ha	%	Ha	%	Ha	%
Residential (actual)	5,425	32	5,710	38	11,135	35
Residential (future planned)	637	4	1,119	8	1,756	6
Economic activities (actual)	944	6	623	4	1,567	5
Economic activities (future planned)	898	5	193	1	1,091	3
Social equipment	318	2	697	5	1,015	3
Recreation/parks	0	0	194	1	194	1
Green zones (urban agriculture)	1,869	11	1,859	12	3,728	12
Special uses	413	2	1,334	9	1,747	6
Expansion zone	6,195	37	1,818	12	8,013	25
Unsuitable for urban use	0	0	1,357	9	1,357	4
Total	16,699		14,904		31,603	

Source: Jenkins (2000: 214)

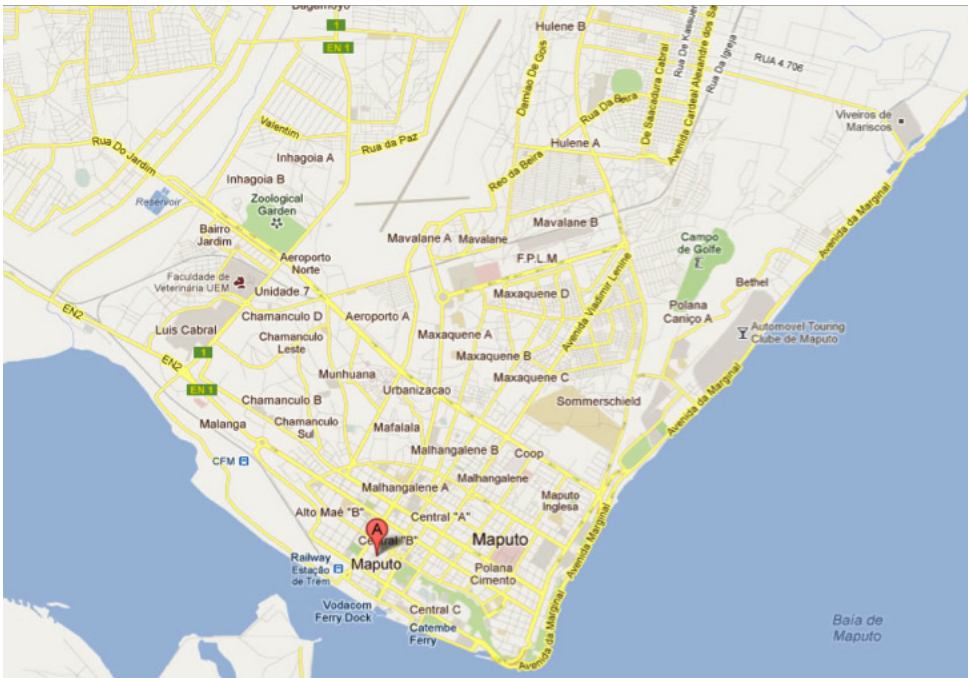
Maputo is divided into seven municipal districts, including KaNyaka Island with a population of only 5,000, and KaTembe across the bay with a population of 20,000 (Figure 7). The other five mainland districts each have a population of over 100,000. Districts are divided into *bairros* (or wards) for administrative purposes. According to Tvedten et al. (2013a), the urban landscape of Maputo is commonly divided into three areas. First, are the most affluent *bairros* in the *cidade* (“city of cement”), such as Bairro Central, Polana Cimento, Sommershield, Triunfo and Costa do Sol, which are characterized by high-rise buildings, shopping centres, hotels, restaurants, villas and gated communities (Figure 8). The majority of the population avoids going to these areas for employment, commercial activities or leisure purposes (Tvedten et al. 2013a).

FIGURE 7: Maputo Municipal Districts



Source: Raimundo et al. (2014)

FIGURE 8: Bairros of Maputo



Source: <http://www.istanbul-city-guide.com/map/mozambique/maputo-map.asp>

Second, in the old central *bairros* or *suburbios* such as Malanga, Chamankulo, Xipamanine and Micandjuine, population increase and a central location have led to a densification of the population, informalization of economic activities, a saturated housing market, and increased crime and insecurity. Those who do not live there covet the area primarily for its commercial opportunities (Tvedten et al. 2013a). Third, there are the peri-urban *bairros* such as Zimpeto, Malhazine, Inhagoia, 25 de Junho and Magoanine, which have a mixed socio-economic composition and are undergoing rapid change. For those with the necessary resources, there is scope for agency and social mobility, but the poorest risk expulsion (Tvedten et al. 2013a). A recent study of Maputo suggests that its spatial structure is now fundamentally dualistic, comprising “the rich city or city of tall buildings” (KaMpfumo) and the “poverty belt” (all other districts) (Figure 9) (Kihato et al. 2013).

FIGURE 9: Maputo’s Concrete City and Poverty Belt



Source: <http://www.africatravelresource.com/maputo-safari/>

3.2 Population Redistribution

A comparison of the last three censuses (1980, 1997 and 2007) shows a northward shift in the centre of gravity of the overall Maputo City population (Jenkins and Andersen 2011). Although the city almost doubled in size between 1980 and 2007, the distribution of growth has been geographically uneven (Table 4). The two central municipal districts of KaMpfumo and Nhlamakulu actually lost population from 1997 to 2007 – a decline of almost 30,000 in total. KaMpfumo underwent a gentrification process that saw the poor areas of the district replaced by upmarket housing and the relocation of the former residents. However, pock-

ets of poverty remain and it is still possible to see “a palace standing side by side with a rudimentary shack” (Barros et al. 2014: 80). There was a slight increase in population in KaMaxakeni municipal district between 1997 and 2007, but most of the growth was concentrated in the peripheral districts of KaMavota (which grew by over 60,000) and KaMabukwana (which adjoins Matola and grew by over 80,000 as a result of internal relocation and in-migration). KaMavota was the focus of most planned urban development in the 1980s (Jenkins and Andersen 2011).

TABLE 4: Population Redistribution in Maputo, 1980-2007

	1980	1997	2007	Change (1980-2007)	
				Difference	%
District 1 (rural*)	16,420	20,455	20,455	4,035	24.6
District 1 (urban) – KaMpfumo	114,284	129,067	107,530	-6,754	-5.9
District 2 – Nhlamankulu	117,473	161,366	155,385	37,912	32.3
District 3 – KaMaxakeni	106,742	209,909	222,756	116,014	108.7
District 4 – KaMavota	82,263	227,527	293,361	211,098	256.6
District 5 – KaMabukwana	122,978	210,261	290,696	167,718	136.4
Total	560,160	958,585	1,090,183	530,023	94.6
* The rural part of District 1 includes the area across the bay at KaTembe and the island of KaNyaka.					
Source: Jenkins and Andersen (2011)					

4. THE FORMAL ECONOMY

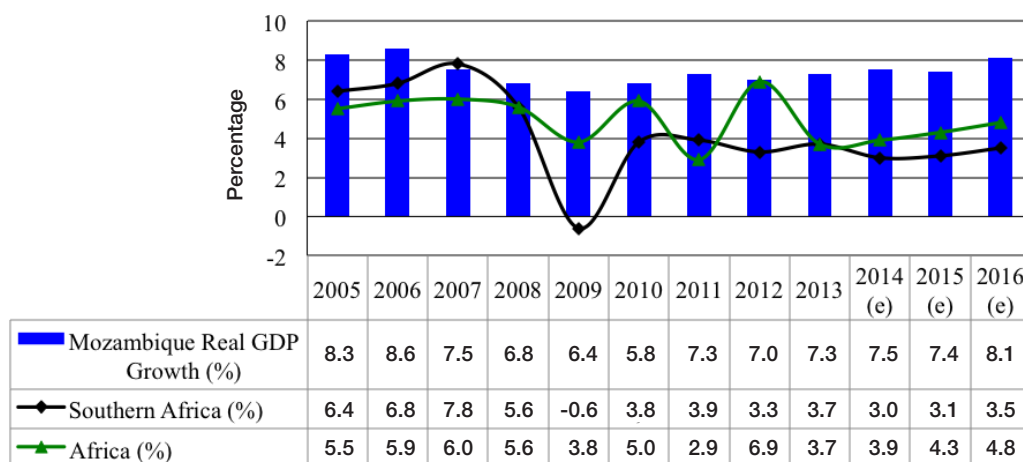
4.1 Main Economic Activities

The strong performance of the Mozambican economy over the last decade is illustrated by the fact that real GDP was consistently in the 6-9% per annum range, much higher than in Africa as a whole and Southern Africa in particular (Figure 10). Agriculture, forestry, fishing and hunting accounted for 29% of GDP in 2013, followed by wholesale and retail services (14%), manufacturing (11%), finance, real estate and business services (10%), and transport, storage and communication (9%) (Table 5).

UN-Habitat (2014) notes that, until the late 1990s, Maputo’s economy revolved around its port function. However, following the end of apartheid in South Africa, it became the end point of the transboundary Maputo Development Corridor (MDC) (Almeida-Santos et al. 2015). This Spatial Development Initiative (SDI) corridor comprised the road and rail network connecting Maputo to South Africa’s Gauteng and Mpumalanga provinces. By 2015, the MDC

had attracted more than USD2.8 billion in investment and was responsible for 42% of Mozambique's export revenues. Second, and connected to this, was the construction of the export-oriented Mozal USD1 billion aluminium smelting plant on the outskirts of Maputo. The plant has become one of the city's largest employers (5,000 to 6,000 jobs during initial construction and over 1,000 permanent employees) (UN-Habitat 2014).

FIGURE 10: Real GDP Growth in Mozambique, 2006-2016



Source: Almeida-Santos et al. (2014: 3)

TABLE 5: Real GDP by Sector, 2013

	%
Agriculture, forestry, fishing and hunting	28.7
Wholesale and retail trade; repair of vehicles household goods; restaurants and hotels	13.7
Manufacturing	11.3
Finance, real estate and business services	10.3
Transport, storage and communication	9.4
Public administration and defence	6.2
Electricity, gas and water	3.6
Construction	2.7
Mining and quarrying	3.6
Other services	10.6

Source: Almeida-Santos et al. (2015: 5)

FIGURE 11: Maputo Harbour

Source: <http://www.wikiwand.com/pt/Maputo>

4.2 Formal Sector Employment

As in most African countries, formal sector employment in Mozambique is still very low. The formal sector is estimated at only 700,000 workers out of a total labour force of 11.6 million people (DTCIDC 2015). Furthermore, an estimated 300,000 youth join the labour force every year, yet only a small proportion enter the formal labour market. At national level, formal employment increased from 8.8% in 2002/03 to 11.7% in 2008/09 (Table 6). Maputo leads in formal employment at national level; almost 45% of the residents of Maputo were in formal employment in 2008/09, which is much higher than in other urban areas (29%). Even though most of the people in the highest quintile are in formal employment (53%), those in the lowest quintile seem to be catching up; the proportion of this group in formal employment increased from 15.4% in 2002/03 to 39% in 2008/09. In short, while the informal sector is an important economic activity for a large number of people in Maputo, the formal sector is assuming an ever-greater role.

TABLE 6: Types of Employment Among the Economically Active Population

	Formal employment %		Informal employment %		Other %	
	2002/03	2008/09	2002/03	2008/09	2002/03	2008/09
National	8.8	11.71	91.1	87.87	0.1	0.42
Rural	3.2	4.31	96.7	95.52	0.1	0.17
Urban	23.5	29.44	76.4	69.53	0.1	1.03
Maputo City	35.6	44.57	64.4	53.36	0.0	2.07
Highest quintile	50.5	52.98	49.5	43.14	0.0	3.88
Lowest quintile	15.4	39.01	84.6	57.43	0.0	3.56

Source: Paulo et al. (2011: 16)

5. THE INFORMAL ECONOMY

5.1 Size and Importance

Even though Mozambique has posted impressive macro-economic growth rates in the last two decades, there has been only limited formal sector employment generation. The majority of the country's working population is still absorbed in informal employment and self-employment (Cappiello 2008, Jenkins 2013). The importance of the informal economy is such that the Ministry of Planning and Development estimated that informal activity represented 41% of GDP in 2003 and 40% in 2004 (Byiers 2008, 2009). A 2005 national sample survey concluded that 75% of the economically active population was employed informally in Mozambique, while a survey of Maputo found that 70% of households were involved in informal economic activities and 64% of jobs were in the informal economy (Paulo et al. 2007). The major informal activities include commerce and transport (50%), services (26%), industry and construction (14%), and agriculture (11%) (Jenkins 2013). Most of those in the commerce and transport category are involved in informal retail of food and a wide variety of other consumer products, including second-hand clothing imported from Europe and North America (Brooks 2010, 2015, Ericsson and Brooks 2015), cell phone airtime (Brouwer 2010), water (Ahlers et al. 2013, Bhatt 2014, Matsinhe et al. 2008, Zuin et al. 2014), charcoal (Brouwer and Magane 1999, Luz et al. 2015), recycled materials (Allen and Jossias 2011, Tvedten et al. 2015), traditional medicines (Krog et al. 2006) and (the subject of this audit) foodstuffs.

Women's access to formal employment in Mozambique is extremely limited and, as a result, women tend to dominate informal employment and self-employment in cities like Maputo (Morna et al. 2014). A 2004 study by the National Institute of Statistics indicated that there were 7,659,200 informal workers in the country and that, out of these, 4,480,400 (or 59%) were women (Morna et al. 2014). Paulo et al.'s (2007) survey in Maputo found that 70% of households were involved in informal economic activities, with a significantly higher participation rate by female-headed households (86%) compared to male-headed households (62%). Unemployed male youth have also joined the informal sector in increasing numbers (War on Want 2006). This has led to intensified gender struggles in the sector (Agadjanian 2005, Monteiro 2002).

The informal economy in Mozambique is beginning to show evidence of self-organization. Two main organizations have emerged. The first, the *Associação dos Operadores e Trabalhadores do Sector Informal* (Association of Informal Sector Operators and Workers or ASSOTSI) was launched in Maputo in 1998 (War on Want 2006). It was formed as a full affiliate of Mozambique's trade union

federation, *Organização dos Trabalhadores de Moçambique* (OTM), and was launched to avoid police harassment of informal traders. In Mozambique, the expression *dumba-nengue* (“trust your feet”) is still used to refer to activities in the informal economy. The association had a membership of nearly 5,000 paid-up members operating in 59 markets in Maputo in 2006 (War on Want 2006), and the number currently stands at more than 40,000 (Dibben et al. 2015). The second organization, the Association of Informal Sector Traders and Importers, better known as *Mukhero* (“to carry”), was established in 1999 and legally recognized in 2004 (War on Want 2006). A distinctive feature of the organization is that most of the *mukheristas* are based in Maputo and the majority (70%) are women.

FIGURE 12: Informal Water Vendor in Bairro Hulene B



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FIGURE 13: Informal Charcoal Vendor in Bairro Magoanine A



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5.2 Policies towards Informality

A recent review of the literature on the informal economy in Mozambique shows that its expansion can be attributed to the implementation of a structural adjustment programme after a devastating period of civil war and a faltering economy (Rogerson 2015). The adoption of neo-liberal policy measures exerted significant hardship on a large proportion of the urban populace “and provided a further impetus for informalisation of the urban economy” (Ahlers et al. 2013: 474). The subsequent job losses in the formal economy initially forced women to work in the informal sector to supplement household income (Ahlers et al. 2013: 474). Furthermore, the civil conflict forced many people to flee from the rural areas to urban areas, which were perceived to be safer (Xaba et al. 2002). By the 2000s, “a large share of the urban population, including rural migrants, former soldiers and retrenched private and public sector workers, depend(ed) on unregistered, small-scale income activities” (Kamete and Lindell 2010: 902).

The Maputo City government has traditionally adopted a tolerant approach to the informal economy (Kamete and Lindell 2010). The city generally aims to discourage illegality through registration and formalization. This has been achieved primarily through two strategies. First, formal urban markets have been established where vendors pay rent for stands. Second, existing informal markets have been upgraded, which has forced vendors to rent new stands (Ulset 2010). Xikhelene is one such informal market that has been upgraded, thereby eliminating all associated trading on the streets around the market. In addition, a Simplified Tax for Small Contributors (ISPC) was introduced in 2009 that requires the trader to pay business tax either as a lump sum or as a percentage of turnover (Dibben et al. 2015). This initiative was part of the government’s five-year plan to improve the tax system and broaden the tax base. The ISPC has been used to mobilize informal businesses to register and, between 2007 and 2012, nearly 119,000 further potential taxpayers were registered with the ISPC (OECD/ FIIAPP 2015: 137). This reflects the success of the Mozambique Revenue Authority (AT or *Autoridade Tributária de Moçambique*), which ran an aggressive national campaign titled “Together We Make Mozambique” that encouraged individuals and businesses to register as taxpayers (Table 7).

TABLE 7: Annual Registration of Taxpayers in Mozambique, 1999-2012

Description	1999-2004	2005	2006	2007	2008	2009	2010	2011	2012
Individuals	126,373	116,047	96,409	186,324	187,185	183,219	257,434	321,292	498,440
Businesses	10,597	2,522	36,976	3,554	4,384	4,933	5,068	6,286	7,814
Total	136,970	118,569	133,385	189,878	191,569	188,152	262,502	327,578	506,254
Cumulative total	136,970	255,539	388,924	578,802	770,371	958,523	1,221,025	1,548,603	2,054,857

Source: OECD/FIIAPP (2015: 139)

The policy drive towards formalization has been contested by informal traders. As Rogerson (2015) notes, underpinning negative official attitudes are perceived linkages between informal activity and crime, and the opposition of some propertied groups in the city towards the informal economy. The consequence has been a mix of repressive tolerance and direct aggression (Kamete 2013).

Harassment of street vendors and confiscation of their merchandise are frequent occurrences. Unplanned marketplaces are considered illegal, even though the local government collects fees in many of them. These markets are viewed as a transitory feature of the urban landscape, while at the same time the local government ensures their continued provisional form by hindering vendors from investing in permanent market structures. The presage of eviction hanging over some of these markets often generates a sense of uncertainty among the vendors (Kamete and Lindell 2010: 902).

A further signal that repressive tolerance is the current policy towards the informal economy in Maputo is the minimal support measures, apparent in an interview with the Ministry of Industry and Commerce (Gobe 2014). The business growth support programme, the Enterprise and Private Sector Development Competitiveness Project (PACDE), was designed to offer funding support for licensed enterprises. Unlicensed businesses in the informal economy were ineligible. Simply put, “if it is not licensed, it does not exist and the Government will not support it” (Gobe 2014).

A recent development in the Mozambican informal economy has been the growth of communities of foreign traders operating in the markets of Maputo (Rogerson 2015). Most of the traders originate from countries such as China, Nigeria, Burundi and Rwanda. Some analysts have observed that the law in Mozambique actually favours the settlement and subsequent participation of foreign nationals in the informal economy. Manthusse (2014), for instance, notes that “here in Mozambique the law has made it easy for foreigners to settle and establish their businesses; perhaps Mozambican law is favourable towards foreigners.”

6. POVERTY AND INCOME

6.1 Income and Expenditure

There has been a general decrease in poverty rates across Mozambique over the past two decades (Paulo et al. 2011). Data from the Ministry of Planning and Development (MPD 2010) indicates that the poverty headcount measure in Maputo increased from 48% in 1996/97 to 54% in 2002/03, before falling dramatically to 36% in 2008/09. However, the World Bank (2010) noted that

70% of the urban population in Mozambique still lived in settlements that had slum characteristics, such as dense unregulated growth, lack of common infrastructural services, and homes made of precarious materials. UN-Habitat (2014) notes that, despite national economic growth, there has been growing poverty and inequality in Maputo. Increasing inequality adds to the sense of impoverishment and marginalization in the poverty belt (Paulo et al. 2011). In February 2008, for example, violent protests broke out in poor neighbourhoods due to crippling increases in the price of fuel and food in Maputo.

Data on changes in income and expenditure suggest that, on average, the residents of Maputo enjoy a higher standard of living than residents of other cities. For instance, their average monthly income of MZN1,410 in 2008/09 was much higher than the national average (MZN290) and the average in other urban areas (MZN663) (Table 8). Likewise, their expenditure of MZN2,175 in 2008/09 was nearly double that in other urban areas (MZN1,114). However, there is a high degree of income variability. Those in the highest income quintile in Maputo earned MZN4,315 per month in 2008/09, more than 10 times the MZN388 per month earned by those in the lowest quintile. Similarly, the average monthly expenditure of those in the highest quintile in Maputo was MZN4,396 in 2008/09, significantly higher than the MZN417 per month spent by those in the lowest quintile. Interestingly, the average monthly expenditure of both those in the highest and lowest quintiles exceeds the average monthly income, which suggests that some households are living in debt.

TABLE 8: Monthly Per Capita Income and Expenditure

	Income (MZN)		Expenditure (MZN)	
	2002/03	2008/09	2002/03	2008/09
National	325	290	324	726
Rural	246	128	231	557
Urban	490	663	523	1,114
Maputo City	828	1,410	928	2,175
Highest quintile	n.a.	4,315	2,932	4,396
Lowest quintile	n.a.	388	237	417

Source: Paulo et al. (2011: 16)

Within Maputo, there is clear evidence that just under one-third of the households are female-headed, and that the poverty rate in every district, from the most to the least wealthy, is higher for female-headed households than for male-headed households (Table 9).

The expenditure patterns of the residents of Maputo differ markedly from the rest of the country's population (Table 10). For instance, they spend a smaller proportion of their monthly income on food compared to residents of other cities (23.4% compared to 37.2% in 2008/09), but spend more on housing (36.6%

compared to 30.4% in 2008/09) and transport (7.4% compared to 5.4% in 2008/09). In Maputo there is a marked difference in the expenditure patterns of the high earning and low earning groups. Those in the lowest quintile are likely to spend almost half of their monthly income on food (47.9% of budget in 2008/09) compared to less than 20% for those in the highest quintile (17.8%). Conversely, the high income earners are more likely to spend proportionately more on housing and transport than the low income earners.

TABLE 9: Poverty Rate by Type of Household Head

Urban districts	Proportion female-headed households	Poverty rate male-headed households	Poverty rate female-headed households
KaMpfumo	28.0	2.0	2.4
KaMaxakeni	33.6	39.0	35.1
Nhlamankulu	28.6	26.1	23.7
KaMavota	28.3	29.2	26.6
KaMabukwana	29.0	36.0	34.0

Source: Tvedten et al. (2013b: 2)

TABLE 10: Monthly Per Capita Expenditures on Selected Items

	Food (%)		Housing (%)		Transport (%)		Furniture (%)		Other (%)	
	02/03	08/09	02/03	08/09	02/03	08/09	02/03	08/09	02/03	08/09
Rural	65.5	69.3	18.1	15.2	1.9	2.6	5.9	2.6	8.6	10.3
Urban	46.1	37.2	28.1	30.4	3.8	5.4	9.0	10.6	13.0	16.4
Maputo City	30.6	23.4	39.1	36.6	6.7	7.4	10.3	11.2	13.2	21.3
Highest quintile	16.3	17.8	42.7	37.6	7.9	8.3	13.8	12.6	19.3	23.6
Lowest quintile	42.7	47.9	34.8	32.1	4.9	4.7	8.9	6.4	8.9	8.8

Source: Paulo et al. (2011: 16)

6.2 Urban Poverty

According to Tvedten et al (2013a), the very poorest (*xiculungo* or “destitutes”) are largely imprisoned in their poverty with limited options for exploiting urban spaces. They often depend on informal economic activities in their own *bairro*, where income-earning opportunities are rare. They lack both necessary social networks and the money to invest in merchandise and transportation. Furthermore, even though the poor (*xangamo* or “chronically” poor) also struggle against many odds, they are in a position (often through informal social networks) to move outside their own *bairro* and seek employment and income in wealthier and more populous suburbs and markets. Although the competition is tough, options for capital accumulation are better; however, *xangamo* are also vulnerable both to material losses and to deterioration of their social conditions.

The wealthy or “better off” consist of two groups: those who are regarded as having worked hard and who “deserve” their wealth (*xantambuluku*), and those

who are believed to have become wealthy through the exploitation of others (*xigogo*) (Tvedten et al. 2013a). The wealthy are generally considered to belong to the *cidade* and hence a different world, but they are also present in some of the sub-urban and peri-urban *bairros*. While there are variations within each of these categories in terms of levels of poverty and well-being, moving between the categories is considered difficult. While the dynamic urban context holds many economic possibilities and options for social mobility, these are generally regarded as being unattainable for most people. The ensuing notion of being captured in poverty, and not being able to take part in what the city has to offer, is at the heart of current dissatisfaction among poor people in Maputo's poor *bairros*.

About three-quarters of Maputo's population live in informal *bairros* in the poverty belt. Although these *bairros* share certain general characteristics, including overcrowding, inadequate services and high levels of informal economic activity, they vary in character and appearance. For example, most of the more central *bairros* have been described as "congested and hectic, with over-populated houses, narrow alleyways and filled with small shops, markets, vendors, repair-shops, bars and other institutions" and a large number of people who rent houses or rooms to be closer to the city centre (Paulo et al. 2007:29). In peri-urban *bairros*, there is less congestion, a more orderly arrangement of housing, fewer commercial activities, and people tend to leave during the day to work or seek work elsewhere. In all semi-formal and informal *bairros*, the poorest and most destitute live in rural "stick houses" or corrugated iron shacks (Paulo et al. 2007:56).

According to Paulo et al. (2007), Maputo residents distinguish five categories of poor household, each with their own local name:

- *Xisiwana xantumbuluku* (the poor by nature) are the poorest households of longstanding without the means to improve their situation;
- *Xisiwane xangamo* have become poor as a result of specific events or circumstances, including *xiculungo* households (usually headed by single, divorced or widowed women with no social networks or rural connections);
- *Xisiwana xakwiancha* households are able to conserve and use what little they have to "have bread and tea every day";
- *Xisiwana nkansakaia* households are headed by single women with many children; and
- *Xisiwana xakwiantxahana* households have a small but regular income that is still insufficient to feed everyone (Paulo et al. 2007).

Many people live in large households because separate dwellings are unaffordable. Also, women are taking increasing control over their own lives by forming female-headed households and establishing close female-focused social networks (Paulo et al. 2007).

In an attempt to redress the pressing problem of urban poverty, the government

of Mozambique introduced a series of initiatives ranging from revenue transfers to improvements in capacity and community building. For instance, in 2013, pensions for the most vulnerable increased following an increase in budget allocations to social spending (Almeida-Santos et al. 2015). Mozambique is attempting to remedy jobless growth by incorporating employment creation, industrialization and business improvement policies into its most recent policy documents, which include a Poverty Reduction Strategy Paper, economic development strategy and government plans (Almeida-Santos et al. 2015).

6.3 Service Provision

Since the mid-1990s, access to potable water has increased dramatically in the urban areas of Mozambique. In 2010, an estimated 78% had access, up from 56% ten years earlier (UN-Habitat 2010b). The main natural water sources are surface water (rivers, lakes) and underground water (springs, boreholes). UN-Habitat (2010b) notes that only three out of 84 boreholes on the periphery of Maputo are equipped with automatic chlorination systems. These boreholes are often located close to latrines. More importantly, Maputo has a high concentration of consumers in both urban and peri-urban settlements who experience low to non-existent levels of water service delivery (UN-Habitat 2010b). In Maputo, four-fifths of households are not connected to a central sewerage system (UN-Habitat 2010b). Consequently, only 10% of Maputo's sewage is treated, while the bulk (90%) ends up in the sea as raw sewage (UN-Habitat 2009).

The basic inequalities between Maputo's concrete city and the poverty belt can be seen in the level of service provision in the various districts (Table 11). The vast majority (over 90%) of the 27,000 housing units in the wealthier parts of the city have electricity, toilets and access to running water on-site (Barros et al. 2014). In the poverty belt, there are differences from district to district but, in each, 30-40% of houses do not have electricity, 70-80% do not have toilets and as many as 64% (in Kamavota) do not have water on site.

TABLE 11: Services in Municipal Districts, 2007

	Ka Mpfumo	Nhla-mankulu	KaMax-akeni	KaMa-vota	KaMa-bukwana	KaTembe	KaNyaka
No. of houses	26,884	30,315	41,443	56,395	57,995	4,523	969
Persons/km ²	8,788	19,236	18,421	2,706	5,503	174	124
% electricity	97.9	55.3	67.8	61.3	54.0	42.5	18.6
% toilets	93.2	29.1	19.0	22.4	23.0	11.3	4.5
% water	92.0	77.2	53.6	36.3	52.8	15.9	1.4
% cement and brick constructions	97.8	72.4	87.9	89.8	83.6	5.3	16.7
% wood, palm and other	2.2	2.8	12.1	1.0	16.4	47.4	83.3

Source: Adapted from Barros et al. (2014: 78)

6.4 Natural Disasters and Climate Change Risk

Environmental risk and vulnerability is a major source of concern for residents in Maputo. The city's low-elevation zones with flat topography are host to large slum concentrations (UN-Habitat 2014). During severe flooding in 2000, two million Mozambicans were affected, with 650,000 forced from their homes – a possible portent of future environmental change impacts (UN-Habitat 2014). The floods also resulted in at least 700 deaths (Frances and Hanlon 2001). The majority of the capital's inhabitants are at risk of natural hazards such as floods and landslides. Other impacts of climate change on Maputo are summarized in Table 12.

TABLE 12: Sectors and Areas of Maputo Vulnerable to Extreme Weather Events

Sector or area	Climate change related event	Impact or consequences
Coastal zone and ecosystems	Tropical cyclones	Damage to coastal infrastructure, dunes, beaches and other natural features
	Rising sea level and storm flow	Increased erosion or damage to coastal infrastructure, dunes, beaches, and other natural features Loss of coastal wetlands, mangroves and other coastal habitats Higher costs for maintenance and expansion of coastal erosion controls (natural or human-made) Saltwater intrusion into coastal aquifers Higher risk of pollution from coastal hazardous waste sites Reduced effectiveness of sea walls
Transportation systems	Variations in temperature and heavy rainfall	Increased damage to road surfaces and bridges Increased maintenance requirements for roadside/pavement
Wetlands and urban agriculture	Heavy precipitation	Increased risk of flooding
	Dry season	Crop failures, water scarcity, drying of water reservoirs, and stronger demand for irrigation Increased risk of habitat loss (mangroves) and salt intrusion
Human settlements and infrastructure	Tropical cyclones	Damage to housing and infrastructure
	Heavy rainfall	Damage to housing and infrastructure Need for new or upgraded flood and erosion control structures Landslides, road washouts and flooding Increased demands on storm water management systems and sewer overflows
	Rising sea levels	Reduced effectiveness of sea walls Damage to housing and infrastructure
Health, food and waste management	Heavy rainfall	Increase in vector-borne diseases (malaria, cholera, etc.) Need for new waste collection, management and treatment systems

Source: UN-Habitat (2010a: 10)

FIGURE 14: Floods in Central Maputo, 2012

Source: <http://www.alamy.com/stock-photo/kilomet.html>

The frequency and intensity of flooding in low-lying coastal cities such as Maputo has led to a flurry of research that focuses on the vulnerability of the poor to climate change (Raimundo and Frayne 2012). Even though climate change is one of the main drivers of flooding (storm occurrence and intensity), local urban change has also been blamed, including alterations to the urban land surface and water pathways as a result of activities such as construction, paving, soil compaction, removal of vegetation and poor storm drain maintenance (Douglas et al. 2008). One resident of Maputo noted that “[a] single one-day rain event can cause floods that persist for three days. If the rains persist from three days to one week, the water depth rises to one metre and it may take a month to disappear” (Douglas et al. 2008: 194).

The city authorities have not done enough to install the necessary drainage infrastructure to minimize flood damage, especially in the poor areas. This seems urgent given the fact that as much as 57 square kilometres of land in Maputo is exposed to flooding, or roughly 16% of the city’s total area (Braccio 2014). Currently, Maputo is one of the launch members of UN-Habitat’s Cities and Climate Change Initiative and is one of five partner cities in the International Council for Local Environmental Initiatives’ “Sub-Saharan African Cities: A Five-City Network to Pioneer Climate Adaptation through Participatory Research and Local Action” project (Boyd et al. 2014). However, a recent study found that “Maputo is a city in which the intensifying impacts of climate change and ineffective urban governance are creating a multiplicity of challenges for already disadvantaged informal residents” (Neville 2013: 54).

In trying to develop a climate change strategy for Maputo, UN-Habitat identified various key institutions and actors and their role in relation to climate change (Table 13).

TABLE 13: Key Institutions and Actors to Develop a Climate Change Strategy

Key institutions and actors	Key responsibilities in relation to climate change
Maputo Municipal Council (MMC)	MMC is the main focal point at city level, with key responsibilities of (i) developing climate change adaptation urban plans; (ii) coordinating the planning and execution of pilot interventions; (iii) benefitting from training and capacity building programmes and (iv) serving as intermediary to access the final beneficiaries; and the vulnerable population at the neighbourhood level, or slum dwellers, also organized in community-based organisations or community associations.
Ministry of State Administration (Ministério da Administração Estatal – MAE)	Works directly with the 43 established municipal authorities in Mozambique including MMC, through its National Directorate for Autarkic Development (Direcção Nacional de Desenvolvimento Autárquico – DNDA). It also leads the inter-ministerial committee for municipal development (Grupo Inter-Ministerial para o Desenvolvimento Autárquico – GIDA).
National Disaster Management Institute (INGC)	Set up in 1999, the institute has the mandate to ensure a permanent state of readiness and an effective capacity to respond to natural disasters. It has a Technical Council, including experts from various state bodies, and a Natural Disaster Management Coordinating Council, which is chaired by the Prime Minister, includes other relevant ministers and reports regularly to the Council of Ministers.
Ministry for Coordination of Environmental Affairs (Ministério para a Coordenação da Acção Ambiental – MICOA)	MICOA, in particular through its National Directorate for Territorial Planning (Direcção Nacional de Planeamento e Ordenamento Territorial – DINAPOT), is a coordinating governmental institution, responsible for regulating urban planning activities at the national level.
Ministry of Public Works and Housing (Ministério das Obras Públicas e Habitação– MOPH)	MOPH is responsible for the implementation of the recently approved housing policy through its National Directorate of Housing and Urbanisation (Direcção Nacional de Habitação e Urbanismo – DNHU).
Ministry of Science and Technology (Ministério da Ciência e Tecnologias – MCT)	Responsible for testing innovative and sustainable solutions/technologies for mitigating/adapting to climate change-related impacts.
National Association of Municipalities of Mozambique (Associação Nacional dos Municípios Moçambicanos – ANAMM)	Has an important role in coordinating action across municipalities and enabling action through advocacy and demonstration.
The academic sector	The Eduardo Mondlane University (Universidade Eduardo Mondlane – UEM) in Maputo is involved in the development and testing of climate change adaptation/mitigation tools and methods, especially through the Faculties of Architecture and Physical Planning, Engineering and Sciences.
Civil society and private sectors	Although these are essential partners, UN-Habitat is yet to identify key actors who can help to move the strategy forward, other than Economic Forum for Environment (Fórum Económico para o Meio Ambiente – FEMA).

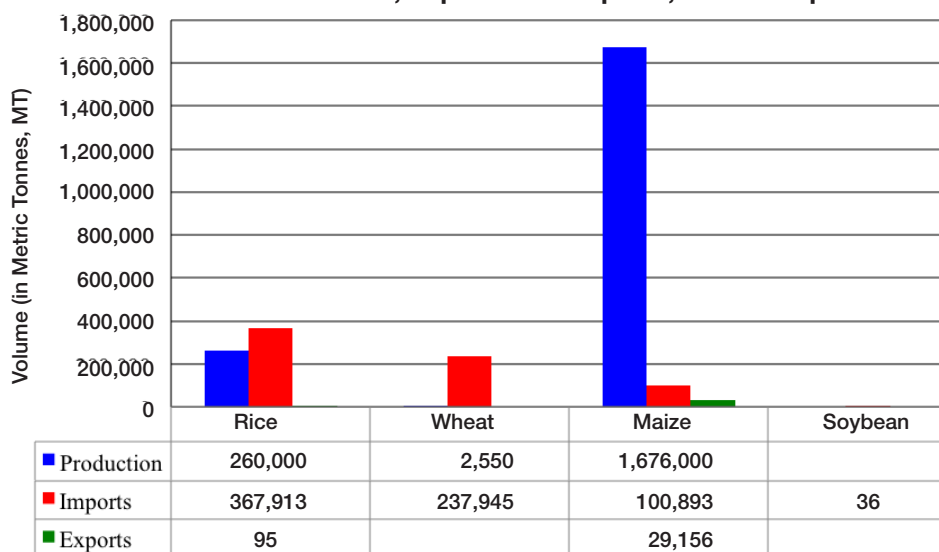
Source: Castan Broto et al. (2013: 690)

7. THE URBAN FOOD SYSTEM

7.1 Sources of Food and Food Flows

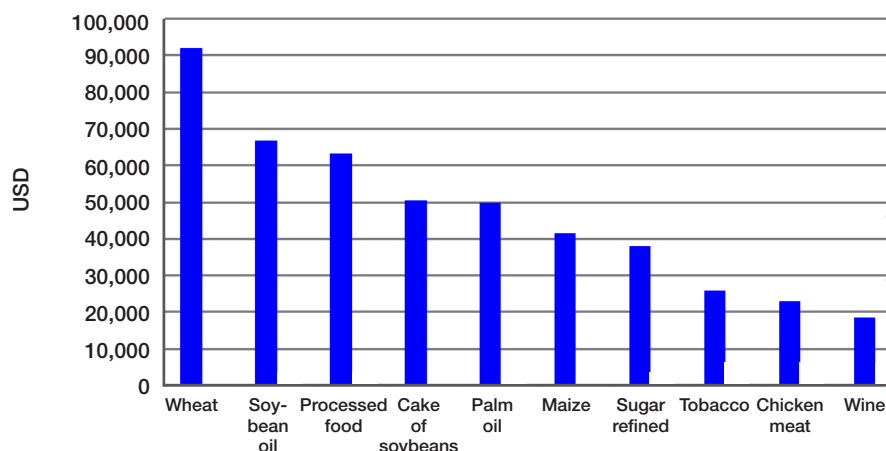
Not a great deal is currently known about Maputo's urban food system or the supply chains that deliver the food consumed in the city. De Brito et al. (2014) note that Mozambique has always imported food. The situation was particularly serious during the civil war (1976 to 1992). By the late 1980s, domestic production accounted for only 14% of food consumption and the remaining 86% came from food aid (De Brito et al. 2014). This dire situation has changed since the war ended, but the country still imports much of its food, especially from South Africa. In 2008, the country produced 1.7 million MT of maize and 260,000 MT of rice (Figure 15). Maize imports were relatively limited (at 100,000 MT) but there were significant imports of rice (368,000 MT) and wheat (238,000 MT).

FIGURE 15: Cereal Production, Exports and Imports, Mozambique 2008



Source: <http://www.foodsecurityportal.org/mozambique>

Mozambique is a major importer of processed and refined foodstuffs. In 2011, for example, it imported wheat worth USD92 million at a unit cost of USD243 per ton. The country also spent significantly on importing soybean oil, soybean cake, palm oil, maize, refined sugar, unprocessed tobacco, chicken meat, wine and other crop and livestock products. Mozambique spent nearly USD500 million on its top 10 imports in 2011. A significant proportion of Mozambique's imports originate from South Africa, and in 2011 it imported food, beverages and tobacco worth ZAR1.2 billion (Table 14). The most common imports were refined sugar, soups and broths, food preparations, sauces and juices. This shows the importance of processed goods in Mozambique's trade with South Africa.

FIGURE 16: Mozambique's Top Imports, 2011

Source: FAOSTAT <http://faostat.fao.org/desktopdefault.aspx?pageid=342&lang=en&country=144>

TABLE 14: Top 10 Imports of Food and Beverages from South Africa to Mozambique, 2011

Product	Value 2011 (ZAR million)
Refined sugar, in solid form, pure sucrose	208.5
Soups and broths and preparations thereof	145.0
Raw sugar, cane	107.7
Food preparations	104.4
Sauces, mixed condiments, mixed seasoning	43.8
Mixtures of juices not fermented or spirited	43.4
Single fruit, vegetable juice, not fermented or spirited	38.3
Chewing gum containing sugar, except medicinal	30.6
Beer made from malt	27.9
Animal feed preparations	27.3
Total exports	1,284.7

Source: <http://wesgro.co.za/publications/publication/2013-mozambique-food-and-beverages>

Two Southern African Migration Programme (SAMP) surveys demonstrated the importance of informal supply chains in the urban food system of Maputo. The first involved a 10-day border-monitoring exercise at Lebombo/Ressano Garcia in 2006 (Peberdy et al. 2015). The survey counted nearly 34,000 cross-border traders, an average of almost 3,400 cross-border traders per day. The most common goods carried by the traders included groceries (76%), meat/fish/eggs (75%) and fresh fruit and vegetables (21%). A more recent study, in 2014, showed that food and beverages were the most common goods bought in South Africa by the traders (Table 15).

TABLE 15: Kind of Goods Usually Bought in South Africa

	No.	%
Food and beverages		
Cooking oil	68	22.4
Eggs	61	20.1
Alcohol	61	20.1
Mealie meal	55	18.1
Fresh produce (fruits and vegetables)	55	18.1
Sugar	48	15.8
Milk (fresh, sour)	45	14.8
Tea/coffee	40	13.2
Tinned/canned fruits and vegetables	38	12.5
Meat (fresh, frozen)	26	8.6
Snacks (crisps, Nik Naks, etc.)	23	7.6
Rice and pasta (spaghetti, macaroni)	19	6.3
Confectionary (sweets, cakes, chocolates)	8	2.6
Bread	2	0.7
Fish (fresh, frozen)	2	0.7
Household/Home goods		
Household products	78	25.7
Bedding (blankets, duvets, etc.)	24	7.9
Plastic goods	15	4.9
Building material	8	2.6
Furniture	7	2.3
Beds and mattresses	6	2.0
Fabric/capulana	4	1.3
Personal goods		
New clothing and footwear	57	18.8
Toiletries and cosmetics	25	8.2
Accessories (bags, sunglasses, etc.)	21	6.9
Pre-owned clothing and footwear	4	1.3
Cigarettes	4	1.3
Books	1	0.3
Electrical goods		
Electronics	31	10.2
Cell phones/phone accessories	30	9.9
Computers/computer accessories	6	2.0
Music/CDs/DVDs	6	2.0
Miscellaneous goods		
Car parts	41	13.5
Spare parts and raw materials	12	3.9
Hardware/tools	9	3.0
Traditional medicine	6	2.0
N=304		
<i>Note: Multiple-response question. Source: Raimundo and Chikanda (2016)</i>		

7.2 Formal Food Retail

The 2008 African Food Security Urban Network (AFSUN) household survey of Maputo indicates that market sources are more important than non-market sources in providing food for the majority of the city's low-income population (Raimundo et al. 2014) (Table 16). Only 23% of households regularly purchased food from supermarkets compared to 79% in the Southern African region as a whole (Table 16). This is a very low percentage by regional standards and reflects the low penetration of the city's retail space by South African supermarket chains. However, the presence of South African supermarkets such as Shoprite has generated controversy over the exploitative working conditions of employees (Miller 2006, 2011).

While supermarkets currently have a low profile, the same cannot be said for the advertisers of processed foods and beverages who are targeting the Maputo consumer market with aggressive advertising of high-sugar, high-fat processed foods. A 2005 survey indicated that the advertising of fast food, soft drinks and alcoholic beverages represents a high share of total billboard advertising in Maputo. This study is now being repeated (Pinto et al. 2007, Gelormini et al. 2015).

FIGURE 17: Coca-Cola Advertising on Apartment Block in Central Maputo



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TABLE 16: Household Food Sources

	Region	Maputo		
	Using source (%)	Using source (%)	Using source weekly (%)	Used source in previous week (%)
Market sources				
Supermarket	79	23	8	3
Informal market/street food	70	98	92	94
Small food outlet	68	77	22	40
Non-market sources				
Grow it	22	22	12	15
Share meals with other households	21	19	7	11
Borrow food	21	12	8	8
Food provided by other households	20	10	3	6
Food remittances	8	12	0	6
Food transfers from rural areas	28	8	0	–
Charitable sources				
Community food kitchen	4	<1	0	<1
Food aid	2	1	0	1

Source: Raimundo et al. (2014)

Small shops (including independent grocers, butcheries and bakeries) were regularly patronized by 77% of the households and 40% had obtained food there in the previous week. The most common type of small retail outlet is the *loja*, owned and operated by local licensed retailers, which carries a wide variety of consumer and household goods, and fresh produce (Stein 2012). In terms of food stocks, *lojas* specialize in non-perishables including canned goods and frozen fish and poultry. In many cities, small outlets are the first to feel the pressure from supermarket expansion, but in Maputo this is probably some way off.

7.3 Informal Food Retail

The informal food economy is easily the most important source of food in Maputo. Almost all households regularly obtain food from informal sellers; over 90% at least once a week and many on a daily basis. For many households, daily purchasing is necessitated by unpredictable daily income and a lack of accumulated funds. Such purchasing raises the unit cost per item and leads to higher household expenditure on food. A recent description of informality in Maputo captures elements of the character and dynamism of the sector:

Street commerce has burgeoned all over the city. Dumba-nengues (concentrations of informal traders) mushroomed, and some grew to engulf entire neighborhoods. This proliferation has all but choked the more traditional forms of small-scale commerce – by the turn of the century, many of Maputo’s formal marketplaces lay dormant, surrounded by the swarming hives of street commerce. In the process of growth,

some of the street commerce has become stationary and formalized through the city's attempts to tax and regulate it; much of it, however, has remained mobile, affording an easy point of entry into the urban economy for workers with the lowest level of financial and human capital. Hence, despite the status and income disadvantage of street commerce relative to other forms of urban employment, this sector itself is internally stratified, with stationary commerce (in makeshift kiosks or stands) commanding higher prestige and income than mobile vending (Agadjanian 2002: 259).

Conventionally, women have dominated the informal economy, but unemployed men have a growing presence, although they tend to view participation as a stop-gap on the road to wage employment. The city has four different types of marketplace. Class A and B markets are provided with infrastructure (including toilets and drainage), while Class C markets are not. Class D markets are more informal and are not acknowledged as such. In 2008/9, there were six Class A, seven Class B, 27 Class C and 23 Class D markets in Maputo (Ulset 2010). Until recently, Xikhelene was a typical Class D market with several thousand static and mobile vendors selling a variety of goods and services, including fruit, vegetables, fish, meat, live poultry, cell phone services, new and second-hand clothes, groceries, sweets, spices, soft drinks, alcoholic drinks, traditional medicine, equipment and cosmetics (Ulset 2010). Vendors obtain their supplies directly from the countryside, from other markets (such as the wholesale market in Zimpeto), or from shops and supermarkets, where they try to buy in bulk and sell in smaller units. Every day trucks arrive at the market with large quantities of goods (frozen fish from Angola, bread from local bakeries and fruit from South Africa) to sell to the vendors. In 2009, under the World Bank-funded ProMaputo upgrading project, two-thirds of the market was demolished to make way for a new transportation hub, causing considerable hardship and financial loss for the vendors. The number of registered traders in seven of the largest markets was nearly 9,000 (Table 17).

The informal food economy is not confined to the markets, and is particularly visible and extensive on the streets and in the *bairros* of Maputo. There are many thousands of street vendors selling a range of fresh and processed food, often from the same stall. Most of the fresh fruit and vegetables, processed food and junk food are imported from South Africa. Within the *bairros*, many individual dwellings have small backyard stalls (*bancas*) selling the same items in smaller quantities. A recent study of the central Mafalala *bairro* indicates that the purpose of *bancas* is not simply to generate income through food re-sale, but also to supplement the quantity and quality of food available to the household (Stein 2012). The household eats from food purchased for the *banca* and sells leftover food through the *banca*. Outside schools, where children do not receive any sustenance during the day, informal vendors sell food in small, affordable quantities. The absence of fresh produce is notable at these stalls, which primarily stock processed junk food, including crisps, biscuits and sweets. Many of the backyard and school *bancas* are managed by children themselves.

TABLE 17: Registered Markets in Maputo

Markets	Description	No. of registered traders	Market category
Estrela Vermelha	Situated in Alto Maé ward and sells mainly alcohol, cigarettes, second-hand clothing, cooked food, chicken, electronics, household furniture	679	B
Mandela	Situated in Bairro Central C and sells mainly alcohol, cigarettes, second-hand clothing, cooked food, chicken, electronics, household furniture, groceries	189	B
Xiquelene	Situated in Bairro FPLM and Laulane and sells mainly alcohol, cigarettes, second-hand clothing, cooked food, chicken, electronics, household furniture, building materials, vegetables, groceries	741	D
Malanga e Fajardo	Situated in Malanga ward and sells mainly vegetables, fruit, chicken and some meat	2,649	C
Praça de Touros	Situated in Malhangalene ward and sells mainly spare parts for vehicles (used and new), including tyres (used), and is used to fix cars informally	46	B
Xipamanine	Situated in Xipamanine ward and sells mainly vegetables, groceries, meat, poultry, pork, beef, goat, second-hand clothes	4,269	A
Museu	Situated in Museu ward (a city ward where the wealthy live) and sells alcohol, cigarettes, fast food	125	B
Total		8,786	

Notes:
 Market Category A: Markets with infrastructure improvements by the municipality, including stalls, improved toilets, stores and paved surfaces.
 Market Category B: Some infrastructural upgrades by the municipality, but no stores, toilets or stalls.
 Market Category C: No infrastructural upgrades by the municipality. The vendors depend solely on what they build (e.g. stalls, tents).
 Market Category D: Sellers operate outside formal markets.

FIGURE 18: Vendor Selling Chickens from Brazil at Mafalala Market

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FIGURE 19: Vegetable Sellers at Mafalala Market

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FIGURE 20: Selling Dried Fish at Mafalala Market



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FIGURE 21: Street Stall Selling Fruit from South Africa



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7.4 Urban Agriculture

Sheldon (2003) has noted that in late colonial and early post-colonial Maputo, “the vast majority of urban women continued their familiar rural agricultural work, wielding their hoes and wrapping themselves in their printed cotton *capulanas* in a new setting.” As a result, women’s agriculture supposedly “profoundly shaped” the character of urbanization in Mozambique. Advocates of urban agriculture in Mozambique have noted that “the development of the agricultural use of the urban and peri-urban land can be a solution not only to enhance food security of the urban poor, but also to ameliorate their self-esteem and hence give them dignity” (Madaleno and Correia 2001). In the 1990s, however, increasing numbers of women turned to working in the informal economy and urban agriculture began to decline in significance. Raimundo et al. (2014) show that less than a quarter (22%) of households in low-income areas produce any of their own food, and only 15% had consumed home-grown produce in the week prior to the survey. As in other cities in the region, the role of urban agriculture in poor urban communities is easily exaggerated (Crush et al. 2011). According to UN-Habitat (2014), urban agriculture in Maputo is undertaken mostly by poor migrants in low-lying river floodplains. Not surprisingly, the frequent flooding of recent years has been a major obstacle to its further development.

7.5 Food Sharing and Remittances

Various informal food sharing arrangements are relied on by a minority of households. Sharing meals with other households is close to the regional average (19% compared to 21%), but obtaining food from other households or borrowing food is less common (10–12% compared to 20–21%). Regular use of these

sources is even less common, suggesting that they are only called upon in times of crisis. A recent study suggests that these coping mechanisms are in decline and that households are less willing or able to share with anyone outside the household: “The dissolution of these safety nets ... points to a nuclearization of economic decisions which include food access strategies.” As a result, “the household comes to be the primary mediator of social coping and food access without the support or involvement of relatives and neighbours who were previously deemed crucial to these activities” (Stein 2012: 82).

AFSUN surveys in other cities have demonstrated that informal rural-urban transfers of food outside market channels are a significant source of food for poor urban households that maintain strong links with the countryside (Frayne 2010). However, while 23% of households had received food from outside Maputo in the previous year, only 9% had received food directly from the countryside. Most of these transfers occur only a few times a year and consist primarily of cereals, fruit and vegetables. A study of six smaller urban centres in Mozambique suggests that rural-urban links are much stronger there, and that there is a “constant interchange of remittances and goods from urbanites and food items from (rural) family members when crops are good” (Dávila et al. 2008: 40). While this seems logical, since many of these centres have large agricultural hinterlands, the evidence presented is slight.

8. FOOD SECURITY

8.1 Levels of Household Food Insecurity

Food insecurity is highly prevalent throughout Mozambique (WFP 2010). With regard specifically to Maputo, there have been a number of food security surveys conducted in Maputo:

- The 1994 Maputo Maize Consumer Survey randomly selected 388 households in poor neighbourhoods of Maputo and interviewed them about their maize grain and meal purchasing and processing practices. The study showed that 89% of low-income households cited purchases of maize grain as their primary source of maize, and an additional 6% cited grain from family production.
- The 2003 Consumer and Small-Scale Miller Survey, a follow-up to the 1994 survey, randomly selected 305 households in poor neighbourhoods of Maputo, Xai-Xai and Beira. The study showed that the proportion of those who relied on maize grain had declined to only 36%, with the balance (two-thirds) relying primarily on refined maize meal.

- The 2005 Maize Trader and Miller surveys involved interviews with the top five millers and 100 rural traders across the country, and small special-purpose surveys of food staple retailers in Maputo. The study found that most of the traders specialized in the sale of three staples: 64% sold rice, 23% refined maize meal, and 13% maize grain. The respondents noted that insufficient demand was the reason for the low number of traders specializing in the sale of maize meal and maize grain (Tschirley et al. 2006).
- A 2003 report on the nutritional status of children and youth in the city used longitudinal anthropometric data from the 1990s (Prista et al. 2003). The study collected data on over 2,000 schoolchildren and found that the primary nutritional deficiency was wasting (low weight for height), while rates of stunting (low height for age) had fallen significantly over the decade and rates of overweight had increased. Wasting and stunting were more prevalent among children of lower socio-economic status. The study did not relate the nutritional status of children to household characteristics and did not identify where and how children accessed food.
- The 2008 AFSUN survey measured food insecurity in Maputo according to four international cross-cultural scales developed by the Food and Nutrition Technical Assistance Project (FANTA) (Raimundo et al. 2014)

Household Food Insecurity Access Scale (HFIAS)

HFIAS measures the degree of food insecurity during the month prior to the survey (Coates et al. 2007). An HFIAS score is calculated for each household based on answers to nine frequency-of-occurrence questions. The minimum score is 0 and the maximum is 27. The higher the score, the more food insecurity the household experienced. The results of the AFSUN 2008 survey indicates that the HFIAS score for the surveyed households is 10.4, which is close to the average for 10 other Southern African cities (Table 18). In fact, Maputo's poor appear to be less food insecure than those in most cities surveyed, including the South African cities of Cape Town (10.7) and Msunduzi (11.3). Only Windhoek, Blantyre and Johannesburg had lower scores than Maputo.

Household Food Insecurity Access Prevalence (HFIAP)

The HFIAP indicator uses the responses to HFIAS questions to group households into four levels of household food insecurity: food secure, mildly food insecure, moderately food insecure and severely food insecure (Coates et al. 2007). A different picture emerges when the HFIAP indicator is used (Table 19). First, Maputo had one of the lowest proportions of severely food insecure households in the region (54% compared to most other cities where the proportion was 60-80%). However, this positive finding should not detract from the fact that just over half of the households in Maputo experience constant food insecurity.

Second, only 5% of the households were found to be completely food secure (well below the regional average of 15%), which is one of the worst scores in the region (only Harare and Lusaka had lower figures). Third, Maputo had the highest proportion of moderately food insecure households in the region (at 32%, considerably higher than the regional average of 20%). These figures all suggest that Maputo has two basic kinds of household: half with severe food insecurity and the other half in a state of chronic food insecurity.

TABLE 18: Maputo HFIAS Scores Compared to Other Southern African Cities

	Mean	Median	No.
Manzini, Swaziland	14.9	14.7	489
Harare, Zimbabwe	14.7	16.0	454
Maseru, Lesotho	12.8	13.0	795
Lusaka, Zambia	11.5	11.0	386
Msunduzi, South Africa	11.3	11.0	548
Gaborone, Botswana	10.8	11.0	391
Cape Town, South Africa	10.7	11.0	1,026
Maputo, Mozambique	10.4	10.0	389
Windhoek, Namibia	9.3	9.0	436
Blantyre, Malawi	5.3	3.7	431
Johannesburg, South Africa	4.7	1.5	976
Region	10.3	10	6,327

Source: Raimundo et al. (2014)

TABLE 19: Maputo HFIAP Scores Compared to Other Southern African Cities

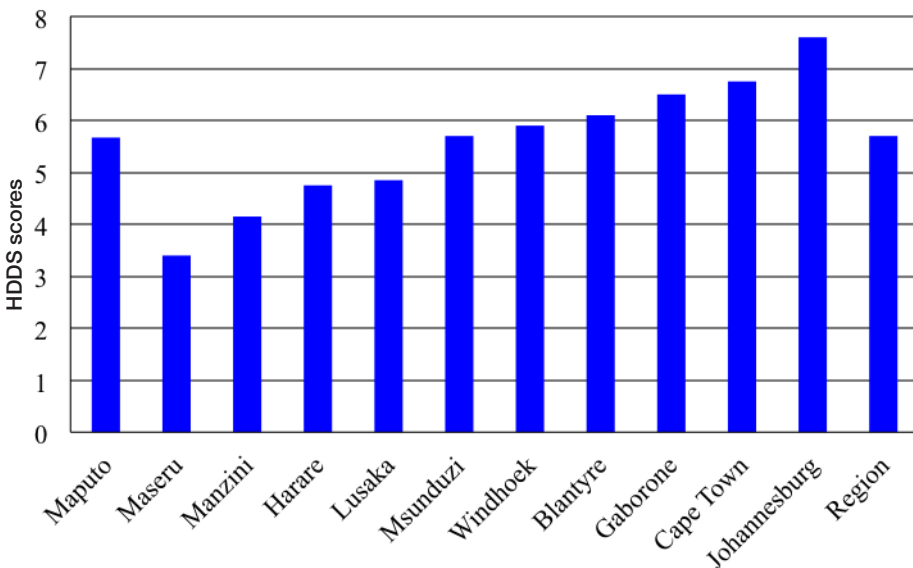
	Food secure (%)	Mildly food insecure (%)	Moderately food insecure (%)	Severely food insecure (%)
Harare, Zimbabwe	2	3	24	72
Lusaka, Zambia	4	3	24	69
Maseru, Lesotho	5	6	25	65
Maputo, Mozambique	5	9	32	54
Manzini, Swaziland	6	3	13	79
Msunduzi, South Africa	7	6	27	60
Gaborone, Botswana	12	6	19	63
Cape Town, South Africa	15	5	12	68
Windhoek, Namibia	18	5	14	63
Blantyre, Malawi	34	15	30	21
Johannesburg, South Africa	44	14	15	27
Region	16	7	20	57

Source: Raimundo et al. (2014)

Household Dietary Diversity Scale (HDDS)

The HDDS captures food groups consumed within the household in the previous 24 hours (Swindale and Bilinsky 2006). The maximum number, based on the Food and Agricultural Organization (FAO) classification of food groups for Africa, is 12. An increase in the average number of different food groups consumed provides a quantifiable measure of improved household dietary diversity. The Maputo diet is dominated by the consumption of rice and bread (MPD 2010). Rice has rapidly become more important than maize as a staple. Consumption of fresh and frozen fish is relatively common, although much of the frozen fish is imported from Angola. Chicken is the most common other form of animal protein and beef is rarely eaten. A fairly wide variety of vegetables (including beans, squash, onions, cassava and cabbage) is consumed, but not in great quantities. The only fruits to feature in the average diet are coconuts and tomatoes. This might lead us to the conclusion that the diet of Maputo’s poor is relatively diverse. In fact, the answers of surveyed households to the HFIAS questions indicate that around 60% had not been able to eat the kinds of food they preferred and 52% had eaten foods that they did not want to because of a lack of resources to purchase the desired diet. Nearly 60% noted that their diet was limited in variety for the same reason. The HDDS quantifies this more precisely (Figure 23). The average surveyed household scored 5.67 out of 12. Nearly half of the households (47%) had a score of five or lower. Comparatively, this puts Maputo in a better place than cities such as Harare, Lusaka and Msunduzi, but worse than cities such as Johannesburg, Cape Town, Blantyre and Windhoek.

FIGURE 22: Regional HDDS Scores

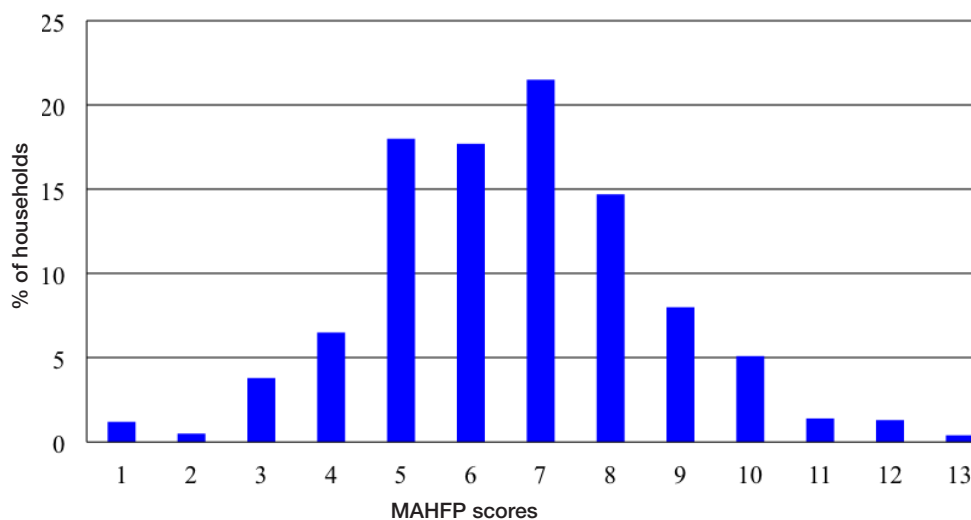


Source: Raimundo et al. (2014)

Months of Adequate Household Food Provisioning (MAHFP)

The MAHFP indicator captures changes in the household's ability to ensure year-round food availability above a minimum level (Bilinsky and Swindale 2007). It indicates possible fluctuations in levels of food insecurity throughout the year. In Maputo, the mean household MAHFP was 8.32, which indicates nearly four months of inadequate food provisioning during the year (Figure 23).

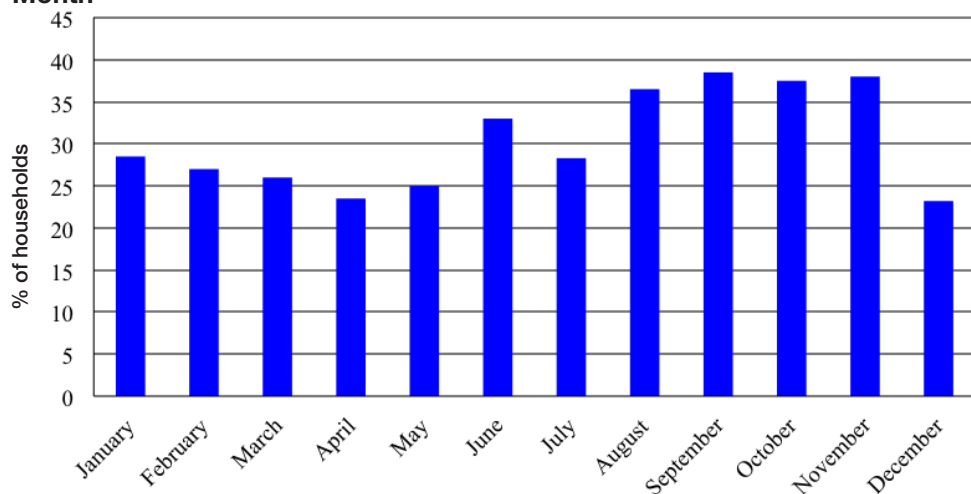
FIGURE 23: Distribution of MAHFP Scores in Maputo



Source: Raimundo et al. (2014)

Analysis of the MAHFP shows that the hungriest months occur from August to November, when 35–40% of households have inadequate provisioning (Figure 24). December is the least food-insecure month overall.

FIGURE 24: Proportion of Households with Inadequate Food Provisioning by Month



Source: Raimundo et al. (2014)

8.2 Determinants of Household Food Insecurity

A number of demographic variables were cross-tabulated with mean scores for three of the food security measures (HFIAS, HDDS and MAHFP) to identify differences in vulnerability to food insecurity (Table 20). There was a clear relationship between household size and food insecurity scores on the HFIAS and the MAHFP. As household size increased, so did food insecurity, as measured by the HFIAS. Similarly, the MAHFP consistently fell with increasing household size, indicating a greater number of months with inadequate food provisioning as household size increases. The only anomaly noted was with the HDDS. Households with between one and five members had lower dietary diversity (5.72) than those with more than 10 members (5.81). The lowest HDDS score was in the group of households with six to 10 members. While one might expect smaller households to have more dietary diversity than mid-sized households, it is not immediately clear why the largest households had the most diverse diets.

TABLE 20: Variations in Mean Food Insecurity Scores

	HFIAS	HDDS	MAHFP
Household size			
1–5	10.27	5.72	9.66
6–10	10.30	5.60	9.44
>10	11.07	5.81	9.09
Household type			
Female-centred	10.84	5.36	9.04
Male-centred	9.80	5.81	10.26
Nuclear	9.79	5.50	9.59
Extended	10.47	5.91	9.54
Income tercile			
Lowest	13.22	5.07	8.46
Middle	10.73	5.67	9.54
Highest	7.74	6.14	10.21
Lived Poverty Index score			
0.00–1.00	7.12	6.24	10.29
1.01–2.00	12.69	5.32	8.97
2.01–3.00	17.13	4.50	7.31

Source: Raimundo et al. (2014)

In terms of the relationship between household type and food insecurity, it is clear that female-centred households are worst off. They had the highest levels of food insecurity (HFIAS of 10.84), the lowest dietary diversity (HDDS 5.36), and the fewest number of months of adequate food provisioning (MAHFP 9.04). Extended households were next in terms of levels of food insecurity (HFIAS 10.47 and MAHFP 9.54). However, consistent with the finding that dietary diversity is greatest in larger households, extended households had the best HDDS scores of any household type. Male-centred and nuclear families had

almost identical HFIAS scores, but the former clearly had the fewest number of months of inadequate food provisioning (less than two months).

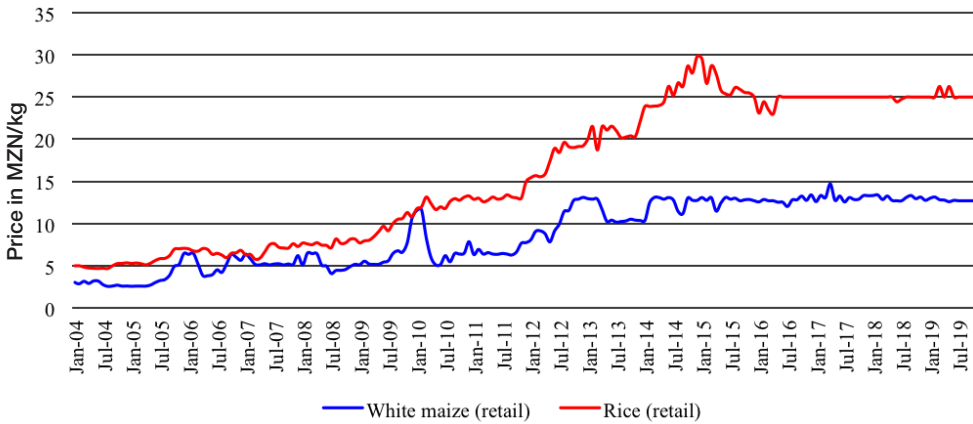
Food security strongly correlated with household income, even in poor neighbourhoods. Households in the lowest income tercile had an extremely high HFIAS of 13.2, compared to only 7.7 for those in the highest income tercile. They also had the lowest dietary diversity score (5.1 compared to 6.1 for those in the highest income tercile). Finally, they had a significantly greater number of months of inadequate provisioning, with an MAHFP score of 8.5 (compared to 10.2 for the highest income tercile). These households reported an inadequate food supply for three-and-a-half months per year, compared with less than two months for better-off households.

8.3 Food Prices and Food Riots

Food prices in Maputo are influenced by several factors. At a local level, production trends have played a major role in determining the price of basic foodstuffs in the city. However, trends in international food production have also been felt in Mozambique, which remains a major importer of food products. This section uses data from two food products, maize and rice, to demonstrate the trends in food prices in the country that have affected the cost of food in Maputo.

The FAO regularly monitors the retail price of foodstuffs such as maize and rice in different cities, including Maputo. Using the Food and Price Monitoring and Analysis Tool, it is possible to track changes in the price of these two important cereals between 2000 and 2015 (Figure 26). It shows, for instance, that even though the price of rice has historically been higher than that of maize, the two commodities traded at almost the same price in December 2005. However, by October 2015, the retail price of rice was almost twice that of maize (MZN25/kg and MZN12.7/kg, respectively). The price of rice in particular has risen rapidly. For example, in January 2000, rice was retailing at MZN4.97/kg, but by December 2010 the price had skyrocketed to MZN29.82/kg. Since 2012, however, there is evidence of stabilization in the retail prices of both maize and rice.

The rapid change in the prices of staples led to increased social unrest in the city. As De Brito et al. (2014) noted, Maputo experienced several violent protests (in 2008, 2010 and 2012) against the rise in the cost of living. The 2008 riots were ostensibly motivated by an increase in the price of fuel, causing private passenger transport operators to increase their fares by between 33% and 50%. The increase occurred immediately after an increase in the price of some foodstuffs, notably bread, which had gone up by about 12.5% (De Brito et al. 2014). The protests paralyzed the cities of Maputo and Matola for three days, and only ended when the government negotiated with the transport operators to keep transport fares unchanged.

FIGURE 25: Food Price Changes in Maputo, 2000-2015

Source: Constructed using data from the Food Price Monitoring and Analysis Tool, FAO, available on <http://www.fao.org/giews/pricetool/>

In 2010, the food riots were precipitated by price hikes that were partly caused by a decline in the value of the Mozambican currency against the South African rand. This came at a time when global wheat prices were rising. The price of bread was set to increase by 17%, electricity by 13%, water by MZN2 per cubic metre, petrol by 8%, and domestic gas by 8% (De Brito et al. 2014). The price of foodstuffs such as rice, tomatoes and onions also rose sharply, as did the price of fuel. The food protests were concentrated in Maputo, but were also experienced in other cities such as Nampula and Chimoio. The protests left 13 people dead and more than 400 injured. As in 2008, the government ended up revising its position, freezing prices and announcing subsidies (De Brito et al. 2014).

The government of Mozambique adopted measures to try to prevent further food protests, the most popular of which was the introduction of subsidies for a basic food basket in 2011. Beneficiaries of the basic basket subsidy were identified initially as formal sector workers living in the 11 provincial capitals who earned a wage equal to or lower than MZN2,000, but was later revised to include all workers in the informal sector and all those who received a wage less than MZN2,500 (De Brito et al. 2014.)

9. CONCLUSION

This audit of the city of Maputo highlights that there are still major information gaps in our understanding of the urban food system. As the Hungry Cities Partnership programme progresses, information on a range of food issues in the city will help to fill many of these gaps. The report will therefore be updated as new information from the Hungry Cities Partnership and other published sources becomes available.

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The city of Maputo, with a population of around 1.3 million, has been at the forefront of urbanization in Mozambique. While the Southern African country has posted impressive macro-economic growth rates in the last two decades, there has been only limited formal sector employment generation. Most of its working population is absorbed in informal employment and self-employment. The informal food economy is easily the most important source of food in Maputo. Almost all households regularly obtain food from informal sellers; over 90% at least once a week and many on a daily basis. For many households, daily purchasing is necessitated by unpredictable daily income and a lack of accumulated funds. Such purchasing raises the unit cost per item and leads to higher household expenditure on food. The informal food economy is not confined to the markets, and is particularly visible and extensive on the streets and in the bairros of Maputo. There are many thousands of street vendors selling a range of fresh and processed food, often from the same stall. Most of the fresh fruit and vegetables, processed food and junk food are imported from South Africa. Food insecurity is highly prevalent throughout Mozambique. This audit of the city of Maputo highlights that there are still major information gaps in our understanding of the urban food system. As its work progresses, the Hungry Cities Partnership aims to fill many of these gaps.

