

Food System and Food Security Study for the City of Cape Town

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Briefing Document

Understanding food systems and food security

Food insecurity is a critical, but poorly understood, challenge for the health and development of Capetonians.

Food insecurity is often imagined as hunger, but it is far broader than that. Households are considered food secure when they have “physical and economic access to sufficient and nutritious food that meets their dietary needs and food preferences for an active and healthy life” (WHO/FAO 1996). Health is not merely the absence of disease, but also encompasses good nutrition and healthy lifestyles. Individuals in a food insecure household and/or community are at greater risk due to diets of poor nutritional value, which lowers immunity against diseases. In children, food insecurity is known to stunt growth and development and this places the child in a disadvantaged position from early on in life. Any improvement in the nutritional profile of an individual is beneficial and as the family and community become more food secure, the greater the benefit. It further reduces the demand on health services

In the Cape Town context, food insecurity manifests not just as hunger, but as long term consumption of a limited variety of foods, reduction in meal sizes and choices to eat calorie dense, nutritionally poor foods in an effort to get enough food to get by. Associated with this food insecurity are chronic malnutrition and micronutrient deficiency, particularly among young children, and an increase in obesity, diabetes and other diet related illnesses.

Food insecurity is therefore not about food not being available, it is about households not having the economic or physical resources to access enough of the right kind of food. The latest study of food insecurity in Cape Town found that 75 percent of households in sampled low-income areas were food insecure, with 58 percent falling into the severely food insecurity category

Food insecurity is caused by household scale characteristics, such as income poverty, but also by wider structural issues, such as the local food retail environment and the price and availability of healthy relative to less healthy foods.

The City of Cape Town therefore commissioned a study based on the following understanding of the food security challenge facing the City.

“Food security or the lack thereof is the outcome of complex and multi-dimensional factors comprising a food system. Therefore, food insecurity is the result of failures or inefficiencies in one or more dimensions of the food system. This necessitates a holistic analysis of the food system that than can provide insights into the various components of the system, especially in our context as a developing world city.”

The call for a food system study sees the City of Cape Town taking the lead nationally, being the first metropolitan area to seek to engage in the food system in a holistic manner and attempting to understand what role the city needs to play in the food system.

The City must work towards a food system that is reliable, sustainable and transparent. Such a system will generate household food security that is less dependent on welfarist responses to the challenge.

In this context, reliability is taken to mean stable and consistent prices, the nutritional quality of available and accessible food, and food safety. Sustainability means that the food system does not degrade the environmental, economic and social environment. Finally, transparency refers to the legibility of the system and its control by the state and citizens.

A new role for the City

Historically, there has been little appreciation of the role of municipal government in food security, as there is no clear direct mandate. The City of Cape Town has taken a lead in municipal government responses to food insecurity through its Urban Agriculture Policy, passed in 2007. However, as the appreciation of the nature and causes of food insecurity has developed, there is a need for a new City approach.

National government has framed food insecurity as a problem requiring household scale responses, such as household gardens and food parcels. However, the National Development Plan (NDP) document speaks more broadly about the structure of the food system and its impact on diets. The discourse on food security and food policy is shifting internationally, and the City has an opportunity to be recognised as a leader in this emerging field.

While the City has no direct mandate to address food security, it plays a number of important roles in the form and functioning of the food system within Cape Town. The City plays a direct and indirect role in many components of the food system, including production, processing, distribution, sale, waste management and safety. Additionally, the City's existing policies and programmes impact upon the household's ability to access and utilize food. If this wider view of the causes of food security is accepted, it is essential to examine the existing and potential role of the City in governing a food system which is designed to enhance food security.

There is a need for the City to develop a Food System and Food Security Strategy that will inform the City's longer-term responses to the problem of food insecurity

Important Findings

1. Cape Town cannot be considered to be food secure, if the widely-accepted WHO/FAO definition is used: *the situation that exists when all people, at all times, have physical and economic access to sufficient safe and nutritious food that meets their dietary needs and food preferences for an active and healthy life (WHO/FAO 1996)*. The December 2013 household survey conducted by AFSUN in 2500 households across the city found food insecurity levels of 58%. These levels are significantly higher in low-income areas
2. Food Security at the household scale is impacted by conditions in the wider food system.
3. The food system in South Africa is undergoing a rapid transition in terms of production, import/export balance and retailing and is increasingly consolidated. For example, although there are 5000 wheat farmers nationally, just four millers control 87% of the market. The ten largest packaged food companies account for 52% of total packaged food sales. The number of Shoprite stores in Cape Town increased from 38 in 1994 to 82 in 2012. This system is prone to high inflation, which has particularly negative impacts on poor consumers. The most recent food price inflation figures (March 2014) found that breads and cereals had an inflation rate of 9.2%, and vegetables, 12.8%.

4. Productive areas in and around Cape Town produce over a quarter of the tonnage of the vegetables and potatoes required by the City. These areas play an important role in moderating prices of staple vegetables for the urban poor, and contribute more broadly to food system robustness. However, the long-term viability of these areas is challenged and current measures to protect them are insufficient.
5. There is significant food processing within Cape Town with over 600 food processors licensed to sell to retailers. There are also around 10 000 retailers and restaurants licensed to sell food. This is a potential growth area, which may increase employment and have food system and food security benefits.
6. Low-income households depend on sourcing food from formal and informal retailers, both of which have benefits and weaknesses regarding access to healthy, safe, and affordable food. Formal retailers offer lower prices per unit and have well-regulated safety standards, but they retail in unit sizes unaffordable to the poorest, have limited opening hours and do not grant credit. Informal retailers are often more expensive per unit and lack safety standards, but sell in affordable unit sizes, are open longer hours and often offer credit (see Table 7.4 of full report for more detail).
7. There are high levels of food insecurity within the City. Food insecurity is particularly prevalent in low-income households. According to the December 2013 AFSUN study, 72% of households in low-income areas are food insecure. Shack-dwellers, female-headed households and households with irregular sources of income are most likely to be food insecure.
8. Households employ a range of strategies to ensure food security, and identify social grants as particularly important. However, these strategies are not sufficient. This suggests a need for systemic, rather than only household scale responses.
9. The food system delivers food but it does not ensure its equitable distribution or consumption. This is where the City can and should play a role in the system. To be fully effective such intervention should be coordinated and coherent. The scale of the challenge means that the response can no longer be ad hoc and piecemeal projects. Key to successful food system interventions is a strategic overarching food strategy that considers the relationship between the city, its residents and the food system. An increasing number of cities worldwide are beginning to develop city-wide food system governance plans and Cape Town can certainly learn from these examples.

Key recommendations

Based on the findings of the report, a number of key recommendations are made to help the City to build and maintain momentum in developing a Food System and Food Security Strategy.

The five key recommendations are:

- 1) Establish the conditions for food system governance. This should be through the development of a Food System and Food Security Working Group. This is essential if the City is to develop coherent, effective strategies to address food insecurity and to work towards a pro-poor food system. It is also essential to build collaborative partnerships with civil society, the private sector, academia and other groups.

Critical elements within this first phase is a) Internal City training on food systems and food security to build a common understanding of the issue and

agreement on strategic response, b) Development of a Food System and Food Security Charter that can guide the City's long term planning for food security and develop agreement with external partners, c) Development of a Food System and Food Security Strategy. This is essential, as it will prevent the responses being project-by-project and department-by-department.

- 2) Re-assess the Agricultural Land Review. This is important as it allows the City to consider the implicit and explicit value systems shaping public and private sector decision making within the food system. The SDF calls for protection of agricultural areas for food security, but the current tools to assess agricultural land do not effectively identify areas of importance for food security. Although this re-assessment focuses specifically on the Agricultural Land Review it provides an opportunity for the City to consciously re-engage its thinking about the wider food system and the City's role in its governance. It is anticipated that this may reveal a set of fundamental tensions that would require attention during the formulation of the food system and food security strategy. The evidence presented in this study identifies Joostenbergvlakte and the Philippi Horticultural Area as being particularly important providers of fresh produce to the city. It is recommended that these areas be protected until the revised Agricultural Land Review validates their retention or otherwise. Once developed they cannot be recovered.
- 3) Develop a coherent, integrated position on food retailing. At present formal and informal food retail are not viewed as being part of a single food system feeding the city. Decisions about retail development are made independent of consideration of food security impacts. Retail is the main source of food for the urban poor. It is essential that the retail environment provide low-income households with access to affordable, nutritious, safe food.
- 4) Incentivise food processing as a growth industry. The food industry already provides many jobs. SMMEs in particular should be supported. This is important because it highlights the potential role of the food system in meeting some of the City's broader objectives. This aligns with national DTI and DAFF priority areas.
- 5) Advocate for more pro-poor food price monitoring. Only with better data on the impact of food prices on the poor will the political will to address the problem in national government.

Developing an inspiring vision and strategy is best done through action. Implementing one or two priority projects that involve several departments and external stakeholders, combined with active learning and documentation can serve to demonstrate the City's commitment to creating a vibrant food system, build capacity among City officials, and inform the preparation of the Food Charter and Strategy. The report proposes a number of areas for immediate action.

Conclusion

Food insecurity remains a critical challenge for the City. However, it is one with many possible points of intervention. The City has the opportunity to generate innovative food system governance approaches for the City itself, but also to be a leader and exemplar in this area of growing importance on the African continent. The initiative also provides Cape Town with a means to acknowledge the role that food plays in the life and identity of the city.

Executive Summary

Introduction

The City of Cape Town is the first city in the Southern African region to initiate a comprehensive food security study. In addition to generating innovative food system governance approaches for the City itself, Cape Town has the opportunity to be a leader and exemplar in this area of growing importance on the African continent. The initiative also provides Cape Town with a means to acknowledge the role that food plays in the life, livelihoods and identity of the city since, as Roberts (2001) notes, “a city is what it eats.” In line with the framing in the Terms of Reference, the study focuses on the multiple, interrelated factors comprising the food system, in order to generate understanding of the food security situation and its determinants in the city. Its aim is to provide a robust evidence base for decision-making about food system governance in the city. The study responds to the questions posed in the Terms of Reference by first elaborating a conceptual framework and providing an overview of the existing political mandate and the roles of the three spheres of government in food system governance and food security alleviation. It argues that the City already influences the City’s food system and therefore food security. Given this, it is essential to strategically engage these influences. The report then describes the food system in Cape Town with an overview of the national and provincial scale factors that shape the food system. These chapters highlight the strengths and weaknesses of the current system in terms of reliability (price, nutritional quality, safety), sustainability (environmental, economic and social) and transparency (availability of data and information); all factors which impact the food security of Capetonians. The report then describes the current state of food security in Cape Town, identifying particular areas and types of households most vulnerable to food insecurity. It also identifies particular shocks and stresses that impact food security, and outlines the coping strategies employed by households in efforts to ameliorate food insecurity. While the City of Cape Town is the first city in Southern Africa to commission a study to inform the development of strategic responses to urban food insecurity, there have been a number of attempts at developing urban food system governance elsewhere. The study summarizes the experiences of these cities, and considers their relevance to the Cape Town context. The final chapter draws together recommendations from the various chapters, identifies priority issues, and proposes immediate, medium and longer-term action steps.

Developing an understanding of the Cape Town food system in a manner that enables an effective response to the terms of reference required the application of multiple research and data collection methodologies. This report made use of both primary and secondary data. Certain data sets were only available at the national scale, while other data were collected in different formats and in different timeframes. Data from mandated research entitled such as Statistics South Africa and WESGRO have been used where applicable and relevant. Where these data are at an aggregate scale, additional qualitative and quantitative data were also used.

The Cape Town city-region is neither self-supporting nor sustainable in terms of food supply and consumption. It cannot therefore be argued to be food secure at the City scale. Rather, Cape Town is embedded in broader national, regional and global food

value-chains that have a profound effect on the city. In order to conceptualise the complex links between global, national and municipal food production, distribution and consumption, this study argues that the City should adopt a food systems approach which focuses on internal functioning and external linkages as well as connecting the functioning of the system to food security outcomes at the community, household and individual level. Food security itself has five different, but inter-linked dimensions: availability; accessibility; adequacy; acceptability and agency. Food insecurity is the product of failures and inefficiencies in the food system. Evidence presented in this report indicates that there are high levels of food insecurity at the household scale in Cape Town.

The report therefore argues that in order to address food insecurity, the City must work towards a food system that is reliable, sustainable and transparent. Such a system will generate household food security that is less dependent on welfarist responses to the challenge.

In this context, reliability is taken to mean stable and consistent prices, the nutritional quality of available and accessible food, and food safety. Sustainability means that the food system does not degrade the environmental, economic and social environment. Finally, transparency refers to the legibility of the system and its control by the state and citizens.

A food system perspective

A functioning city food system that ensures food security for all who live in the city would need to embody a number of core principles including:

- The constitutional right to food and nutrition and the obligation of local government to ensure the progressive realisation of this right;
- Food insecurity in the urban environment is fundamentally a problem of food inaccessibility;
- In an environment where residents purchase the bulk of food they consume, access has both economic and spatial dimensions;
- Access to affordable, nutritious, safe and culturally-appropriate foods is affected by factors such as pricing structures, advertising and urban design;
- Information on and understanding of the food system is vital for the strategic management and oversight of the food system.

In complex systems such as urban food systems, there are multiple role players and distributed authority. This means that no single entity assumes responsibility for addressing food insecurity. This report takes the view that due to the obligations set out in terms of the constitutional right to food, all spheres of government need to take responsibility. As a result, it is important to establish who is responsible for which components and where different levels of government can intervene to effect positive change in the system. This perspective of scale-specific accountability counters the dominant paradigm present in South Africa. Whether at national, provincial or municipal level, the operation of food systems and associated food security outcomes are generally viewed as the sole responsibility of departments of agriculture. This is a completely one-dimensional and inadequate position. Food is a cross-cutting issue and a 'whole-of-government' approach is necessary to create the environment in which a robust food system, involving the private sector, government, non-governmental entities and the public, can serve the needs and aspirations of the entire population.

The South African food security policy environment

The central and provincial government response to food insecurity to date has been grounded in three key Strategies and Programmes: the Integrated Food Security Strategy (IFSS), the Integrated Nutrition Programme (INP), and the National School Nutrition Programme (NSNP). Implemented respectively by different national and provincial departments of Agriculture, Health and Education, these strategies and programmes have impacts within Cape Town but all administered by provincial, rather than municipal, entities. This creates and reinforces an urban food mandate gap, a food policy vacuum at the city scale. However, the National Development Plan (NDP) signals a shift in this situation. The NDP suggests that there needs to be a wider set of engagements and better integration between departments. The NDP provides a number of important signposts for the future:

1. Food security includes nutrition security, ensuring that the focus is on the nutritional quality of foods and not simply basic caloric sufficiency;
2. Food and nutrition security is connected to both social protection and health agendas;
3. Food and nutrition security requires interventions to reduce the cost of food and provide a stable food inflation environment;
4. There is a need to “identify the main elements of a comprehensive food security and nutrition strategy and launch a campaign” including multiple stakeholders and connecting a wide range of departments;
5. Food security is related to the wider food system. A policy framework is required which responds to bottlenecks that create food insecurity;
6. Investment in agriculture and agro-processing should effect SMME growth for job creation and redress skewed ownership patterns;
7. Local food systems need to be better connected to international food systems.

Neither the existing programmes nor the NDP suggest an explicit mandate for municipal government to address food insecurity. However, priorities and mechanisms advocated by the NDP can be operationalised at national, provincial *and local* levels. In particular, the NDP implies involvement of a wider range of departments impacting food security and food systems. Point 5 supports a central theme of this report, namely that systemic responses rather than project-driven interventions are needed. It reinforces the notion that local areas have a key role to play in addressing food insecurity bottlenecks.

The City of Cape Town, and various departments in it, already play an important, often unrecognised, role in the urban food system and the food security of its residents. The City plays a direct and indirect role in many components of the food system, including food safety, production, processing, distribution, sale and waste management. Additionally, the City’s existing policies and programmes impact upon the household’s ability to access and utilize food. These interventions are currently not systematic or coordinated, since they derive from, and are driven by, the allocation of departmental responsibilities rather than a coherent City-wide vision of the food system as a whole.

Report findings

Chapter Two provides an inventory of actual and potential roles of different departments at different points in the food system (see summary in Table 2.3). These roles need to be further developed, informed by an overall vision and understanding of the food system. To date, particular emphasis has been placed on city-level food

production (urban agriculture) and much less on other critical elements of the food system such as processing, distribution, formal and informal retailing, and waste management. In addition, while there is a substantial role for the City in addressing food security and shaping the food system, the system is also influenced by a far broader set of stakeholders including national and provincial departments, private sector actors, trade unions and a range of NGOs, CBOs and other civil society organizations. A detailed stakeholder mapping, including current roles and responsibilities, is provided in Chapter 2.

Since an adequate food supply is an essential platform for a stable and functioning food system, it is important to understand where and how the city obtains its food and what the opportunities and constraints are to local production both within the city boundaries and within its hinterland (in this case, Western Province). This is a significant challenge because an ever-increasing amount of food that is consumed in the city is delivered by supply-chains that reach deep into other parts of the country and into global markets. These are private sector supply-chains and for a variety of reasons, including recent competition commission ruling, the companies that orchestrate these chains are extremely reluctant to share even the most basic information about their operations and strategies. The analysis of the broader South Africa food system in Chapter 3 -- including data on production levels and trends, the geography of food production, corporate concentration and the organization of supply chains -- leads to the following general conclusions:

- Post-apartheid agricultural and trade policy has led to a reduction in the number of farms and a consolidation of the agricultural sector. Between 1990 and 2008 there was a 76% reduction in the number of farmers in South Africa, and farms have been consolidated. It has also led to a shift in production focus, with a marked increase in the production of horticultural crops for export, most notably a massive growth in grape production.
- The South African food system is increasingly consolidated with key value chains, such as wheat, maize, dairy and poultry controlled by a very small number of companies. Four main wheat millers control 87% of the market, 73% of the market share of maize is held by four companies, four major milk buyers process 65% of commercial milk delivered to dairies, and two companies produce 50% of broiler chickens in the country;
- Similar consolidation has occurred in the food-processing sector. The ten largest companies produce 52% of all packaged food sold in South Africa. Large agro-processing businesses account for 91% of all income and 75% of all employment in the sector;
- There is further concentration in the retail sector and the supermarkets are playing an increasingly important role in the food system as a whole, influencing production and processing downstream through vertical integration. Four main retailers account for 97% of food sold with the formal retail sector, and 68% of all food sales;
- Due to the nature of the national food system, food consumed in Cape Town cannot be assumed to be locally produced, and there is therefore a need for a national perspective;
- Large supermarket chains also source food on international markets to smooth seasonality and ensure a year-round supply of certain products, as well as brand-name foodstuffs that cannot be sourced within the country;

- In one sense South Africa's modern food system is extremely efficient at delivering food in sufficient quantities to the residents of Cape Town, getting large volumes of food into the city. However, in another sense, that same efficiency is not reflected in how the food is distributed within Cape Town. Food is not evenly distributed throughout the city nor is it equally accessible to all, reflecting a food system model that while apparently efficient is a model that privileges certain markets and disregards others;
- While local food prices and trends in formal retail are largely dictated by national food price trends and competitive pricing, local food system dynamics do play a role in mediating these national trends.
- The cost of food is vulnerable to rising input, labour and transport costs, long term climate change and extreme weather events, and changes in export markets – such as currency fluctuations and tariffs, and import standards.
- The Western Cape's agricultural sector accounts for almost 21% of the country's agricultural production and 45% of the country's agricultural exports. The Province is a major contributor to national primary agricultural employment, and upstream and downstream employment. However, the export orientation of agriculture means that high levels of agricultural production do not necessarily translate into food security outcomes.

The trends represent a food system in rapid transition, one where poor consumers are often the most vulnerable. An example of this vulnerability is reflected in the March 2014 Consumer Price Index published by StatsSA. The report highlights that most food groups showed high inflation, with bread and cereals having an inflation rate of 9.2% and vegetables having the highest annual rate at 12,8%. Within the vegetable increases produce such as onions and tomatoes both had annual rates over 20%. When these results are considered within the context of different food basket and income distribution regimes, the lowest quintile in Cape Town are most vulnerable to such fluctuations. If these inflationary increases are considered with other increases in essential items such as schooling, energy and transport, this reflects a dramatic inflationary increase, one that far exceeds the cited 6% CPI.

Cape Town's food system components

Cape Town has important local food and wider agricultural production capacity. Cape Town is a key point through which much provincial and even national agricultural produce is beneficiated, both for export and national consumption. This infrastructure supports a more localised set of food system activities. Food production within Cape Town benefits from these structures which, at the same time, are made more viable by regional food production e.g. the Cape Town Fresh Produce Market and the fisheries industries.

Productive spaces

In-city food production is of benefit to a city like Cape Town, particularly in terms of delivering cheaper food and bringing greater dietary diversity and nutritional benefit. The discussion of Cape Town's in-house food supply focuses on commercial agriculture and the form and fate of the unique productive agriculturally-zoned areas within the boundaries of the City of Cape Town (Chapter 4) and urban agriculture (Chapter 5). A constant theme is the tension between the valuation of agricultural land in terms of its

contribution to food security versus alternative means of valuation such as the argued need for land for development and housing options. Detailed information is available on this element of the food system and its analysis prompts the following conclusions:

- There is vital agricultural production within Cape Town. While there is large-scale production of grapes and other fruit for export, there is also high production of staple vegetables and livestock, both of which support more local consumption;
- Considered collectively, these areas make a viable and necessary contribution to the Cape Town food system. They have been demonstrated to play a price-moderating role in the Fresh Produce Market and informal trader systems. This role is most evident in the case of commodities critical to the diets of the poor. The price of low cost but high weight items such as cabbage, butternut, potatoes, onions, etc. is affected by transport costs, making local production attractive.
- The productive areas in and around Cape Town produce 23.9% of the tonnage of vegetables consumed in Cape Town (just including figures on cabbages, carrots and onions), and over 38% of the required tonnage of potatoes.
- The long-term viability of these areas is challenged in a number of ways. The complexity of the nexus between urban agricultural land use and other development needs presents a significant challenge. One of the most critical is in how the protection status of the areas is arrived at and the methods and metrics used to arrive at the assertion of value. Values such as the contribution to food security and improved nutrition need to be recognised and profiled;

Although the current SDF calls for “high-potential and unique agricultural areas” to be protected for food security purpose, the areas classified under the Agricultural Land Review as such are not primarily the food production areas of the city but predominantly viticulture areas. The areas where food production takes place hold lower value in the SDF. This separation of agriculture from food security is evident in the treatment of food within the City’s IDPs. There is a need to reassess the criteria upon which agricultural land is assessed to ensure that areas that contribute most to food security are afforded the protection recommended within the SDF.

Urban agriculture (in the form of community gardens and household plots) has been the main focus of explicit food security attention by the City, even though this is only one element of an integrated and functioning food system. There is substantial support for urban agriculture with a prominent role played by the City’s Urban Agriculture Unit and the NGO sector. The Provincial Department of Agriculture has supported 114 community gardens within the City since 2008 to present. The Social Development and Early Childhood Development Directorate supports 38 projects. There are also over 100 NGOs working on urban agriculture in Cape Town, some of which have innovative programmes that connect farmers to markets, provide wider skills training and have a strong focus on sustainability. However, because of different ideological and economic approaches, government and the NGO sector have not always been able to work together to achieve shared objectives. In addition to this, the absence of an overarching food system strategy for the City of Cape Town means that these urban agriculture interventions remain project oriented and do not feed into wider strategic food security planning and as such their real and perceived value remains unrecognised and at times even undermined.

Within middle and upper income communities there is a growing interest in own food production, especially vegetable cultivation. These communities have the luxury of

convertible, privately-owned land, which is not the case in poorer communities. The December 2013 AFSUN Cape Town food security survey found that only 2% of households in low-income areas of the city sourced food through own production, compared to 7% of households in middle-income areas, and 10% of households in high-income. Although urban agriculture is often viewed as a poverty relief strategy, the study found that household urban agriculture is not a significant income earner.

Food Flows

Food flows to, through and within the city (the distribution component of a food system) provide important insights into the efficiency of a system in providing equal access to food for all. A drive along the N1 or N2 or a visit to the Cape Town harbour reveals that there are substantial flows of food into, out of and within Cape Town. However, these flows are poorly documented. Various methodologies have been developed in other contexts to map and quantify different kinds of flows including material flows analysis and sustainability reporting. None of the existing methodologies or data sets adequately addresses the question of food flows in Cape Town. There is a lack of coherent data on flows of food to and within the city due to the complexities of the food system and the control of data by private sector actors. The public data that exist have not been collected for the purposes of mapping food flows. In general available data are collected at an aggregate national scale. Using these data sets as well as available data for Cape Town, such as the flows through the Cape Town Fresh Produce Market (CTFPM) and informal trader networks, the report provides some understanding of flows of food for consumption in Cape Town. From these data the following determinations can be made:

- Cape Town is a major food export and import point. The Western Cape Produces 21% of national agricultural output, but the bulk of this food flows through the city.
- Cape Town's per capita food consumption is 430 kgs per person per year with a total food consumption figure of 1 607 09 metric tonnes per annum. The Cape Town consumption figure is higher than the calculated national figure of 330 kgs per person per year and is influenced by aspects such as sources of food, proximity to markets, fresh produce prices and the higher aggregate per capita wealth in Cape Town.
- The CTFPM is one of the two main sources of fresh produce sold in Cape Town – the other being the major retailers – and is the main source of fresh produce for the informal trade sector;
- The CTFPM has experienced a decline in tonnage traded in the last ten years, as the retailers have increased their direct purchase from farmers. It remains important as the source of produce for informal traders and plays a role in moderating food price fluctuations;
- Studies of the informal trade sector indicate the complexity of informal flows within the city. The informal trade sector acquires food from multiple sources, often on a daily basis. They have flexible purchasing patterns to ensure the best price and quality. Trade networks and associated food flows across the city are dense, dynamic and interconnected and are therefore responsive to both price pressures from above and below.

When the productive agricultural areas within the city and the food flows are considered collectively and read in the context of other findings from this study, it is argued that the productive areas, particularly those areas growing food, are of sufficient importance to the city to be secured, protected and afforded the necessary governance to retain them as key assets of the City. This importance needs to be supported in City-scale strategic planning processes including spatial planning, heritage and economic development.

Formal retail accounts for 55% of food sales nationally, a figure projected to rise to 85% in the next few years. In Cape Town, there are around 10 000 retailers and restaurants licensed to sell food. The paucity of private sector data for mapping food flows therefore hinders strategic food system planning based on a comprehensive understanding of the food distribution component. Much of the data on food flows into Cape Town are thus held by the private sector and for a variety of reasons detailed in this report, the private sector players were highly reluctant to divulge this information. Systems to collect and synthesise data must be brokered between City and the private sector if the City wishes to undertake a future system-wide mapping of food flows. Identifying the sources of food flowing into Cape Town was thus a significant challenge. Using known data from some of the retailers who were willing to provide information and known information for food system entities such as the Cape Town Fresh Produce Market, estimates of food flowing into the city were calculated. As certain data was less reliable than others, the data was rated according to levels of reliability. These calculations, suggest that a high proportion of most foods are sourced from within the Western Cape region. 45% of animal protein (excluding dairy), 71% of vegetables, 65% of fruit, 72% of dairy and 34% of grains are sourced from within the Western Cape. This underscores the need for province and the City to have a joint food system strategy. These figures are subject to a variety of seasonal, economic and food system- related fluctuations and are only indicative of current data. Going forward, these figures need to be tested and calculated on a regular basis so as to enable the development of robust figures necessary for longer term strategic food system planning. Systems to collect and synthesise data must be brokered between City and the private sector if the City wishes to undertake a future system-wide mapping of food flows.

Food Processing

Another key element of the Cape Town food system is food processing. As much as 70% of South Africa's agricultural output undergoes some form of processing or packaging and Cape Town, due to its port status and the size of the market, is a food processing hub. Cape Town has over 600 food processors that have been issued with Certificates of Acceptability and supply retailers. The food sector is therefore an important source of employment in the city. All the major food companies have factories in the city, clustered in a number of key nodes: Montague Gardens, Killarney, Epping Industrial, Cape Town Harbour, and to a lesser extent Industrial and Business Parks in Westlake, Brackenfell, Athlone and along Voortrekker Road. These companies are largely dependent on primary products being brought into Cape Town from within and beyond the country's borders. Despite Cape Town's large and varied food-processing sector, many of the core foods consumed in the City are produced by large national and multinational companies and imported into the City. It is therefore pertinent to ask whether the City might increase its role in supporting smaller producers of key food items. The DTI's IPAP2 and DAFF's 2012 Agro-Processing Strategy identify food processing as a predominantly urban activity that has high employment and growth multipliers. Agro-processing is identified as a priority sector within the City's 2013 Investment Incentives Policy.

Food Retail

The formal and informal food retail environments need to be considered as part of the same food system. The potential impact of future supermarket expansion on food security should be a component of planning decisions. In the last 20 years, there has been massive expansion of the supermarket sector in Cape Town. This has been driven by new markets, broader food system trends of market deregulation and trade liberalization and the retail-led township development models. Supermarket location in cities is generally closely correlated to income and purchasing power with the absence of supermarkets in poorer, especially informal, areas, creating food deserts, a term used to describe geographical areas within a city where access to safe, affordable and nutritional food is limited. In Cape Town this is also the case but there is also a pattern of expansion into lower income areas. Supermarkets rarely enter low-income areas as standalone stores, but rather through new shopping mall developments or so-called mini-malls. These are seen as a means of neighbourhood regeneration and leading to essential infrastructure development in townships. Concerns have been raised that the arrival of shopping malls and supermarkets undermines local businesses. Given the role of informal food retail in ensuring food access for the poorest urban residents, the loss of local businesses may negatively impact food security for the most vulnerable residents, despite the apparent lower prices brought by the supermarkets (see Table 7.4).

The supermarket sector is rapidly changing the local food retail environment, with little consideration of its impact, positive or negative on local food and nutrition security. This report argues that food security is enhanced when a variety of food access strategies are available to the urban poor. It does not argue that supermarkets are intrinsically positive or negative for food security. What it does argue is that maintaining a diversity of retail forms provides a food environment in which households are better able to maximise their potential food security using their existing financial resources and asset base. In South Africa there has been a small body of work focusing on the impact of mall developments (which generally include supermarkets as anchor tenants) on local economic development in township areas. Studies show that small traders and vendors are generally negatively impacted. Those who survive do so only by changing their business models. The loss of small retail is potentially damaging for the food security of residents on a number of levels from access to appropriate unit sizes, credit and reduced transport costs to name but a few.

As of 2012, social grants have been disbursed at supermarkets, providing them with significantly more business. The impact of this shift in grant disbursement on the informal trade sector has not yet been studied, but concerns have been raised that this shift merely channels government money straight to the big food companies, who will further increase their market share and less capital will circulate within the townships.

Municipal governments, including Cape Town, have tended to frame informal trade as a livelihood strategy and a part of economic development. The City's positive position towards informal trade contrasts with that in other South African cities, such as Johannesburg and Tswane. An AFSUN survey of informal food retailers in Cape Town in 2013 found the following:

- Just under 80% were general dealers/spazas (39%), meat traders (20%) or fruit and vegetable sellers (19%);

- There are distinct geographies of activity with dense food retail around transport hubs (railway stations and taxi ranks) and along major roads for people using trains and local informal “amaphela” taxis on the way to and from work;
- Spaza stores tended to be scattered throughout the wards, serving very local populations. There were also clusters of fruit and vegetable retailers located directly outside the shopping malls;
- Traders are predominantly South African, except in the spaza business where Somalis are strongly represented. Informal retailers are either survivalists or entrepreneurs. One study estimated that up to 50% of new entrants into the spaza business survive for less than five years.

The main competitive advantages of informal retailers are their willingness to offer credit and the sale of products in small unit sizes. Although the informal food economy plays an important role in the local food system, it faces significant challenges including food spoilage, theft and vandalism, followed by environmental health problems. There are certainly opportunities for the City to address these problems within its existing departmental mandates.

Sustainability and the Cape Town Food System

The sustainability of local and global food systems has been the focus of considerable academic and policy debate. Principles of more general sustainability approaches and goals are embedded in many of the City’s existing policies, strategies and reporting processes. However, food is largely absent in these position documents. Perhaps one of the only areas where food is discussed is within the climate change debates. However, most climate scientists focus on the relationship between climate change and food production or the greenhouse gas emissions generated by the food industry. This predominantly environmental view of food system sustainability, while critical, directs focus to only one of the sustainability pillars. Far greater attention needs to be paid to the associated social and economic sustainability aspects of the food system. Importantly, these need to be viewed as embedded within one another and not as stand alone interventions of social, economic and environmental actions where sustainability is achieved at the intersection of these three components. The same applied to food system sustainability. This can only be achieved through a greater strategic and systemic focus.

One entry point for addressing food system sustainability is through an engagement with waste, both through reduction in waste generated and better use of waste. A distinction needs to be made between wasted, discarded or spoiled food and the waste food products derived from food processing and surplus food, often generated as a result of the current supermarkets operating model. Food processing and packaging is a predominantly urban activity, and there is a concentration of post-harvest handling and storage in Cape Town. Furthermore the City is a major site of retail and consumption. It is clear that there is substantial food waste within the city. This presents a sustainability challenge and opportunity.

In order to reduce food waste, methods need to be put in place throughout supply chains to reduce, reuse/re-distribute and recycle food. While the redistribution of surplus, still fit for human consumption, food in Cape Town has greatly increased due to the operations of Food Bank South Africa (which manages traceability and insists on daily collections for high risk items), there is still much to be done with regard to other forms of food waste. At present no city-wide system exists for the collection and

management of food waste in Cape Town. Certain city departments have already done substantial work on the extent of food waste and the need and opportunities for better management of food waste in order to improve the City's sustainability performance. Only a small proportion of waste or surplus food can be redistributed for consumption, the remainder, however, can largely be recycled through composting, vermiculture, biogas digestion and other means, and produce agricultural inputs or fuel.

A focus on food waste allows for a far clearer understanding of the weaknesses within the food system. Food waste offers a lens through which the inequalities and sustainability challenges within the food system become most evident. While it may appear counter intuitive, focusing at one of the final stages in the food chain often allows for greater strategic understanding of other component of the wider food system.

Food prices

There have been a series of global food price shocks in recent years. Food price volatility is the outcome of local and international processes, short-term shocks and long-term trends, and political, economic and environmental conditions. While the causes are complex, it is clear that food price volatility will continue to affect household food security. CPI figures are calculated by StatsSA from data gathered monthly across South Africa. However, these are not the best measure for understanding the actual impact of inflation on low-income households. The Basic Food Basket approach better captures the impact of food price inflation on poor households. The rate of increase of the price of the basic basket has exceeded that of CPI (see earlier discussion on the lower quintiles), suggesting that the foods on which the poor rely are becoming more expensive at a faster pace than other foods. Prices and sensitivity to food price inflation are different within and between formal and informal trade sectors. In the case of non-perishables, the informal sector is often more expensive, but fresh produce and meat are often cheaper due to shorter value chains and different standards.

Food system operations and themes

The food system in Cape Town has a number of positive characteristics:

- ✓ High agricultural productivity of wheat, livestock and horticultural products in areas in the hinterland of the city (Western Cape);
- ✓ Evidence from this research shows that productive agriculture in and near the city moderate food prices, and provides a range of sources of stock for traders serving low income areas;
- ✓ Active, community-based urban agriculture projects, mainly run by NGOs, throughout the city;
- ✓ Active community-based food system interventions with operational knowledge of food system challenges, each responding to specific constituencies according to need (such as Food Bank, Lunch Buddies, etc);
- ✓ A dense network of flows of food within the city that provide multiple means for households to access food;
- ✓ A well-developed food processing sector;

- ✓ A diverse retail environment that allows households to access food from different sources.

There are also a number of weaknesses in the food system, which manifest themselves in the high levels of food insecurity experienced in the city, and which urgently need to be addressed:

- Lack of a coherent food governance strategy at the national, provincial and local scales;
- National and provincial food security interventions over-prioritise production oriented responses to the food security challenges undermining deeper systemic challenges;
- Provincial agriculture strategies that prioritise export-oriented agriculture and view agriculture for food security as a poverty alleviation strategy alone;
- Increasing imports of highly processed foods;
- Lack of transparency within the food system beyond the farm level and certain mandated reporting areas such as the CTFPM;
- High levels of concentration throughout the value chain, which creates barriers for entrants of smaller businesses;
- Lack of consideration of the impact of the expansion of supermarkets on the informal trade sector and the balance of healthy and less healthy food availability (for clarification of healthy and less healthy foods see the footnote on p. 15 of main report);
- Lack of environmental sustainability within the food system;
- Highly volatile food price environment, coupled with food price monitoring systems that are not well suited to monitor the impact of food price increases on poor households.

Food security in Cape Town

How pervasive is food insecurity in the city and what can be done about it? While there is general agreement on the formal definition of food (in)security, there is less agreement on what tools and methodologies should be used to monitor and measure it. In this study we propose a toolkit that has been utilised and tested in a wide variety of geographical and cross-cultural contexts for assessing food insecurity at the household level. The toolkit provides a robust set of quantitative measures based on self-assessment and short and long-term recall by respondents and could be used with profit on a regular basis in Cape Town to assess improvements and deterioration in food security levels as well as the major variables driving food insecurity. Chapter 9 details the methodology for data collection and calculating the four basic measures developed by the Food and Nutrition Technical Assistance (FANTA) project: the HFIAS, HFIAP, HDDS and MAHFP. This toolkit offers a number of key benefits in measuring food security. These include but are not limited to cost, time, ease of application, general accuracy, replicability, geographical relevance, coupled with comparability across areas.

The study also suggests ongoing monitoring of the food system itself. Central to the study terms of reference is the notion that food security is the “outcome of complex and multi-dimensional factors comprising a food system.” From this it is clear that any

ongoing engagement by the City to address food security must be informed not just by household scale indicators, but also by food system indicators. While the Food System Study provides an overview of current food system characteristics and highlights areas of transformation, it is vital to note that the food system is undergoing a series of transitions (as indicated by the shifting retail environment, the rapidly changing urban diet, and potentially changing land use patterns). It is the contention of this study that the indicator set to be used by the City must include food system as well as household scale food security indicators. The study recommends ongoing monitoring of the food system and its impact on food security.

Chapter 9 further elaborates on the findings of two household surveys conducted in Cape Town in 2008 and 2013 (the latter a representative survey of the city as a whole), supplemented by other case studies. Among the major findings were the following:

- 80% of poor households in three communities (Khayelitsha, Philippi and Ocean View) were either moderately or severely food insecure in 2008. A related case study carried out in Manenberg found that 64% of households were food insecure. The 2013 survey found that 58% of households in the city as a whole were moderately or severely food insecure;
- Food insecurity is very unequally distributed across the city, being most acute in low-income areas where only 18% of households are food secure compared with 74% and 94% in middle and high-income areas respectively.
- The surveys paint a bleak picture of the Cape Town diet. Only 2% of households consumed food from all 12 FAO food groups in the 24 hours prior to the survey. In low-income group areas, only 18% of households surveyed consumed food from 9 or more food groups and more than half (55%) consumed from 6 or fewer.
- Households in different areas of the city are exposed to different levels of risk at different times of the year. Almost all high-income households (95%) indicated that they are adequately provisioned for all 12 months of the year. By contrast, only 25% in the low-income areas experience twelve months of adequate food provisioning.
- Studies of food consumption patterns of adolescent learners and young people more generally in Cape Town outside the home reveal an alarming pattern of consumption of foods of low nutritional value, high in sugar and salt content.
- Poor diet has significant health impacts. Health is not merely the absence of disease, but also encompasses good nutrition and healthy lifestyles. In South Africa the burden of disease is of great concern and malnutrition/poor nutrition impacts on the health of the population. Individuals in a food insecure household and/or community are at greater risk due to diets of poor nutritional value, which lowers immunity against diseases. In children it is known to stunt growth and development and this places the child in a disadvantaged position from early on in life. Any improvement in the nutritional profile of an individual is beneficial and as the family and community becomes more food secure, the greater the benefit. It further reduces the demand on health services.

Determinants of food security

Important determinants of food security at the household level include the location of households, type of housing, access to food sources (markets), dependency ratio,

household size and structure, gender, household income, employment, absence of viable social protection and food prices. For example:

- Poor female-headed households are more food insecure than male-headed households.
- Only 2% of households with an income below R500 per month were food secure compared to 23% of those with incomes between R3 001 and R3 500 and 62% of those in the R4 001–R4 500 category.
- Households with access to formal sector employment are more food secure than those that do not, since wage work facilitates the mobilization of resources that are critical to accessing food, especially as few urban residents have recourse to own production.
- In poor areas of the city, shack dwellers are 20% more likely to be severely food insecure than house dwellers. With over 174 000 households living in informal settlements in Cape Town, the interaction between housing type and household food insecurity cannot be overstated.
- Most of the residents in the city purchase their food from supermarkets, fast food outlets and small stores. However residents in the high-income areas visit supermarkets more frequently than all other groups. Households in low-income areas patronise spaza shops more frequently (55% at least 5 days a week).

Many Capetonians live with multiple and cumulative deprivations. Households apply three broad strategies in response to these deprivations. These include income-generating strategies, consumption smoothing strategies and resource augmentation strategies. The high costs of shelter, transport and other necessary expenses force poor households to cut back on food expenses. Strategies of income generation are generally designed to enable the household to avoid shocks as well as mitigate the worst effects of those shocks, should the household fail to avoid them. Strategies of consumption smoothing enable the household to stretch the few resources that they have over a period of time. The array of resource augmentation strategies include reliance on social grants; purchasing food on credit; borrowing money (especially from loan sharks) to purchase food; switching to less expensive foods; non-payment of utility bills; and shifting residence from formal to informal housing in order to save money that is then channelled towards food expenses.

South Africa is one of the few countries in Sub-Saharan Africa with a comprehensive set of social grants. These grants have a significant impact on day-to-day survival of individuals and households, allowing the recipients to secure basic energy and food needs. Grants range from the old age grant, disability grants, child grant and war veterans grants to the foster child grant, and dependency grant. Grants do not only benefit grant recipients but other household members as well. They allowed household members to purchase food, purchase property, build or improve homes, help in financing agriculture, and pay for children's education.

There is certainly enough food in Cape Town to ensure that no-one is food insecure. The problem is not one of supply but of access. An abundance of food does not necessarily translate to food security at the local or household scale. In Cape Town, as in any other city in South Africa, the number of households that are food insecure is unacceptably high as are the high levels of inequality in food security. The food system delivers the food but it does not ensure its equitable distribution or consumption. This is where the

City can and should play an interventionist role in the system. To be fully effective such intervention should be coordinated and coherent. The scale of the challenge means that they can no longer be ad hoc and piecemeal projects. Key to successful food system interventions is a strategic overarching food strategy that considers the relationship between the city, its residents and the food system. An increasing number of cities worldwide are beginning to develop city-wide food system governance plans and Cape Town can certainly learn from these examples.

Examples from other cities

Cities around the world have developed a range of governance structures and strategies. The lack of official mandate is far from unique to the South African context. A dominant Northern model is the multi-stakeholder Food Policy Council whereas approaches in South America have been more local government-driven. Both forms have strengths and weaknesses that need to be considered by the City. A common approach is to ground food governance in an Urban Food Strategy and a Food Charter. The Food Charter provides clarity on the city's food system orientation, clarifying key areas of focus, governance orientations and the ultimate vision of the urban food system. The Food Charter was identified as highly significant by a number of cities that have developed comprehensive responses to food insecurity. It was argued that the development of a Food Charter is vital, given the broad range of stakeholders who shape the food system. Other cities argued that the Food Charter was a cost effective means to develop consensus within and beyond government.

The Urban Food Strategy provides strategic direction and can be used to create connections between diverse stakeholders and projects. The establishment of a food governance structure including multiple municipal departments and external stakeholders has been identified as crucially important. Central to the effective strategic governance of a food system at the urban scale has been the use of knowledge as a key food system "currency" where learning through the constant refinement of the food system supports efficient and effective food system interventions. This needs to be supported by effective management of such a strategy where management is able to cut across the multiple departments that all impact on and respond to components of the food system within the city. Finally, effective strategies hold a strong focus on pro-poor interventions responding to the needs of the most food insecure within a city.

Three projects from elsewhere were outlined in order to provide the City with examples of food system governance approaches that address three of the critical challenges identified in the report. Seattle's Mapping Food Access Project was outlined to provide insights into addressing data gaps and working with external research agencies. New York City's Green Carts and Shop Healthy Programs were outlined as projects aimed at increasing the accessibility and affordability of healthy foods. Finally, Toronto's Community Food Procurement Project was presented as an example of the City working in partnership with the private sector and NGOs in order to increase accessibility of healthier foods while increasing procurement from local producers.

Barriers to effective action experienced by other cities include a lack of political will; time and finance constraints; conflict with other priorities; and a policy vacuum.

Food system governance in Cape Town

Although many food system challenges manifest at the municipal scale, the City currently has no explicit mandate to address food insecurity and therefore no single budget line for food system governance and food security interventions. Nevertheless, the existing programmes and policies of the City already shape the local food system, whether this has been formally acknowledged or not. A robust food governance framework is essential to embed food system and food security issues in the City. Without this, momentum will be lost and food system and food security interventions will remain isolated and ad hoc.

Recommendations and Action Plan

The full list of recommendations made throughout the report are collated on p. 310. The recommendations are classified according to level of priority, resource implication for the City, Responsible City unit, Other City/Provincial Units, and whether they require engagement with external stakeholders. Five key action areas emerge from this comprehensive set of recommendations:

- 1) Establish the conditions for food system governance. This should be accomplished through the development of a Food System and Food Security Working Group. This is essential if the City is to develop coherent, effective strategies to address food insecurity and to work towards a pro-poor food system. It is also essential to build collaborative partnerships with civil society, the private sector, academia and other groups.

Critical elements within this first phase is a) Internal City training on food systems and food security to build a common understanding of the issue and agreement on strategic response, b) Development of a Food System and Food Security Charter that can guide the City's long term planning for food security and develop agreement with external partners, c) Development of a Food System and Food Security Strategy. This is essential as it will prevent the responses being project-by-project and department-by-department.

- 2) Re-assess the Agricultural Land Review. This is important as it allows the City to consider the implicit and explicit value systems shaping public and private sector decision making within the food system. The SDF calls for protection of agricultural areas for food security, but the current tools to assess agricultural land do not effectively identify areas of importance for food security. Although this re-assessment focuses specifically on the Agricultural Land Review it provides an opportunity for the City to consciously re-engage its thinking about the wider food system and the City's role in its governance. It is anticipated that this may reveal a set of fundamental tensions that would require attention during the formulation of the food system and food security strategy. The evidence presented in this study identifies Joostenbergvlakte and the Philippi Horticultural Area as being particularly important providers of fresh produce to the city. It is recommended that these areas be protected until the revised Agricultural Land Review validates their retention or otherwise. Once developed they cannot be recovered.
- 3) Develop a coherent, integrated position on food retailing. At present formal and informal food retail are not viewed as being part of a single food system feeding the city. Decisions about retail development are made independent of

consideration of food security impacts. Retail is the main source of food for the urban poor. It is essential that the retail environment provide low-income households with access to affordable, nutritious, safe food.

- 4) Incentivise food processing as a growth industry. The food industry already provides many jobs. SMMEs in particular should be supported. This is important because it highlights the potential role of the food system in meeting some of the City's broader objectives. This aligns with national DTI and DAFF priority areas.
- 5) Advocate for more pro-poor food price monitoring. Only with better data on the impact of food prices on the poor will the political will to address the problem in national government

To move forward and action learning approach, supported with a strong information system and stakeholder engagement, is recommended. Concurrently, work on developing a Food Charter should lay the foundation for the development of a Food System and Food Security Strategy. Finally, a one-year action plan is proposed.

Action learning projects

The report proposes building action-oriented consensus on a vision and strategy around the implementation of a carefully selected and interrelated set of projects. The selection and implementation of these projects will require skilful engagement with stakeholders from across the food system, and an effective documentation and communication strategy. All of this is essential to ensure that these activities do not become isolated "showcase projects", but collectively serve to raise awareness, build capacity, demonstrate commitment, and inform the integration of food security and food system issues into the City's strategies and operations. The City could undertake one or more of the following three "demonstration" projects:

- a) A nutrition and food security awareness campaign;
- b) Waste management in key food processing sites; and
- c) Facilitation of City dialogue on planning of food retail environments.

Information system and stakeholder engagement

There are two preconditions for the effective implementation of an action-learning approach to the development of a food system and food security strategy and governance system for the City.

1. The development of a robust information and knowledge management system to inform project and programme design, monitor progress and capture lessons of experience.
2. A carefully designed and facilitated process of engagement with stakeholders during all phases of the process.

Development of a Food Charter

The establishment of a Food Charter should be a priority, implemented concurrently with the action-learning activities. The need for a Charter was demonstrated during interactions with the City of Cape Town and the wider stakeholders through the research process for this study. Many food system perspectives were evident and multiple perspectives were offered in response to the challenges identified. This report makes explicit the connections between food system and food security governance objectives and the guiding principles of the City – in this case the "Five Cities" approach

(Inclusive City, Caring City, Opportunity City, Safe City and Well Run City) embedded in the IDP. Food Charters present a vision for a future set of food system and food security outcomes. Food Charters therefore establish a set of principles and objectives on which decisions about food can be based. They provide a reference point for managing food system issues on a system-wide basis. A Food Charter would have little to no cost to the City, but provide a mechanism to raise awareness, build consensus and motivate for funding to support programmes linked to the Charter's principles. Suggested principles for a Food Charter include:

- Champion and facilitate the progressive realisation of the constitutional right to food and nutrition security, to ensure that all residents are able to access sufficient affordable, nutritious, safe and culturally-appropriate food
- Generate food system conditions that enable households to meet their food needs independent of state or NGO sector welfare.
- Generate an urban food system that is reliable, sustainable and transparent
- Advocate for income, employment, housing, and transportation policies that support secure and dignified access to the food people need
- Ongoing dialogue with Provincial and National Government and State-owned entities on policies and programmes that impact the City's food security.
- Pro-active engagement with private sector (formal and informal) to provide better physical and economic access to affordable, healthy foods
- Partnership with civil society organisations to mutually support each other to achieve food security for all.

Importantly, a Food Charter would need to be held and championed by a department or unit within the City that has the ability to engage with other departments at a strategic management level. A well-articulated Food Charter would constitute the foundation a robust, sustainable and equitable food system strategy going forward and would position Cape Town as a national leader and continental leader in addressing urban food security in the "urban millennium."

One-Year Action Plan

Drawing on the recommendations outlined above, the following four components are proposed for an Action plan for the first year:

Training of officials on food security
Establishment of a Food System and Food Security Working Group
Preparation of the Food Charter
Implementation of at least one action-learning project.

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Acronyms and abbreviations

AFSUN	African Food Security Urban Network
ALR	Agricultural Land Report (2008)
BFAP	Bureau for Food and Agricultural Policy
BMI	Body Mass Index
CBO	Community-Based Organisation
CDE	Cost of Dietary Energy
CHEC	Cape Higher Education Consortium
CO ₂	Carbon Dioxide
CoCT	City of Cape Town
CPI	Consumer Price Index
CPIF	Consumer Price Index – Food
CT	Cape Town
CTFPM	Cape Town Fresh Produce Market
DAFF	Department of Agriculture Forestry and Fisheries
DDS	Dietary Diversity Score
DEA	Department of Environmental Affairs
DEFRA	Department of Environment, Food and Rural Areas (UK)
DIA	Dietary Intake Assessment
DoA	Department of Agriculture
DRDLR	Department of Rural Development and Land Reform
DTI	Department of Trade and Industry
ECD	Early Childhood Development
ED	Energy Density
EPWP	Extended Public Works Programme
FANTA	Food and Nutrition Technical Assistance
FAO	Food and Agriculture Organization
FBDG	Food Based Dietary Guidelines
FFS	Food Frequency Scores
FIEMS	Food Insecurity Experience-based Measurement Scales
FPC	Food Policy Council
FPM	Fresh Produce Market

FSI	Food Security Initiative (Stellenbosch)
FSPUD	Food Sensitive Planning and Urban Design
FVS	Food Variety Scores
GAIN	Global Agricultural Information Network
GATT	Global Agreement on Trade and Tariffs
GDP	Gross Domestic Product
GHG	Greenhouse Gas
GHS	General Household Survey
ha	Hectare
HACCP	Hazard Analysis Critical Control Point
HDDS	Household Dietary Diversity Score
HFIAP	Household Food Insecurity Access Prevalence
HFIAS	Household Food Insecurity Access Scale
HLPE	High Level Panel of Experts
HSRC	Human Sciences Research Council of South Africa
IDP	Integrated Development Plan
IFPRI	International Food Policy Research Institute
IFSS	Integrated Food Security Strategy (2002)
INP	Integrated Nutrition Programme (1994)
IPAP2	Industrial Policy Action Plan 2 (2010/2011)
LFS	Labour Force Survey
LPI	Lived Poverty Index
LSM	Living Standards Measure
LUPO	Land Use Planning Ordinance
MAHFP	Months of Adequate Household Food Provisioning
MJC	Muslim Judicial Council
MOU	Memorandum of Understanding
NAMC	National Agricultural Marketing Council of South Africa
NDP	National Development Plan (2012)
NEMA	National Environmental Management Act (1998)
NFPM	National Fresh Produce Markets
NGO	Non-Governmental Organisation
NPC	National Planning Commission
NPO	Not-for-Profit Organisation
NSNP	National Schools Nutrition Programme (2004)
NWMS	National Waste Management Strategy (2011)

PACSA	Pietermaritzburg Agency for Community Social Action
PBDM	Planning and Business Development Management
PEDI	Philippi Economic Development Initiative
PGWC	Provincial Government of the Western Cape
PHA	Philippi Horticultural Area
PNSP	Primary Schools Nutrition Programme (1994)
PPI	Purchasing Price Index
PRASA	Passenger Rail Agency of South Africa
PSE	Producer Support Estimate
PSO	Provincial Strategic Objective
PSFA	Peninsula School Feeding Association
QLFS	Quarterly Labour Force Survey
SANHANES	South African National Health and Nutrition Examination Survey (2013)
SAFL	Southern Africa Food Lab
SAPA	South African Poultry Association
SAPS	South African Police Service
SCEA	Schaapkraal Civic and Environmental Association
StatsSA	Statistics South Africa
UA	Urban Agriculture
UFS	Urban Food Strategy
UK	United Kingdom
UN	United Nations
UNEP	United Nations Environmental Programme
VPUU	Violence Prevention through Urban Upgrading
WESGRO	Destination Marketing, Investment and Trade Promotion Agency for the Western Cape
WHO	World Health Organization
WRAP	Waste Resource Action Plan
WTO	World Trade Organization
YRBS	National Youth Risk Behaviour Survey
ZAR	South African Rand

1 Introduction

1.1 Connecting Food Systems and Food Security

The Right to Food is enshrined within the South African Constitution. However, despite there being sufficient food available within the country, this right is not being met. Both nationally and within the City of Cape Town there are high levels of household food insecurity.

The nature of food insecurity is changing. Food insecure households continue to be malnourished in terms of essential nutrients for health and development, but they are also now characterised by increasing obesity, diabetes and hypertension. This shifting pathology necessitates a shift in thinking about food security and its causes. It can no longer be viewed solely, or even primarily, simply as a manifestation of household poverty. It must be viewed in the context of the wider food system, and other interconnected systems.

The Terms of Reference for this study identify the challenge of food insecurity in the following manner:

“Food security or the lack thereof is the outcome of complex and multi-dimensional factors comprising a food system. Therefore, food insecurity is the result of failures or inefficiencies in one or more dimensions of the food system. This necessitates a holistic analysis of the food system that than can provide insights into the various components of the system, especially in our context as a developing world city. That analysis must also take note of the constitutional mandates of the tiers of government in South Africa, such as the legal mandate for food security that rests with the national government, in conjunction with various provincial departments. Local government, however, needs to understand food systems so as to make evidence-based planning and policy decisions that will have long-term impacts on their areas.”

In order to generate the evidence base to enable the City to make planning and policy decisions that will impact food insecurity the following questions were asked,:

(a) What are the components of Cape Town’s food system? How effective is it? What are the points of weakness in the systems? What interventions would be needed to achieve and sustain effective food systems in the city? What are the key threats to the system in the future and what mitigation strategies are needed?

(b) What is the status of food security in the city? Which instruments should be used to measure food security and what are the appropriate indicators? Where are the food vulnerable residents located? What are their coping strategies?

(c) What are the areas within the city’s boundaries that contribute towards the food systems and food security in Cape Town? How do you quantify their roles as production centres for food? How significant are they for food security in the city?

(d) Who are all the role-players in the field of food security in Cape Town – whose roles are enshrined in official mandates and whose are more voluntary – to inform what role the Council would play, i.e. what should the Council’s response be to food insecurity?

This report addresses these questions and provides a set of recommendations based on its findings and from applicable lessons from around the globe.

The City of Cape Town is the first city in the Southern African region to initiate a comprehensive study of this kind. In addition to generating innovative food system governance approaches for the City itself, Cape Town has the opportunity to be a leader and exemplar in this area of growing importance on the African continent. The initiative also provides Cape Town with a means to acknowledge the role that food plays in the life and identity of the city. The history of Cape Town is a history of food: from the annual migration of the Khoi to graze their herds, to the establishment of the city as a refreshment station for the ships of the Dutch East India Company, to the agriculture-led expansion that created the first free burghers and established a town beyond the Company-owned lands, to the diverse culinary traditions brought by the slaves and by economic immigrants from around the world. Today, the city of Cape Town has some 10 000 formally-licensed food retailers and restaurants ranging from international award winning restaurants to micro-enterprises making pots of breyani to order. Food is a distinct component of local culture, a feature of the city's history that can be celebrated and strengthened. Cape Town truly is what it eats.

1.2 Study Overview

The study addresses the questions raised in the Terms of Reference in seven distinct sections. The ordering of sections was the source of considerable internal debate amongst the consultancy team: Would beginning with an overview of agriculture in South Africa imply that urban food security is an issue of insufficient food production? Would putting food security before food systems reinforce the view that food insecurity is distinct from the food system and that the food system is only a minor component of food insecurity? Would putting the food system before food security privilege the economics of the food system over the lived experience of food insecurity? Would starting the food system section with production reinforce the view that production is the most important element of the food system and therefore largely out of the hands of municipal government mandates? In light of these discussions, it is important to emphasize that the different sections of the report are closely inter-related and need to be read and understood as a whole.

Chapter 2 provides an overview of the current policy and legislative framework for food system governance and food security. Informed by the National Development Plan and conceptual framework described below, this section argues that the City already plays a considerable role, often unintentionally, in the governance of the food system.

Chapters 3-8 review the current food system in South Africa considering production, flows of food, food processing, food retail, food system sustainability, and food price inflation.

Chapter 9 then presents findings on the extent and characteristics of food insecurity, the factors affecting vulnerability to food insecurity, and an evaluation of the various assessment tools available. Section 5 then addresses the food coping strategies of the city's urban poor, in particular.

Chapter 10 is comparative in nature. In recent years, there have been considerable advances in food system governance and the development of food security strategies in other parts of the world. This section discusses various programmes and policies that have potential value for Cape Town.

The final section, Chapter 11, presents a set of key priority areas and recommendations for the City.

The majority of this report is based on secondary data from official government sources and peer-reviewed academic papers. A number of additional data sources were used. The City provided the research team with data on food processing and urban agriculture, as well as access to the General Household Survey data sets and base maps for Census 2011. Data on urban agriculture projects were also received from the Provincial Department of Agriculture. In addition, a number of interviews were conducted with farmers, businesses, NGO practitioners, and individuals involved in the food system governance around the world.

1.3 Conceptual Framework

1.3.1 Scales of Reference

In accordance with the understanding of food security presented in the Terms of Reference, this study developed a conceptual framework that is designed to help the City to better understand and respond to the challenge of food insecurity whilst working within its existing mandate. The following section therefore describes the conceptual framework underpinning this food system and food security study, and provides a set of principles to guide the City's future engagement with food security issues.

The conceptual framework is designed to facilitate understanding of the complex connections between different elements of the global, national and municipal food system and to connect all three to the challenge of measuring and responding to food insecurity at the community, household and individual level. While the tender focuses specifically on the city of Cape Town, it is important to acknowledge that the Cape Town city-region is neither self-supporting nor sustainable. Instead, it is embedded in broader national, regional and global food value-chains that have a profound effect on the city. For example, during the global food price hikes of 2008-9, over which the City had little or no control, there was a major increase in food insecurity in many communities in Cape Town. The lesson for the City is not how it can reduce food prices on global markets, but rather how it to develop strategies and response mechanisms for dealing with the impact of future food price shocks on the residents of the city.

Within the city itself it is important to have a conceptual framework that is multi-scalar (see Figure 1.1). A focus purely on the individual and household, for example, would mean ignoring the challenges associated with the overall food system, the reasons why individuals are unable to access food, external threats to the food system, food system faults and entrenched vulnerabilities. Or again, limiting food access interventions to the community or household level (in the form of food gardens, food parcels and social grants) would align with the City's values of being a *Caring City*, but would mask deeper systemic food system challenges.

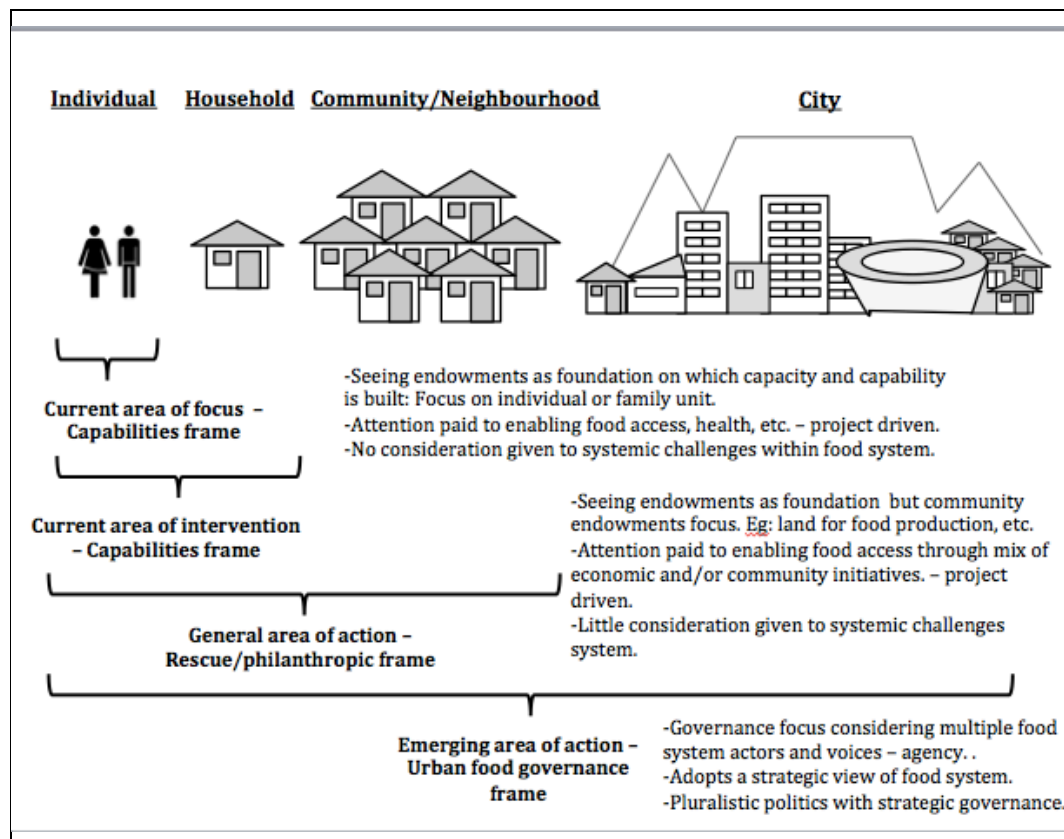


Figure 1.1: Food security scales of intervention and focus.

1.3.2 Food Systems and Food Security

At the outset, it is important to define what we mean by the terms ‘food system’ and ‘food security’:

Food System - The food system comprises (i) the activities, actors and institutions who grow, process, distribute, acquire, consume and dispose of food and how they interact with other systems and actors; and (ii) the outcomes of these activities contributing to food security (Figure 1.2) (Adapted from Roberts 2001, Ericksen 2007, and MacRae 2013).

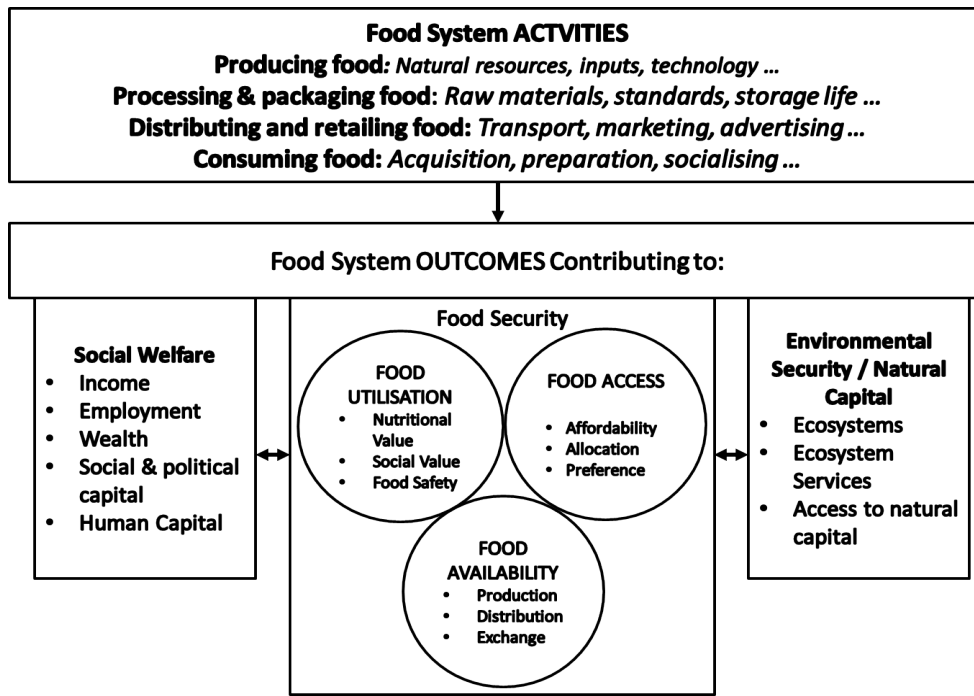


Figure 1.2: Food System Activities and Outcomes. Source: modified from Ericksen 2007

The food system should not be isolated from other urban systems such as transport, energy, housing, unemployment, informality, and so on. As a result, food system vulnerability is further compounded by tensions within these connected systems. These all interact, and in many instances, reinforce and/or amplify vulnerability to food insecurity. Positive actions have the reverse effect and reduce vulnerability. Identifying ways to engage with all these interconnecting systems enables the City to engage, through multiple departments, and with communities, to address food insecurity and attendant food related problems.

***Food Security** - Food security is usually defined as the situation that exists when all people, at all times, have physical and economic access to sufficient safe and nutritious food that meets their dietary needs and food preferences for an active and healthy life (WHO/FAO 1996).*

This definition of food security was originally disaggregated into the triad of food utilisation, food access and food availability (Figure 1.2). More recently, it has been further disaggregated into the 5 “A’s”: availability, adequacy, accessibility, acceptability and agency (Rocha 2008). The 5 “A’s” have the virtue of connecting issues of food security more explicitly to factors beyond the household scale and to challenges within the food system. This approach has been used to underpin a number of food security strategies and food security initiatives around the world. The ways in which the 5 “A’s” relate to each other and to food security outcomes are depicted in Figure 1.3.

Table 1.1 The 5 'A's of food security

Aspect	Focus
Availability	Food in sufficient amounts to meet people's needs.
Accessibility	People are assured physical and economic access to food.
Adequacy	Food that is nutritious, diverse and safe in accordance with that needed to maintain health, while being produced in environmentally sustainable ways.
Acceptability	Food that is culturally acceptable and/or food produced and obtained in ways that do not compromise people's dignity, self-respect and human rights.
Agency	Where people are empowered by a food system environment that ensures that policies and processes, driven by government, society or both, are in place, implemented and accessible so as to enable food security. Agency recognises that communities have specific knowledge about food system activities and seeks to validate and integrate this knowledge into processes and plans.

Source: Rocha (2008)

The most common framework for understanding the problem of food access at the household scale has been Sen's entitlements approach which views lack of food access as determined by a failure of an individual or household's entitlement set. A household's entitlement set is the combination of all the goods and services that it can acquire by converting its "endowments" (all assets and resources, including labour power). Sen identified four core categories of food-based entitlements: "production-based entitlements" (growing food), "trade-based entitlements" (buying food), "own-labour entitlements" (working for food) and "inheritance and transfer entitlements" (being given food by others). This framework lends itself to household scale analysis of food insecurity. However, determinants of food access extend beyond the household scale. It is therefore necessary to examine the wider systemic causes of food insecurity.

1.3.3 Basic Principles

1. The Right to Food

Rights to Food and Nutrition are enshrined within the South African Constitution (1995) in Section 27.1.b and 28.1.c. The relevant clauses obligate government to ensure the progressive realisation of the right to food. The role of municipal government in addressing food insecurity is not clearly articulated within the Constitution nor within other Acts guiding municipalities. Municipal government is, however, bound by the Constitution. Local government is not released of its obligation to facilitate the realization of the right to food simply because national government has projects or strategies in place to assist in enabling food access. Attaining food security is therefore not just about access to food, but also about having the agency to acquire food. This agency is built on a number of components which include:

- *Choice and the power to make choices within the food system.*
- *Legitimate use of power within a system in a just and equitable manner.*
- *Processes and redress in the face of unjust power and influence.*
- *Voice, concomitant with being heard and resultant action.*
- *Recognition of role, ability, knowledge and stake.*
- *Consensus driven processes.*

Olivier de Schutter the UN Special Rapporteur on the Right to Food recently wrote, “Right-to-food legislation is not an end in itself. It must be the starting point for building a whole apparatus to tackle hunger. And this apparatus must embrace a human rights approach because the mechanisms of participation and accountability that engage people with political processes are the same things that provide a buffer against the social marginalisation at the heart of hunger” (de Schutter 2012). The question, therefore, is what role the City can play in the construction of such an apparatus.

2. Urban Food Security is about Access More than Availability

Historically food security was viewed primarily as a problem of food production and availability at the national and global scale. For example, food security was first articulated as the ‘secure, adequate and suitable supply of food for everyone’ at the 1943 Hot Spring Conference of Food and Agriculture in the United States (Maxwell, 1996). This definition was refined at the World Food Council in 1974 to “The availability at all times of adequate world food supplies of basic food-stuff... to sustain a steady expansion... and to offset fluctuations in production and prices.”

This production-oriented understanding of food security has resurfaced in the last decade as donors and international agencies call for a “Green Revolution” in Africa. It has also left its mark on the South African government’s response to food insecurity. Until 2002 the government’s primary food security focus was ensuring that there was sufficient food being produced at the national scale.

However, a country (such as South Africa) that is food secure at the national scale and exports large quantities of food can also contain large numbers of food insecure residents. Production and supply is therefore only one facet of food security. Intense food insecurity can, and often does, co-exist with an abundance of food and considerable food wastage. The main problem is lack of access to food, rather than the availability of food alone. Unfortunately, there is still a tendency in South Africa to view urban food security through the lens of agricultural production and food availability and exclude consideration of accessibility, adequacy, acceptability and agency. However, the NDP recognizes the difference between national and household food security, and calls for policy focus on both (NPC 2013, 230).

3. Food Access Has Both Economic and Spatial Dimensions

The main source of food in urban areas is the market (both formal and informal) and all urban residents purchase the vast majority of the food they consume. Economic access to food (food prices, affordability and incomes) is generally seen as paramount. Assessments of food security are often based on nominal poverty lines and income and expenditure surveys. These fail to account for the challenges of physical or spatial access, in terms of the location of consumers relative to markets and mobility limitations. Neither economic nor physical access can be adequately understood at the individual or household level. There is therefore a need to connect household food security to extra-household factors such as the spatial organization of the city and the location of different kinds of retail outlet. This requires a shift not just in scale of analysis, but in the conceptualization of food insecurity. Food insecurity is not simply a problem of household poverty, but a matter of structural inequality that has spatial manifestations.

4. Individual Agency, and the Lack Thereof, Needs to be Included in Understanding Food Security

There is a pervasive assumption that people will use their economic resources to maximize their food and nutrition security. Within South African nutrition policy and programming this has led to a significant focus on nutrition education to provide people with the information they need to make good food choices. However, problems of physical accessibility, storage, refrigeration and available cooking technology all impact on a household's ability to purchase and consume healthy foods.¹ Additionally, the relative availability of healthy and less healthy foods, the pricing structures of the market, advertising and even retail environment design all reduce household ability to access affordable, nutritious, hygienic and culturally-appropriate foods. There is therefore a need to understand agency within the food system.

5. Food Insecurity is a Problem of the Food System

Food insecurity is often the product of failures, inefficiencies and dysfunctionality in the food system. Such a perspective on the causes of food security means that food security strategies and policies must consider the nature of the existing food system and act to rectify problems and generate conditions that will lead to enhanced household food security. It is insufficient to focus on household scale interventions alone.

The aim must be a food system that is reliable, sustainable and transparent. Such a system will generate household food security that is less dependent on welfarist responses to the challenge.

In this context, reliability is taken to mean stable and consistent prices, the nutritional quality of available and accessible food, and food safety. Sustainability means that the food system does not degrade the environmental, economic and social environment. Finally, transparency refers to the legibility of the system and its control by the state and citizens.

This focus on the linkages between the food system's structure and the experience of food insecurity aligns the project with the emerging thinking in the North American and European contexts which focuses on community food security and couches food insecurity in a language of justice and rights rather than a language of poverty.

7. The Role of the City in the Food System

This framing of food security as directly related to the operation of the food system provides a far broader set of entry points for the City. The City plays a direct and indirect role in many components of the food system, including production, processing, distribution, sale and waste management. Additionally, the City's existing policies and programmes impact upon the household's ability to access and utilize food. Under this framing it is therefore essential to understand the existing and potential role of the City in governing a food system that is designed to enhance food security.

This report therefore recognizes the inter-relationships at multiple scales between food system and food security, and between the multiple stakeholders who play a role in food system governance. Each sub-chapter of the Food System section (Chapter 3) therefore begins with a discussion of the reliability, sustainability and transparency of this component of the food system, and asks what the role of the City is in the governance of this component of the food system.

8. Incorporation of Conceptual Framework principles into report

¹ Throughout this report the broad categories of "healthy" and "less healthy" foods is used. These distinctions align to Temple et al's (2010, 2011) distinction between "healthy" foods with low energy density and high nutrient density and "unhealthy" foods with high energy density and low nutrient density, and to Monteiro et al's (2011) distinction between unprocessed/minimally processed, processed and ultra-processed foods. Ultra-processed foods are characteristically energy-dense, fatty, sugary or salty and are characterised as less healthy foods.

This report therefore recognizes the inter-relationships at multiple scales between food system and food security, and between the multiple stakeholders who play a role in food system governance. Each chapter of the Food System section therefore begins with a discussion of the reliability, sustainability and transparency of this component of the food system, and then asks what the role of the City is in the governance of this component of the food system in the interest of food security.

1.3.4 Conclusion

Food insecurity needs to be understood as a function of problems in the food system, which makes healthy foods unaffordable for the majority of the population. This, in turn, leads to the question of what kind of food system exists and what kind of food system is most desirable. Government responses need to move beyond “second class” interventions (Kirsten 2012) to include a wider set of engagements which address household and community scale mitigation but also address the food system as a whole. The process by which food is produced in local or distant locations and reaches consumers in cities is complex, but also largely opaque.

Given the fact that Cape Town’s food system is ever more firmly embedded in wider national and international food systems, it is no longer possible to speak of a “local food system”. One of the most notable trends in the post-apartheid South African food system is increased consolidation along the value chain (Greenberg 2010). There is also concentration in the food retail sector. The supermarket sector is an increasingly important actor in the food system, with share of the food retail market increasing to 68% in 2010 (Planting 2010, 34). Consolidation and concentration in the food sector have actually made the food system less traceable, as large companies are unwilling to share their data. As Isabel Schmidt from StatsSA observed:

“Statistics South Africa has noted that the abolition of marketing and control boards in the food sector has resulted in significant information gaps in relation to food systems in South Africa. Furthermore the activities of the Competition Commission is increasingly making non-regulated associations and large scale conglomerates unwilling to voluntarily provide information about their activities to the Agricultural marketing board and other state entities.” (Schmidt, StatsSA, Pers. Comm.)

The critical challenge for the City is how to ensure that a system in which comprehensive information is unobtainable and “nobody is in charge” actually works. In order to address this challenge it is essential to understand the general contours of the current global, national and local food system, including where the food that is consumed in Cape Town originates.

2 Policy and Governance Overview

Key Summary Points

- The Right to Food is a Constitutional Right.
- The Constitution states that the “state must take reasonable legislative and other measures, within its available resources, to achieve the progressive realization of this right.”
- Currently there is no clear direct mandate for municipal government to address food security under traditional framings of food security.
- However, the NDP provides a broader framing of food security and more explicitly connects it to food system issues.
- According to this framing, the City’s existing roles in the governance of the food system and ensuring food security are assessed according to food system components and aspects of food security.
- This chapter argues that despite a lack of official mandate for food security, the City already plays a number of roles in food system governance and food security. A number of City Directorates can be understood to already have impacts – positive and negative – on food security. Furthermore, it is argued that the City has an important role in partnering with Provincial and National Departments, the private sector and civil society stakeholders to enhance food security in the City.
- This chapter provides an overview of the roles of national and provincial government departments with reference to food systems and food security, as well as an overview of the roles of the various City Directorates.
- Urban food security and food systems are influenced by a wide range of stakeholders from different spheres of government, the private sector, trade unions, NGOs, CBOs, FBOs and other civil society groupings. If the Right to Food is to be realized, the City will need a coordinated strategy to engage external stakeholders. This chapter provides an overview of the relevant stakeholders for a range of food system and food security priority areas, and provides an outline of an approach that could be employed.

2.1 Introduction to the role of local government with regard to food systems and food security

There is currently no clear set of guidelines for local government to address food insecurity and local food systems. The right to food is however recognized as a Section 27 right in the Constitution.

- “27. (1) Everyone has the right to have access to:
- (a) health care services, including reproductive health care;
 - (b) sufficient food and water; and

(c) social security, including, if they are unable to support themselves and their dependants, appropriate social assistance.

(2) The state must take reasonable legislative and other measures, within its available resources, to achieve the progressive realisation of each of these rights."

Additionally, Section 28.1.c identifies that every child has the right to basic nutrition. Through this food and nutritional security are both enshrined in the Constitution.

As an institution bound by the Constitution, it is essential to develop a proper understanding of what "reasonable and other measures" are available to local government to "achieve the progressive realization" of the right to food.

The objects of local government as established in the Constitution as are follows:

"152. (1) The objects of local government are -

- (a) to provide democratic and accountable government for local communities;*
- (b) to ensure the provision of services to communities in a sustainable manner;*
- (c) to promote social and economic development;*
- (d) to promote a safe and healthy environment; and*
- (e) to encourage the involvement of communities and community organisations in the matters of local government.*

(2) A municipality must strive, within its financial and administrative capacity, to achieve the objects set out in subsection (1)"

The powers and functions of municipalities are identified in Section 156

"156. (1) A municipality has executive authority in respect of, and has the right to administer

- (a) the local government matters listed in Part B of Schedule 4 and Part B of Schedule 5; and*
- (b) any other matter assigned to it by national or provincial legislation.*

(2) A municipality may make and administer by-laws for the effective administration of the matters which it has the right to administer.

(3) Subject to section 151(4), a by-law that conflicts with national or provincial legislation is invalid. If there is a conflict between a by-law and national or provincial legislation that is inoperative because of a conflict referred to in section 149, the by-law must be regarded as valid for as long as that legislation is inoperative.

(4) The national government and provincial governments must assign to a municipality, by agreement and subject to any conditions, the administration of a matter listed in Part A of Schedule 4 or Part A of Schedule 5 which necessarily relates to local government, if

- (a) that matter would most effectively be administered locally; and*
- (b) the municipality has the capacity to administer it.*

(5) A municipality has the right to exercise any power concerning a matter reasonably necessary for, or incidental to, the effective performance of its functions."

The Areas of specific Legislative Competence of local government are as follows (the areas emboldened have specific food system and food security relevance):

Beaches and amusement facilities

Billboards and the display of advertisements in public places

Cemeteries, funeral parlours and crematoria

Cleansing

Control of public nuisances

Control of undertakings that sell liquor to the public

Facilities for the accommodation, care and burial of animals

Fencing and fences

Licensing of dogs

Licensing and control of undertakings that sell food to the public

Local amenities

Local sport facilities

Markets

Municipal abattoirs (note – the last of the City's abattoirs was closed in 2003)

Municipal parks and recreation

Municipal roads

Noise pollution

Pounds

Public places

Refuse removal, refuse dumps and solid waste disposal

Street trading

Street lighting

Traffic and parking

The current policy and legislative requirements affecting local governance are primarily contained within the Local Government White Paper, the Local Government Municipal Demarcation Act, the Local Government Municipal Structures Act, The Local Government Municipal Systems Act, the Disaster Management Act, the Local Government Municipal Finance Act, and the Local Government Municipal Property Rates Act.

Most notably Section 51 of the Municipal Systems Act states that “A municipality must, within its administrative and financial capacity, establish and organise its administration in a manner than would enable the municipality to: a) be responsive to the needs of the local community.... d) ensure that its political structures, political office bearers and managers and other staff members align their roles and responsibilities with the priorities and objectives set out by the municipality’s integrated development plan, e) establish clear relationships, and facilitate co-operation, co-ordination and communication between i) its political structures, political office bearers and its administration; ii) its political structures, political office bearers and administration and the local community.”

Municipal government is not independent of Provincial and National Government legislation. The Constitution describes the three spheres of government as “distinctive, interdependent and interrelated” and calls for them to “cooperate with one another in mutual trust and good faith”. Municipal government does not act independently of national and provincial government, and these spheres of government may regulate how municipal governments act in relation to their areas of legislative competence. Municipal by-laws may not conflict with legislation at the provincial or national level. However, functions of national or provincial government may be devolved to local

Additionally, as part of the Western Cape Province, provincial government policies and programmes affect Cape Town’s food system and food security. It is therefore important to identify the role of Provincial Government in food system governance and food security.

The national and provincial spheres of government have the following areas concurrent legislative competence in accordance with Schedule 4 of the Constitution. As with Municipal government areas, the areas relevant to food systems and food security are emboldened.

- *Administration of indigenous forests*
- **Agriculture**
- *Airports other than international and national airports*
- *Animal control and diseases*
- *Casinos, racing, gambling and wagering, excluding lotteries and sports pools*
- **Consumer protection**
- *Cultural matters*
- **Disaster management**
- **Education at all levels, excluding tertiary education**
- **Environment**
- **Health services**
- **Housing**
- *Indigenous law and customary law, subject to Chapter 12 of the Constitution*
- **Industrial promotion**
- *Language policy and the regulation of official languages to the extent that the provisions of section 6 of the Constitution expressly confer upon the provincial legislatures legislative competence*
- *Media services directly controlled or provided by the provincial government, subject to section 192*
- *Nature conservation, excluding national parks, national botanical gardens and marine resources*
- *Police to the extent that the provisions of Chapter 11 of the Constitution confer upon the provincial legislatures legislative competence*
- **Pollution control**
- **Population development**
- *Property transfer fees*
- *Provincial public enterprises in respect of the functional areas in this Schedule and Schedule 5*
- **Public transport**
- **Public works only in respect of the needs of provincial government departments in the discharge of their responsibilities to administer functions specifically assigned to them in terms of the Constitution or any other law**
- **Regional planning and development**
- *Road traffic regulation*

- **Soil conservation**
- *Tourism*
- **Trade**
- *Traditional leadership, subject to Chapter 12 of the Constitution*
- **Urban and rural development**
- *Vehicle licensing*
- **Welfare services**

And according to Schedule 5, the following are areas of exclusive Provincial legislative competence.

- **Abattoirs**
- *Ambulance services*
- *Archives other than national archives*
- *Libraries other than national libraries*
- *Liquor licenses*
- *Museums other than national museums*
- **Provincial planning**
- *Provincial cultural matters*
- *Provincial recreation and amenities*
- *Provincial sport*
- **Provincial roads and traffic**
- *Veterinary services, excluding regulation of the profession*

Guided by this discussion of the Right to Food and the role of local government and provincial government, this section is framed by four questions:

- 1) What is the current understanding of the State's role in ensuring the Right to Food (Section 27.1)?
- 2) If food security and the Right to Food are understood in the context of the wider food system as suggested by the NDP, what is the role of local government in food system governance and food security?
- 3) What national and provincial departments play a role in ensuring the food security?
- 4) Who are the other stakeholders with whom local government should "establish clear relationships and facilitate co-operation, co-ordination and communication" as per the Municipal Services Act (Section 51 e)?

2.2 Current Understanding of the State's Role in Ensuring the Right to Food

It is essential to understand the framing of food security at the national government level, as this informs why the current lack of clear mandate for local government to address food security exists.

The State's role in food security has been grounded in three key Strategies and Programmes: The Integrated Food Security Strategy (IFSS), the Integrated Nutrition Programme (INP), and the National School Nutrition Programme (NSNP).

As is discussed below, each of these three have limitations which prevent a systemic view of food security as a part of broader food system challenges being acknowledge. Additionally, because of the Departments in which the programmes and strategies are housed, there is little direct role for municipal government. However, the NDP provides scope for a broader conceptualisation of the systemic nature of food insecurity and for a role for municipal government. Given the role of the NDP in shaping national long-term goals and building consensus across all spheres of government, it is important that the City's approach to the food system is informed by the priorities of this document.

2.2.1 Integrated Food Security Strategy

The primary documentation guiding food security intervention by the State is the Integrated Food Security Strategy (IFSS) (2002).

The IFSS identifies food security as being built on a robust food system, which includes,

- “a) The capacity to produce, store, distribute and if necessary, to import sufficient food to meet the basic food needs of people;*
- b) A maximum level of robustness to reduce vulnerability to market fluctuations and political pressures; and*
- c) Minimal seasonal, cyclical and other variations in access to food”*

It states “Food security policies must address all aspects of the food system, affecting the entire conceptual spectrum, ranging from production, marketing, distribution, all the way to consumption and nutrition.” It therefore argues that:

“Food policy interventions require that both micro- and macro issues be addressed. They have to be designed in such a manner that they:

Resolve issues of malnutrition and food security,

Involve policy and programme design and implementation that cut across departmental divisions,

Consider a wide array of data that can be disaggregated down to the household level (or even to the intra-household level), and

Deal with conflicting policy objectives that arise between producers and consumer interests, urban and rural differences, primary and secondary production, budgetary prioritisation between consumption support and investment in agriculture, and short- and long-run decisions.”

To achieve the ends of improving food security, the IFSS identified a number of national Departments with specific roles. These included the Department of Agriculture (now Department of Agriculture, Forestry and Fisheries), Department of Health and Departments of Social Development and Provincial and Local Government as lead Departments in key areas of intervention. It further identified the following Departments as partner departments: Water Affairs and Forestry, Minerals and Energy, Public Enterprises, Public Works, Transport and Communications, Trade and Industry.

Although the IFSS calls for co-operation and co-ordination between departments, the main department responsible for implementing food security programmes became the Department of Agriculture (now DAFF). Other Departments with recognised food security related programmes are the Department of Health (through the Integrated Nutrition Programme), the Department of Social Development (through emergency food-based interventions) and the Department of Basic Education (through the National School Nutrition Programme).

Under this framing there is no clear role for local government, with Agriculture being a Provincial competency. The lack of an urban focus in any DAFF programming needs to be understood within the context of the Department's need to align itself to national priority areas, and align itself to rural development. Additionally, the strategy is not readily enforceable as there is no policy on the issue of food security. The IFSS and the broader government response to food insecurity have been widely critiqued for its productionist bias and the lack of focus on the systemic drivers of food insecurity (Drimie & Ruysenaar 2010, Kirsten 2012). It has been further argued that the way in which the IFSS interprets data on poverty in rural and urban areas, and the location of the IFSS within DAFF, has led to a lack of consideration of urban food security and food system challenges (Battersby 2012).

The vision statement of the IFSS is "to attain universal physical, social and economic access to sufficient, safe and nutritious food by all South Africans at all time to meet their dietary and food preferences for an active and healthy life." If this is to be achieved it is essential to understand the role that a far wider set of government departments play in shaping the food system and in the attainment of food security.

2.2.2 The Integrated Nutrition Programme

The Integrated Nutrition Programme (INP) developed out of the Department of Health's 1994 White Paper and was designed to encourage and support programmes that were integrated, sustainable and community driven. It attempts to combine direct nutrition interventions with indirect ones in recognition that the problems of hunger and malnutrition cannot be solved by direct nutrition targeted projects alone (Oldewage-Theron & Napier 2011, 284). To this end, the INP advocates, indirectly, for water and sanitation service delivery as a means to address malnutrition.

The INP has eight strategic focus areas: Contribution to household food security; Disease-specific nutritional support, treatment and counselling; Growth monitoring and promotion; Nutritional promotion, education and advocacy; Promotion, protection and support of breast-feeding; Micronutrient malnutrition control; Food service management; A nutritional intervention programme for the human immunodeficiency virus (HIV), the acquired immune deficiency syndrome (AIDS) and tuberculosis (TB). In their review of the programme and its targets, Labadarios et al (2005) identify the first focus area as being particularly challenging. They note that in the original INP framework there was an attempt to develop Community-Based Nutrition Projects that would encourage "multisectoral government support to communities to 'solve' their own nutritional problems" (Ladabarios et al 2005, 102). This was to be achieved through food-based income generation projects. These projects were generally not successful, as a result of unrealistic objectives and lack of appropriate resources. The objectives developed for 2001 and 2007 did not include this objective. While this omission was to encourage better use of limited resources, it has written the local food system and food economies out of the INP. This report argues that this absence is a critical limitation.

The INP is located within the Department of Health – with the exception of the National School Nutrition Programme, which was moved to the Department of Education. While the logic of this is clear, locating an "Integrated" programme within one Department limits the conceptualisation of the nutrition problem and the kinds of responses possible (Chopra et al 2009). Due in part to this location and the programmatic focus of the Department of Health, there is an absence of focus on the role of the market, formal and informal, in shaping nutritional outcomes.

2.2.3 National School Nutrition Programme

School feeding schemes were introduced in South Africa in the 1940s, when free milk was given to White and Coloured pupils at school (Tomlinson 2007, 4). The Primary School Nutrition Programme (PSNP) was introduced in 1994 as one of 15 Presidential Lead Programmes in the Reconstruction and Development Programme (Child Health Unit 1997, v). It was managed by the Department of Health until being transferred to the Department of Education in 2004 as the National Schools Nutrition Programme (NSNP).

The goals of the NSNP are to alleviate short-term hunger and to enhance learning capacity among primary school learners. The objectives of the programme are to:

- To enhance learning through school feeding;
- To strengthen nutrition education in schools;
- To promote food gardens in schools; and
- To develop and strengthen partnerships to enhance the programme (DoE 2012, 7).

The NSNP is managed by Provincial Departments of Education, and in 2011 fed 426 707 learners in Quintile 1-3 schools in the Western Cape (DoE 2012, 54). The provinces appoint private sector service providers to administer the feeding programme. In the Western Cape the vast majority of the feeding is done through one large co-operative, whereas in KwaZulu Natal there are over 700 service providers, as no service provider in the province is allowed to take on more than 3000 learners. This raises questions about the role of the procurement processes in the NSNP as a mechanism to drive greater involvement of SMMEs in the food sector. There are crucial questions about the relative benefits to businesses and learners under different procurement models.

The NSNP does not always connect well to other food and nutrition engagements within the school, including sourcing food from gardens located at the school, nutrition education programmes, and the contradictory nutrition messages emerging from state programmes designed to ensure nutritionally adequate foods and the use of school tuck shops to generate funds for schools.

The IFSS, INP and NSNP are all located in departments which have Provincial, rather than Municipal representation. This seems to reinforce the urban food mandate gap. However, the NDP suggests the need for a wider set of engagements and better integration between departments.

2.2.4 The NDP

The National Development Plan (2012) lays out the roadmap to eliminating poverty and reducing inequality in South Africa, by focusing on growing an inclusive economy, building capacities, enhancing the capacity of the state, and promoting leadership and partnerships through society. Within the Plan there is a far broader framing of the State's role in food security and food systems than has previously been articulated. Informed by the NDP, the report therefore argues for the consideration of a wide range of national and local government departments in ensuring household food security and sustainable food systems.

The NDP explicitly connects food security to nutrition security, thus ensuring that the focus is on the nutritional quality of foods and not simply basic caloric sufficiency. Food and nutrition security is connected to both social protection and health agendas. It states, "Addressing household food and nutrition security is a low cost way of

underpinning livelihoods, well being and developmental growth” (p. 379). Additionally, food and nutrition security is recognized as requiring interventions through repeated invocations of the need to reduce the cost of food (p. 39, 40) and for “a stable food inflation environment” (p. 116).

The document calls for involvement by public- and private-sector action (p. 53) and for the need to “identify the main elements of comprehensive food security and nutrition strategy and launch a campaign” (p. 73). This therefore justifies an approach that includes multiple stakeholders and connects a wide range of departments.

A key feature of the NDP’s engagement with food and nutrition security is its connection of food security to the wider food system. The document advocates the development of a policy framework to respond to bottlenecks that create food insecurity (p. 289). This implies a more strongly food system based approach than is present in the IFSS. In its calls for greater investment in the agricultural and agro-processing sectors, a need to increase fruit and vegetable production is identified in order to better align the sector to the nutritional intake guidelines (p. 231). This is a marked divergence from generally received agricultural development plans that have focused on grains and crops for export.

There is a call for investment in agriculture and agro-processing as areas of SMME growth for job creation and to redress skewed ownership patterns (p. 142). This is enhanced by an identified need to develop preferential procurement programmes to aid the entry of new entrants into the agriculture sector, in recognition of the concentration of the food market (p. 226).

Finally, the NDP argues for the local food system to be better connected to international food systems (p. 34, 88).

The wider perspective offered by the NDP therefore justifies consideration of a wider range of departments impacting food security and food systems and therefore a part of the state’s role in the progressive realization of the right to food.

2.3 The Role of Municipal Government in Food Systems and Food Security

2.3.1 Understanding the lack of urban mandate to address food insecurity

At present there is no clear policy engagement with urban food insecurity or urban food systems more broadly at the national government scale. As a result, there is no explicit mandate for municipal government to address food insecurity. This lack of a specific urban food focus has a negative impact on citizens’ abilities to access food and therefore the realization of the right to food. This section provides a brief overview of why this gap exists.

As noted in the conceptual framework, the current framing of food security in South Africa remains rural in focus. Although the right to food and the challenge of food insecurity are being increasingly articulated in public statements of the ANC, DA, COSATU and other political players, the focus is almost exclusively on rural areas.

The urban food security gap in political discourse has its roots in the ideological framing of the location and causes of food insecurity within the Integrated Food Security Strategy (Drimie and Ruysenaar 2010). This gap is reinforced by the Strategy's political home, the Department of Agriculture (Now Department of Agriculture, Forestry and Fisheries). The lead department selected to drive the Strategy reveals an underlying productionist and therefore rural bias within the conceptualization of food insecurity. Despite the key challenges identified in the IFSS, the document locates the heart of the problem as rural food security and the solution to be increased production, 'One of the primary objectives... is to overcome rural food insecurity by increasing the participation of rural food insecure households in productive agriculture sector activities' (Department of Agriculture 2002, 28). Despite advances in the conceptualisation of food security in the National Development Plan, this rural framing persists.

This chapter argues that national government does not "see" urban food insecurity, and therefore does not have a specific role for local government in addressing food security for a series of ideological and methodological reasons. Daniel Maxwell argues that urban food insecurity is politically invisible in sub-Saharan Africa to city governments due to limited budgets and "more urgently visible problems" (Maxwell 1999, 1940), like housing and sanitation.

In the context of the South African city, where there is intense pressure to meet massive critical infrastructure backlogs, this most certainly is an important consideration. However, this explanation assumes a level of control over the municipal budgeting process that is not the case in the South African context. There is no food security mandate at the city scale. As a result, any action taken by cities to address food insecurity is currently work unfunded by national government and without policy support. This chapter argues that this is a fundamental challenge to the realization of the right to food in the South African city.

Maxwell's second reason is that urban food insecurity is rendered invisible because of how it manifests. In rural areas, food insecurity is often linked to a single shock, such as a drought, which affects all households at the same time, thus making the crisis visible. In urban areas, food insecurity is rarely the result of absolute food shortages, but entitlement failures at a household level. Different households will experience these challenges at different times. Because urban food security therefore manifests at the household rather than community scale and because affected households employ a range of localized coping strategies, urban food insecurity is less visible to policy makers.

Finally, Maxwell argues that because of the ongoing perception that poverty and food insecurity are rural problems, policy makers are less inclined to see urban food insecurity. In South Africa this perception is reinforced by the need to overcome the apartheid rural/urban divide. In South Africa the urban development agenda has been viewed as endorsing the status quo and therefore doing little to address apartheid inequalities (Turok and Parnell 2009).

This perception of poverty and food insecurity as being predominantly rural challenges has been reinforced by the methodological approaches used to assess levels of food insecurity. The outcome of this ideological and methodological approach is that urban food insecurity has been rendered invisible to policy makers at the national and city scales.

Levels of food insecurity within South Africa are commonly derived from findings of large scale general surveys, such as StatsSA's the General Household Survey, October Household Survey and the Income and Expenditure Survey and the HSRC's South African Social Attitudes Survey. These surveys consistently find levels of food insecurity

to be higher in rural areas than urban areas, which would seem to reinforce the notion of food insecurity being a predominantly rural challenge. Yet, each of these tools uses fairly blunt proxies to assess food insecurity, which may obscure the true extent and experience of food insecurity in urban areas (for further explanation see Battersby 2012).

The main methodological issue that reinforces the notion that there is no need for an urban mandate to address food insecurity is the method of data aggregation in the existing food security work.

The 2009 joint report by Oxfam GB, Concern Worldwide and CARE International argues that the ‘common use of percentage rates over absolute numbers [of malnutrition] is greatly distorting when used for urban slums, as this masks the higher numbers... affected in such densely populated settings (Oxfam GB et al 2009, p. 14). The use of percentage rates comparing rural and urban leads to misleading data on the relative prevalence of food insecurity. If the proportion of the households that are food insecure that live in urban areas were compared to the proportion of food insecure households that live in rural areas a quite different representation of where the food insecure are may be generated simply due to the population numbers in urban areas. This blurring of percentages and absolute numbers is evident within the IFSS itself, which states, “Gauteng and the Western Cape are wealthier provinces with the least number of poor households at less than 12% each” (Department of Agriculture 2002, 22). These provinces may have the lowest proportions of people categorised as poor, but the population sizes of these provinces means that they do not necessarily have the “least number of poor households”. Using Table 4 provided in the IFSS on household expenditure as an indicator of poverty, 6.1% of Gauteng’s 1 964 168 households spent R600 or less per month compared to 21.7% of the Northern Cape’s 186 984 households. Although the Gauteng proportion is far lower, this equates to 119 814 households, compared to 40 575 households in the Northern Cape. The use of proportions generates a particular understanding about the location of poverty and food insecurity in South Africa.

For these reasons, finer-grained studies with food security as a central component of their data variables are useful. In a 2000 household survey of food insecurity in rural Eastern Cape (Mount Frere), rural Western Cape (Ceres) and Cape Town (Khayelitsha and Nyanga), the rural Eastern Cape households were found to be only marginally more food insecure than the Cape Town households (83% and 81% respectively. Those in the rural Western Cape site were found to be the least food insecure (69%) (de Swart 2003 in Hendriks 2005, 114). These data begin to illustrate the extent of food insecurity in low-income urban areas and the need to disaggregate beyond the simple rural/urban binary.

2.3.2 Identifying the City’s role in urban food security

As a result of the ideological framing and methodological approaches that reinforce the notion that food insecurity is primarily a rural problem, there is no explicit food security mandate for municipal government. However, under the conceptual framework that emerged from the Terms of Reference for the Study, and informed by the wider understanding of the connections between food and nutrition security and the food system, this report argues that the City already plays an important role in the food security of its residents.

Many aspects of the form and function of the urban food system are directly impacted by existing City policies and programmes. Food insecurity at the household scale is

acknowledged to be the outcome of both household conditions and the nature of the wider food system. This therefore suggests that the City plays both a direct and an indirect role in ensuring the right to food within Cape Town.

This section describes the role of the City in food system governance and meeting the food security needs of Cape Town's residents through a presentation of the City's role in the various components of the food system and the 5 As of household food security. The focus of this section is both the direct role of the various City departments, and the City's indirect role in working with stakeholders who influence the food system and food security.

Section 2.4, 2.5 and 2.6 present this material in a second format – focussing on each National, Provincial and City Department's role in food system governance and food security. It is intended that this provide two entry points for the City to consider its future food security planning.

2.3.3 Food System Roles of the City

a) Production:

The City plays a role in both Urban Agriculture, as defined by the Urban Agriculture Policy and in commercial agriculture, through the various City functions that affect commercial agricultural land within or adjacent to the City's boundaries.

i) City specific role

Urban Agriculture:

The City promotes and supports urban agriculture through two City policies – The Urban Agriculture Policy (2007, new version under review) under the Urban Agriculture Unit within the Economic Development, and Social Development's Food Gardens Policy in Support of Poverty Alleviation and Reduction (2013). Both policies seek to enhance food security through the promotion of home and community urban agriculture. This is the City's most explicit food security intervention and has been the only reference to food security in the City's IDPs following the passing of the Urban Agriculture Policy in 2007 (See Section 4.4.2). There is also a role for the City with regard to Municipal Commonage, but this is not well developed in Cape Town. The City has attempted to secure commonage land on the periphery of the city, but has experienced a number of challenges obtaining access to the land.

There are a number of other departments that play a role in urban agriculture, including Community Services's role in providing space for food gardens, the Health Directorate's Keeping of Animals and Poultry Policy (2005) and the Extended Public Works Programme, Elsie's River Green Grow, which falls under City Management.

This report argues that the viability of urban agriculture is impacted by the existing work of other departments which have not been considered as actors in the food system, such as the Economic Development's Informal Trading By-Law, and Solid Waste Management's practices that create a particular model of food waste management that prevent it being used as a resource for agriculture (commercial and subsistence).

Commercial Agriculture:

The City has a number of commercial agricultural nodes within or adjacent to the City's boundaries. These are important sources of both horticultural products and livestock for local consumption and crops and products for export. The management of these

areas generally falls to the Provincial Department of Agriculture, however, there are important City functions that impact the viability of these lands for continued production (as is discussed in Section 3.4). The City's 2008 Agricultural Land Review has informed the Spatial Development Framework and a number of decisions about the future of different areas of agricultural land. The City's Spatial Planning and Urban Design department therefore plays an important role in food system planning.

Additionally, dumping of building rubble and other waste on agricultural lands is playing a role in undermining their agricultural potential. This therefore ensures a role in food system governance for the Environmental Compliance Unit of the Environmental Resource Management Department and Utility Services.

ii) City Partnership role:

Urban Agriculture: The City's Urban Agriculture Unit partners with the Provincial Department of Agriculture's Farmer Support and Development Programme. The City also partners with NGO stakeholders in urban agriculture promotion and development, including the local NGO Soil for Life, and the international agencies, including Mazingira Institute (Nairobi), Rooftops Canada.

Commercial Agriculture: LUPO (Land Use Planning Ordinance) governs the City's engagement with the Western Cape Department of Environmental Affairs and Development Planning on issues pertaining to moving the urban edge. The Agricultural Land Review's valuations of land align to principles used by the Provincial Department of Agriculture to value agricultural land. The City and Western Cape Department of Environmental Affairs and Development Planning's Waste Management directorate play an important role in maintaining the viability of these agricultural spaces in light of extensive illegal dumping in these areas. Agricultural areas are also undermined by informal urban encroachment, as evidenced by the land invasions on privately owned farmland. Civic Associations have a partnership role in reporting illegal settlements and illegal dumping to the City and Province, as the Schaapkraal Civic and Environmental Association have been in the practice of doing. There is also a need to partner with the Police Service to encourage their intervention in countering land invasions.

The City is currently poorly equipped to make decisions on agricultural land given uncertainties about productivity. This is in part because of the aggregation structure and range of crops focused by the Agricultural Census. The City can approach StatsSA to amend the Agricultural Census's methodology. Although much of the development pressure on agricultural land comes from middle to upper income housing developments, there is pressure on agricultural land for low-income housing. This is in part due to the problems associated with releasing state land for housing. The City could therefore motivate the Housing Development Agency to engage National and Provincial Departments to release land within the City's boundaries. This would relieve pressure on the agricultural land.

b) Processing

i) City specific role

There is significant food processing taking place within the City, as is described in Chapter 7. Food producing businesses have not been viewed as a separate category within City economic strategies, and are only monitored as part of the Health Directorate's Food Control Programme. While this monitoring is essential, there is a need for more information about what is being produced. The DTI's IPAP2 and DAFF's 2012 Agro-Processing Strategy identify food processing as a predominantly urban activity that has high employment and growth multipliers. The focus of both is on small

and medium enterprises. Within Cape Town, food processing clusters around business and industrial parks. Given this clustering there is therefore a role for Spatial Planning and Urban Design, Planning and Building Development Management, and Economic Development in the location and promotion of food processing within the City that aligns to the principles of a reliable and sustainable local food system.

Additionally, this report suggests that these clusters of food processors provide an opportunity for Utility Services to consider innovative food waste management approaches at these sites, which would reduce existing pressure on landfill and make the local food system more environmentally sustainable, by repurposing food waste for biogas or liquid fertilizer.

According to the Constitution, Municipal abattoirs fall under the City's mandate. However, the city's abattoir closed down in 2003. Given the ongoing production of livestock in the city and the desire in many areas of the city for freshly slaughtered meat, there is a need for the City to develop a strategy to enable the safe and legal slaughter and processing of meat within low income areas. This could be achieved in partnership with Provincial government, which is currently exploring the option of a mobile abattoir.

ii) City Partnership role:

The DTI has made significant investment in the agro-processing sector. DAFF is intending to use the Agro-Processing Strategy to address the limited participation of small and medium agro-processing enterprises in agro-food value chains. The City may be able to leverage resources from the DTI to promote small and medium scale agro-processors. The City may also be able to partner with businesses to develop innovative food waste approaches.

c) Distribution:

i) City specific role

The report did not focus directly on food distribution. There is little direct role for the City with reference to this component of the food system.

ii) City Partnership role:

The nature of the Cape Town food system is in part the transport infrastructure within and around the City. The Provincial Department of Agriculture have described how the challenge of deteriorating rail infrastructure and the opportunity of Cape Town's harbour and airport have shaped the export oriented nature of the provincial food system (see Chapter 3.4). These transportation characteristics have brought more fresh produce through the City and may account for the relatively high fresh produce consumption as identified in Chapter 6. For this reason, the City needs to be cognisant of the role of the National Department of Transport and its public entities (South African National Roads Agency, Port Regulator) in influencing food price and accessibility, as well as the Department of Energy in setting fuel levies, which further influence food price.

d) Retail:

i) City specific role

The City plays a major role in the structure of the food retail environment within Cape Town. Most notably, Planning and Building Development Management regulates land use and building development, which determines the spatial characteristics of the local

food environment. Additionally, it approves development plans and therefore has played a role in the emergence of the shopping mall as a township phenomenon. The impacts of this, positive and negative, on food security are discussed Chapter 7. Also falling under the Economic, Environmental and Spatial Planning Directorate is the management of informal trading, a sector that is an important source of food for the city's poor. The Health Directorate's Food Control Programme in Environmental Health plays an important role in monitoring the safety of food retail.

Although formal and informal food retail space is determined and governed by the City, there is no explicit focus on the food system and food security implication of these planning and governance decisions. This report argues that there is a need for these implications to be considered, and for formal and informal retail to be considered as part of the same food system.

At present the Community Service Department's Public Parks By Law prohibits the sale of any foods without written permission from the Director. Food retail in public places has been demonstrated to improve the liveability and community safety of these spaces. This therefore represents an opportunity for the City to improve public space.

ii) City Partnership role:

One of the ongoing challenges for the City in determining the nature of the food system is an absence of reliable data. StatsSA have identified significant information gaps in the food system as a result of the abolition of marketing and control boards, and the activities of the Competition Commission. The South African Human Rights Commission has indicated that it would be able to encourage the large retailers to release retail data components which would help the City understand the food system better. Given the importance of food retail to food security in the urban context, the City should consider approaching the South African Human Rights Commission. The City should also engage the major retailers directly to access retail data. There is also a need for the City to work with informal trader associations to generate a food retail environment that is spatially aligned to the needs of the poor. Finally, as Box 7.1 discusses, transport interchanges are important sites of food retail, there is therefore a need for the City to work the PRASA to plan food retailing that serves the food and nutrition needs of the poor.

e) Disposal:

i) City specific role

Utility Services, Environmental Resource Management and the Health Directorate all play a role in ensuring the safe disposal of food from household and business premises. Given the pressure on landfill in the City, the safe deferral of retail and processor food waste from landfill is an opportunity for the City to generate a more sustainable food system.

ii) City Partnership role:

In order for the City to more sustainably manage food waste there is a need for a number of partnerships with NGOs that recover food that would otherwise go to waste, such as Food Bank and Stop Hunger Now. The benefit of working with these organizations is that they take responsibility for traceability and safety of the food waste. The City can partner with Urban Agriculture and Commercial Agriculture to enable to the use of treated food waste as agricultural inputs.

2.3.4 Food Security roles of the City

a) Availability: Food in sufficient amounts to meet people's needs

i) City specific role

This broadly aligns to the Production focus of Section 2.3.3. The City plays a direct role in ensuring availability of food through the Urban Agriculture Policy and the Food Gardens in Support of Poverty Alleviation and Reduction Policy. The City also plays an important role in determining the viability and continued presence of commercial agricultural land within and adjacent to the City.

ii) Indirect role:

As noted in Section 2.3.3, the City plays an indirect role in availability through its partnerships with urban agriculture NGOs and the Provincial Department of Agriculture.

b) Accessibility: People are assured physical and economic access to food

i) City specific role:

Given the dependence on urban residents on the market for food access, the role of the City here broadly aligns to the Retail focus of Section 2.3.3. It is important to consider the role of the City in ensuring both physical and economic access to food. Many households struggle to access adequate affordable, nutritious food. The local food retail environment, as discussed in Section 2.3.3, impacts physical food access, but so too does the location of residential areas relative to place of work. The long commutes experienced by many low-income earners in the city, reduces their ability to access and utilize affordable, nutritious foods (Zager 2011). A shift in scale of thinking about food security from the household, to the neighbourhood and city scales is therefore needed. There is ultimately a role for Human Settlements in ensuring food access, through ensuring that new low cost housing developments are well located relative to employment and transport infrastructure.

The retail environment determines economic access, by household economic circumstances and by housing characteristics. The retail environment has been discussed above. The City seeks to enhance household economic circumstances through a number of other interventions such as the Youth Development Policy and the Urban Agriculture Policy. The proportion of income available for food purchase also determines economic access; as a result Utility Services play a role in food security through their setting of electricity tariffs.

The City plays a supporting role for when physical and economic access fails. Most notably the City's indigent policy enables poor households to spend more of the income on food. Additionally, the City's poverty alleviation strategies and the Disaster Risk Management Centre play an important role in ensuring a measure of food security.

ii) City Partnership role:

As discussed in Section 2.3.3, transport interchanges are important sites of food access. There is scope for collaboration between PRASA and the City to enhance these food environments. There is a need for dialogue with formal retail and informal trader associations.

The City has a number of partnerships to ensure that households unable to access food receive food through state provision. This is most notable in the Social Development and Early Childhood Development's proposal to work with Provincial government on the management of Early Childhood Development Centres, which will impact the nature of

food provision through these centres. The City may also partner with NGO partners such as Food Bank, and school feeding associations, which are closely aligned with the Provincial Departments of Social Development and Education

c) Adequacy: *Food that is nutritious, diverse and safe in accordance with the needed to maintain health, while being produced in environmentally sustainable ways*

i) City specific role

The City's Health Directorate plays a direct role in ensuring the adequacy of food through its monitoring of food safety in production, processing, trade and redistribution.

The City has yet to take a direct role in ensuring that the food being made available the food system is nutritious and diverse. Given the growing health burden of poor diets, this is arguably essential. Mechanisms by which this could be achieved are discussed in the final chapter of this report. The responsibility for this would fall under the EESP Directorate in terms of planning for both formal and informal food retail.

The quality of diets is also determined by household characteristics, such as the ability to safely store and cook fresh foods, and the time to prepare foods. This therefore suggests that the work of Human Settlements and Utility Services play a role in shaping food adequacy that has not been recognised.

ii) City Partnership role:

An area of concern is the sale of less healthy foods in and near schools; the City has an opportunity to partner with the Provincial Department of Education to development mechanisms to improve the nutritional quality of the school food environment.

d) Acceptability: *Food that is culturally acceptable and/or food produced and obtained in ways that do not compromise people's dignity, self-respect and human rights.*

i) City specific role

There is no clear direct role for the City in this, with the possible exception of concerns raised by recipients of disaster relief about the food received. There is an emerging interest amongst the wealthier sections of Cape Town in the ethics of food produced. There is an opportunity for the City to engage in local food branding, which would enhance both the viability of small producers and the traceability of food within the system.

ii) City Partnership role:

There are broader questions about the balance of foods being produced and sold, the ability of consumers to access foods from smaller producers, the increased presence of highly processed foods in the market, and concerns about the mislabelling of foods. These all impact upon the acceptability of food within the City's food system. This therefore suggests a need for dialogue with the Provincial Department of Health and the Department of Trade and Industry.

e) Agency: *Where people are empowered by a food system environment that ensure that policies and processes, driven by government, society or both, are in place, implemented and accessible so as to enable food security. Agency recognizes that communities have specific knowledge about food system activities and seeks to validate and integrate this knowledge into processes and plans.*

There is a role for the City in communicating information about the food system and food security support through community structures and through information hubs

(libraries). Ensuring agency extends beyond communication to residents, it extends to understanding why residents in low-income areas don't have agency and understand who has power in the food system. This then requires strategies to be developed that move beyond household scale interventions and include the objective of developing a food system that is reliable, sustainable and transparent, which will promote food security.

Sections 2.4 – 2.6 provide an overview of the specific roles of National, Provincial and Municipal Departments and Directorates with reference to food security. These should be viewed as supplementary evidence to support the arguments made in Section 2.3.

2.4 National Government Departments' Role in Food Systems and Food Security

This section provides an overview of the Departments identified by this study as playing a role in food security and food systems. Because of the breadth of Departments presented, it is not feasible or useful to present the legislative mandate of each department. The information provided is not exhaustive, but it serves to demonstrate the many influences on food systems and food security. It also provides a point of reference to confirm that the recommendations in the final chapter align to National priority areas.

Table 2.1 Importance of national government departments to food systems and food security

National Government Department	Food System	Food Security	Level of Importance
Agriculture, Forestry and Fisheries	✓	✓	High
Basic Education		✓	Medium
Economic Development	✓	✓	High
Energy	✓	✓	Medium
Environmental Affairs	✓		Low
Health	✓	✓	High
Home Affairs		✓	Low
Human Settlements	✓	✓	Medium
International Relations and Cooperation	✓		Low

Labour		✓	Medium
Public Enterprises	✓	✓	Medium
Public Works	✓	✓	Medium
Rural Development and Land Reform	✓		Medium
Social Development		✓	High
Statistics South Africa	✓	✓	Medium
Trade and Industry	✓		High
Transport	✓	✓	Low
Treasury	✓	✓	Medium
Water Affairs	✓	✓	Medium
Women, Children and People with Disabilities		✓	Low
Presidency	✓	✓	High

2.4.1 Department of Agriculture, Forestry and Fisheries

DAFF has six strategic goals: 1) Increased profitable production of food, fibre and timber products by all categories of farmers (subsistence, smallholder and commercial), 2) Sustained management of natural resources, 3) Effective national regulatory services and risk management services, 4) A transformed and unified sector, 5) Increased contribution of the sector to economic growth and development, 6) Effective and efficient governance.

The Department therefore not only coordinates the food security initiative, but also impacts on all scales of agricultural production, manages food safety through managing the level of risks with food, diseases, pests, natural disasters and trade, and seeks to increase growth, income and sustainable job opportunities in the value chain.

Relevant Programmes: Agricultural Broad-Based Black Economic Empowerment; Comprehensive Agricultural Support Programme; Integrated Food Security and Nutrition Programme; Knowledge and Information Management System; Research and Development; National Regulatory Services; Land and Agrarian Reform Project; LandCare.

Level of Importance: High

2.4.2 Basic Education

Vision/Mandate: The Department of Basic Education's role is to develop, maintain and support a South African education system for the 21st century. DBE has responsibility for all schools from Grade R to Grade 12, and adult literacy programmes.

Relevant Programmes: National School Nutrition Programme; Health Promotion.

Level of Importance: Medium

2.4.3 Economic Development

Vision/Mandate: The aim of EDD is to promote economic development through participatory, coherent and coordinated economic policy and planning for the benefit of all South Africans. It therefore “coordinate[s] the economic development contributions of government departments, state entities and civil society; contribute[s] to efforts that ensure coherence between the economic policies and plans of the state and state entities on one hand, and the government’s political and economic objectives and mandate on the other; and promote[s] government’s ability to achieve its goals of advancing economic development with decent work opportunities” (EDD website). As such the Department plays an important oversight role.

The EDD encompasses several entities relevant to food systems and food security, namely: Industrial Development Corporation (www.idc.co.za), Small Enterprise Finance Agency (www.sefa.org.za), Competition Commission (www.compcom.co.za), Competition Tribunal (www.comptrib.co.za) and the International Trade Administration Commission (ITAC) (www.itac.org.za). The Competition Commission and Competition Tribunal have been particularly important in determining the structure of the food system, and therefore affordability and accessibility of food. They have also indirectly created a data transparency challenge. ITAC has been important in determining terms of trade of food, which has had major impacts on the national food system, and all five aspects of food security.

Relevant Programmes: Economic Planning and Coordination (Sub-programmes: Spatial Sector and National Economic Planning; Investment for Economic Development; Competitiveness for Trade and Decent Work; Economic Development, State Budgeting and Financing & Procurement Process; Green Economy)

Economic Policy Development (Sub-programmes: Growth Path and Creation of Decent Work; Economic Policy; Broad-Based Black Economic Empowerment; Second Economy)

Level of Importance: High

2.4.4 Energy

Vision/Mandate: The Department of Energy is responsible for ensuring exploration, development, processing, utilisation and management of South Africa’s mineral and energy resources. The Department of Energy’s, Energy Policy is based on the following key objectives: Attaining universal access to energy by 2014; Accessible, affordable and reliable energy, especially for the poor; Diversifying primary energy sources and reducing dependency on coal; Good governance, which must also facilitate and encourage private-sector investments in the energy sector; and Environmentally responsible energy provision. Department of Energy Website)

Relevant Programmes: The Department regulates electricity and fuel prices, both of which impact the price of food as it passes along the food value chain. Additionally, the Department oversees Eskom in supplying electricity to households. The price of electricity has a direct impact on household’s ability to use income to buy food, and on the choices they are able to make with regard to storage and cooking, and therefore food choice.

Level of Importance: Medium

2.4.5 Environmental Affairs

Vision/Mandate: “The Department of Environmental Affairs is mandated to ensure the protection of the environment and conservation of natural resources, balanced with sustainable development and the equitable distribution of the benefits derived from natural resources” (Department of Environmental Affairs Website)

Relevant Programmes: Although generally relevant to food systems through general environment management, there are specific points of relevance for food system sustainability within the Department’s Waste Management mandate, and possible relevance through the Green Fund as a tool to develop innovate local food system projects.

Level of Importance: Low

2.4.6 Health

Vision/Mandate: The Department of Health’s mission statement is to provide leadership and guidance to the National Health System in its efforts to promote and monitor the health of all people in South Africa, and to provide caring and effective services through a primary health care approach. The Department’s most obvious food intervention is through the Integrated Nutrition Programme, however under the current Minister there has been a strong preventative health focus, which has included a number of food interventions.

Relevant Programmes: Integrated Nutrition Programme; Salt and trans-fat regulation, Promotion of breastfeeding; Food safety; Food Stuffs, Cosmetics & Disinfectants Act 1972; GMO Act 1997.

Level of Importance: High

2.4.7 Home Affairs

Vision/Mandate: The Department is responsible for the maintenance of the population register, the issuing of identity documents and visas, managing immigration, handling of refugees, and controlling borders.

Relevant Programmes: Issuing of identity documents and birth certificates – This is relevant in that it provides the means by which individuals can register for social grants.

Level of Importance: Low

2.4.8 Human Settlements

Vision/Mandate: The primary purpose of the Department is to implement the Constitutional Right to housing through determining finances, promotion, communication and monitoring of the implementation of housing and sanitation programmes in South Africa. It has identified the following priority areas: “Accelerated delivery of housing opportunities; access to basic services; more efficient land use; an improved property market” (Department of Human Settlements website).

Relevant Programmes/Activities: The location of land identified for housing impacts access to employment and journey times, both of which impact food security. The size and quality of top structure impacts the food utilization component of food security. The

design of human settlements may enhance or hinder access to food through planning for food production and retail spaces.

Level of Importance: Medium

2.4.9 International Relations & Cooperation

Vision/Mandate: The Department is responsible for South Africa's relationships with foreign countries and international organizations.

Relevant Programmes/Activities: Working with DTI to develop bilateral and multilateral interactions to promote South African national interests.

Level of Importance: Low

2.4.10 Labour

Vision/Mandate: The Department is responsible for regulating the South African labour market. This is achieved through: "Appropriate legislation and regulation; Inspection, compliance monitoring and enforcement; Protection of human rights; Provision of employment services; Promoting equity; Social and income protection; social dialogue" (Department of Labour website)

Relevant Programmes: Of particular importance is the Sectoral Determinations of minimum wage, which impact business viability, but also the ability of households to afford adequate food.

Level of Importance: Medium

2.4.11 Public Enterprises

Vision/Mandate: The Department oversees South Africa's major state-owned enterprises. The state-owned enterprises are viewed as "strategic instruments of industrial policy and core players in the New Growth Path". The Department therefore aims to align these businesses with the New Growth Path, but ensuring that "their planning and performance, and investments and activities, are in line with Government medium term strategic framework and the Minister's service delivery agreement."

Relevant Programmes: The Department's management of Eskom has major impacts on the price of food along the value chain, and on household's food utilization strategy. Through their control of Transnet, the Department manages the Ports and freight rail infrastructure. This again, plays a role in the cost of food, but also the patterns of internal and international food distribution.

Level of Importance: Medium

2.4.12 Public Works

Vision/Mandate: The Department of Public Works' has a variety of roles. It is relevant to food security and food systems through its mandate to manage the Extended Public Works Programme (EPWP)

Relevant Programmes: The EPWP creates employment opportunities for the unemployed, which provides a source of income to ensure food access. EPWP projects focus on four sectors, all of which contribute to food security and food system stability: Infrastructure Sector; Non-State Sector; Environmental and Cultural Sector; and, Social Sector.

Additionally, the National Infrastructure Maintenance Programme aims to maintain public roads, health and education facilities, water resources infrastructure, ACSA, and Transnet among others. The quality of infrastructure on these sectors impacts the functioning of all phases of the food system, and the access to safe living conditions which impact on food security.

Level of Importance: Medium

2.4.13 Rural Development & Land Reform

Vision/Mandate: The Department's mission is to initiate, coordinate, catalyse and implement an integrated rural development programme. The Department has identified its most important strategy as Agrarian Transformation

Relevant Programmes: Rural Development; Land Restitution; Land Reform. The programmes of the Department are indirectly important for urban food systems and food insecurity. The report cannot speak to the impact of land reform on food security in the urban areas. However, it supports the assertion that the slow pace of land reform and the uncertainties embedded in the process have impacted levels of commercial farmer confidence and may therefore have played a role in the food system shifts discussed in Chapter 3

Level of Importance: Medium - indirectly

2.4.14 Social Development

Vision/Mandate: The Department has two core functions. "1) The management and oversight over social security, encompassing social assistance and social insurance policies that aim to prevent and alleviate poverty in the event of life cycle risks such as the loss of income due to unemployment, disability, old age or death occurring; 2) Developmental social welfare services that provide support to reduce poverty, vulnerability and the impact of HIV and AIDS through sustainable development programmes in partnership with implementing agencies such as State-funded institutions, Non-Governmental Organisations (NGOs), Community-Based Organisations (CBOs) and Faith-Based Organisations (FBOs).

Relevant Programmes: Social Policy; Integrated Development; Welfare Services; Comprehensive Social Security. The Department offers a wide range of services to the public including all the categories of social grants, funding of non-profit organizations, registration of non-profit organizations, registration of Early Childhood Development Centres, and the National Food Relief Programme. Additionally, they manage the social grant service points. The location of these service points is argued later in this study to be precipitating a shift in food consumption patterns and potentially giving more power in the food system to major retailers. Social grants not only provide a means for households to access food, but they also have driven some changes in the food system. The Department of Social Development is currently working on its own National Food Security Strategy.

Level of Importance: High

2.4.15 Statistics South Africa

Vision/Mandate: StatsSA is the national statistical service of South Africa and has the role of producing social and economic statistics to guide government policy and strategies.

Relevant Programmes: Guided by the Statistics Act, StatsSA gathers and makes publicly available data gathered from Censuses and Surveys of population and economic sectors, and provides analysis of inflation, amongst others. StatsSA is also investigating ways to collect data on food security that could be disaggregated to the municipal level.

Level of Importance: Medium

2.4.16 Trade & Industry

Vision/Mandate: The Department of Trade and Industry (DTI) is responsible for commercial and industrial policy. It has a number of subsidiary agencies that promote economic development, implement commercial law, regulate international trade, manage BEE and protect consumers. The most important agencies for food systems and food security are: Small Enterprise Development Agency (SEDA), National Consumer Tribunal (NCT), National Credit Regulator (NCR), and South African Bureau of Standards (SABS)

Relevant Programmes: Small, Medium and Micro-Enterprise Development; Industrial Policy Action Plan 2010-2013 (IPAP2); Trade, Exports & Investment; Financial Assistance (including the Employment Creation Fund, Agricultural Development and Enhancement Programme, Small Medium Enterprise Development Programme); Legislation and Business Regulation (focusing on competition, consumer protection, company and intellectual property, and public interest regulation)

Level of Importance: High

2.4.17 Transport

Vision/Mandate: The Department is responsible for airports, roads, railways and marine transport. It identifies transport as “the heartbeat of South Africa’s economic growth and social development”. The mission is to “lead the development of integrated efficient transport systems by creating a framework of sustainable policies, regulations and implementable models to support government strategies for economic, social and international development” (Department of Transport website). The Department has a number of public entities associated with it, such as PRASA, Ports Regulator, South African National Roads agency, which indirectly impact food price and accessibility.

Level of Importance: Low

2.4.18 Treasury

Vision/Mandate: The National Treasury is responsible for managing South Africa’s government finances. As such, it approves budgets and therefore sets the national financial and programming priorities.

Relevant Programmes: Over the next ten years the National Treasury priorities include increasing investment in infrastructure and industrial capita; improving education and skills development to raise productivity; improving the regulation of markets and public entities; and fighting poverty and inequality through efficient public service delivery, expanded employment levels, income support and empowerment.

Level of Importance: Medium

2.4.19 Water Affairs

Vision/Mandate: The Department's role is to manage the nation's water resources sustainably, including for agricultural use. It is responsible for overall drinking water supply, but sanitation was moved to the Department of Human Settlements in 2010.

Relevant Programmes: Water for Growth and Development Framework; National Water Policy Review; Project on the Raw Water Pricing Strategy. Water pricing has value chain implications throughout the food system.

Level of Importance: Medium

2.4.20 Women, Children & People with Disabilities

Vision/Mandate: The role of the Department is to promote, facilitate, coordinate and monitor the realization of the rights of women, children and people with disabilities.

Relevant Programmes: There are no clear programmes or projects evident at this stage. However, given the vulnerability profiles of these sections of society to food insecurity, it is clear that there should be a role for this department to impact food insecurity.

Level of Importance: Low

2.4.21 Presidency

Vision/Mandate: The Presidency's role is executive management and co-ordination of Government through organizing governance. Its key aim is to facilitate an integrated and co-ordinated approach to governance, through "creative, cross-sectoral thinking on policy issues and the enhancement of the alignment of sectoral priorities with the national strategic policy framework and other Government priorities" (Office of the Presidency). There are two ministries within the Presidency, namely the National Planning Commission and the Department of Performance Monitoring and Evaluation.

Relevant Programmes: The NDP is South Africa's road map that plots out the long-term socio-economic development plan for the country. As such it provides strategic oversight of all government programmes and strategies. It therefore plays an important role in shaping the food system and food security landscape.

Level of Importance: High

2.5 Role of Provincial Government

This section provides an overview of the Departments identified by this study as playing a role in food security and food systems. Because of the breadth of Departments presented, it is not feasible or useful to present the legislative mandate of each

department. The information provided is not exhaustive, but it serves to demonstrate the many influences on food systems and food security.

The Western Cape has 12 Provincial Strategic Objectives, which is used to guide the vision and interaction between departments. The Provincial Transversal Management System is an important tool to ensure this collaboration. The PSOs are:

- 1: *Creating opportunities for growth & jobs*
- 2: *Improving education outcomes*
- 3: *Increasing access to safe & efficient transport*
- 4: *Increasing wellness*
- 5: *Increasing safety*
- 6: *Developing integrated & sustainable human settlements*
- 7: *Mainstreaming sustainability & optimising resource-use efficiency*
- 8&9: *Promoting social inclusion & reducing poverty*
- 10: *Integrating service delivery for maximum impact*
- 11: *Creating opportunities for growth & development in rural areas*
- 12: *Building the best-run regional government in the world*

The Province views Food Security as falling under PSO 8 and has a working group (Working Group 4), which focuses on household food security. The objective of this group is to facilitate access to affordable and diverse food, including nutrition security. The main focus of this group is various food production initiatives, with an additional nutrition support programme for vulnerable pregnant women.

Table 2.2 Importance of provincial government departments to food systems and food security

Department	Food System Role	Food Security Role	Level of importance
Agriculture	✓	✓	High
Community Safety			Low
Cultural Affairs and Sport			Low
Economic Development and Tourism	✓	✓	Medium
Education		✓	High
Environmental Affairs and Development Planning	✓		High
Health	✓	✓	High
Human Settlements		✓	Medium

Local Government		Low
Social Development	✓	High
Transport and Public Works	✓	Medium
Department of the Premier		Low
Provincial Treasury		Low

2.5.1 Agriculture

Vision/Mandate: The Department’s stated vision is to create “united, responsive and prosperous agricultural sector in balance with nature” and its mission is to “[unlock] the full potential of agriculture to enhance the economic, ecological and social wealth of all the people of the Western Cape”. Its activities are guided by the vision and mandate of DAFF.

Relevant Programmes: The Department has a number of programmes aimed at enhancing and supporting commercial and emerging farming in the Province. The Department views its primary food security focus to be the Farmer Support and Development Programme. It is important to note that while this seeks to address household food security, the Department’s programmes that impact commercial agriculture play an important role in shaping the provincial food system. These programmes include: Agricultural Economic Services, Sustainable Resource Management, and Research and Technology Development. The Department is further responsible for inspection of private abattoirs.

Level of Importance: High

2.5.2 Community Safety

Vision/Mandate: The Department of Community Safety aims to increase safety for all people in the Province through improving policing, increasing citizenship in the field of community safety, promoting road safety, optimizing safety and security risk management.

Relevant Programmes: There are not directly relevant programmes, though it is important to note that physical food access and the viability of informal sector food retail is impacted by the fear of and experience of crime.

Level of Importance: Low

2.5.3 Cultural Affairs and Sport

Vision/Mandate: The Department of Cultural Affairs and Sport’s stated purpose is to encourage “excellence and inclusivity in order to unite people through sport and culture and to ensure a creative and active Western Cape.”

Relevant Programmes: There are no obviously relevant programmes with regard to food systems or food security.

Level of Importance: Low

2.5.4 Economic Development and Tourism

Vision/Mandate: “The Department of Economic Development and Tourism's vision is a Western Cape that has a vibrant, innovative, and sustainable economy, characterised by growth, employment and equitable opportunities, and built on the full potential of all... To achieve the vision statement as noted above, the Department is required to provide a facilitative and leadership role to the Western Cape economy through the Department's understanding of the regional economy, its ability to identify economic opportunities and potential, and its contribution to government economic priorities”

Relevant Programmes: The Department leads Provincial Strategic Objective 1 – Job Creation and Economic Growth. To this end, it has five focus areas: Economic strategy and policy; Enabling business environment; Demand-led, private sector driven support; Infrastructure-led growth; and, Decreased skills gap. The Department therefore plays an important, but indirect role in many aspects of the food system and in generating the conditions for household food security in the City.

Level of Importance: Medium

2.5.5 Education

Vision/Mandate: The Western Cape Education Department is responsible for public schooling from grades R to 12, as well as special education, Further Education and Training and Adult Basic Education and Training.

Relevant Programmes: The Department coordinates school feeding in the province and is therefore directly relevant to child and adolescent food security.

Level of Importance: High

2.5.6 Environmental Affairs and Development Planning

Vision/Mandate: The Department of Environmental Affairs and Development Planning is responsible for ensuring that the integrity of the natural environment of the Western Cape is maintained. Its role is to make decisions based on national environmental legislation, while also being aware of how other legislation impacts on these decisions.

Relevant Programmes: The Department has four programmes that impact the food system, particularly with reference to the viability of agricultural land. These programmes are: Environmental Policy Planning and Co-ordination; Compliance and Enforcement; Environmental Quality Management; and, Environmental Empowerment Services.

Level of Importance: High

2.5.7 Health

Vision/Mandate: The Department seems to provide equitable access to quality health services in partnership with the relevant stakeholders within a balanced and well-managed health system.

Relevant Programmes: The Department is the competent authority to implement the Integrated Nutrition Programme in the Province. It is also the home of the Environmental Health Services. The role of Environmental Health at the Provincial mostly focuses on Port Health and malaria control. Environmental Health is primarily the responsibility of Local Government and defined as Municipal Health Services.

Level of Importance: High

2.5.8 Human Settlements

Vision/Mandate: The Department of Human Settlements is responsible for developing sustainable integrated human settlements in the Western Cape.

Relevant Programmes: Given the importance of housing location and housing quality in ensuring food access and utilization, the work of Human Settlement in providing subsidized housing, coordinating the People's Housing Process, and acquiring land for development processes, the Department has an important, if indirect role in food security.

Level of Importance: Medium

2.5.9 Local Government

Vision/Mandate: The role of the Department of Local Government is to support and strengthen municipalities.

Relevant Programmes: There is no clear role for this department in food security or food system governance

Level of Importance: Low

2.5.10 Social Development

Vision/Mandate: The Department's vision is to ensure the provision of a comprehensive network of social development services that enables and empowers the poor, the vulnerable and those with special needs.

Relevant Programmes: The Department has many programmes that directly impact food security. The most direct food security intervention is the Community Based Food Support project, which replaced the existing soup kitchens in 2012. The Department also plays an important role in registering NGOs, many of which have a food security focus.

Level of Importance: High

2.5.11 Transport and Public Works

Vision/Mandate: The Department of Transport and Public Works is responsible for the construction and maintenance of roads, educational and health facilities, and general buildings. It also increases growth and job opportunities through various programmes and increases access to safe and efficient transport.

Relevant Programmes: The Department has relevance to the efficiency of the food system through its road maintenance programme, which impacts the viability of transport for food. It is also important in increasing physical and economic access to food through its public transport governance role. Given the clustering of formal and informal food retail near transport interchanges, there is an important point of connection for the City planning.

Level of Importance: Medium

2.5.12 Premier

Vision/Mandate: The Office of the Premier oversees the provincial strategic objectives and provides legal and corporate support to other provincial departments.

Relevant Programmes: There is no direct role for this Department, however, the visioning of the PSOs is a driver of provincial food system characteristics.

Level of Importance: Low

2.5.13 Provincial Treasury

Vision/Mandate: The Provincial Treasury controls and oversees the provincial finances.

Relevant Programmes: The Treasury sets the Provincial budget. As such it aligns financial resources to programmatic priorities. There is therefore an indirect role on food systems and food security, through the strategic funding of Departments and Programmes according to the PSOs.

Level of Importance: Low

2.6 Role of Local Government

Note: This report acknowledges that there have recently been new departments formed within the City; however, there is insufficient information about the functioning of each new department to analyse for this report. The findings of this report are therefore not fully accurate at the Departmental level, but should be correct at the Directorate level.

Cape Town's current IDP acknowledges food in two particular contexts. The first is in a discussion of the City's role in municipal health (environmental health) through food control. The second is in a discussion of the benefits of rainwater harvesting for food gardens as a water conservation initiative. Previous IDPs have engaged food only through the lens of urban agriculture as a means to address food insecurity.

The current explicitly "food" related points of intervention are firstly through food gardens/urban agriculture as a (the) means to address food insecurity. This is evidenced in the Urban Agriculture Policy and the Food Gardens Policy, as well as in the draft Policy Alleviation and Reduction Policy (2013) and the Economic Growth Strategy (2013). The other explicit engagement with food is through the work of Environmental Health's Food Control Programme.

There is no further direct recognition of the role of the City in food system governance or food security promotion, although a slightly broader perspective is evident in the Social Development Strategy. This Strategy states "the City will work with PGWC to look at introducing a nutrition programme for children under 5 years of age in ECD facilities" (CoCT undated, 22).

However, as discussed in the Conceptual Framework presented in Section 1, it is argued that the City already plays a significant role in the food system and has a series of existing projects, programmes and policies that currently enhance or hinder food security (see Figure 2.1). This wider view is endorsed through the guidance of the NDP.

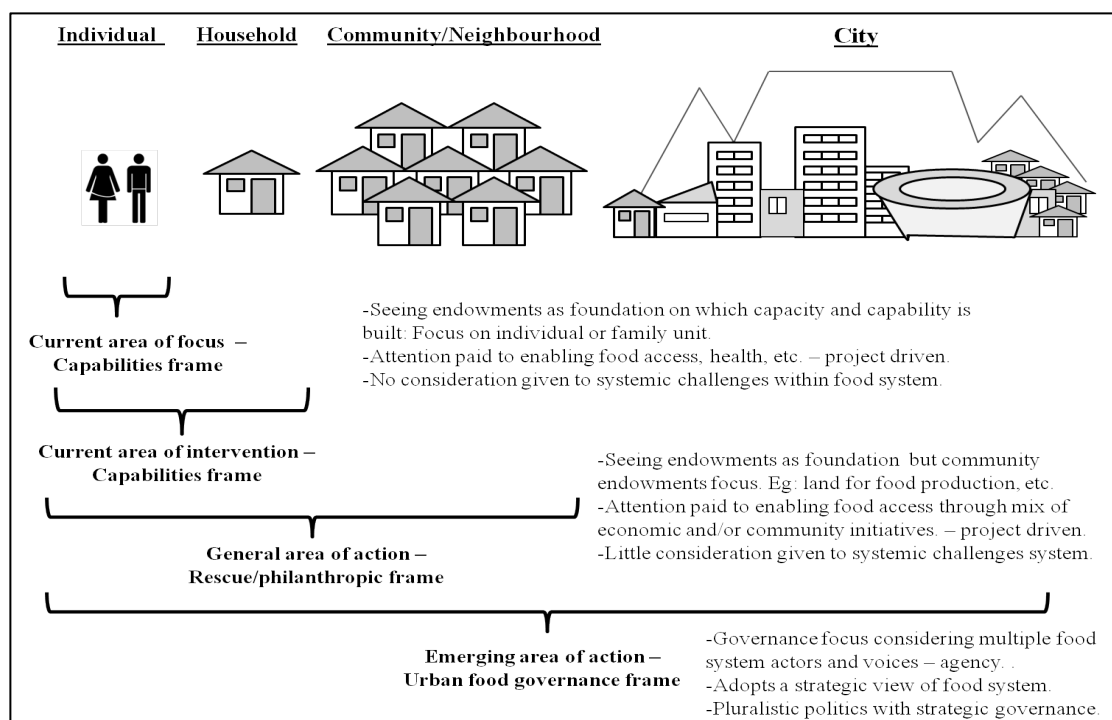


Figure 2.1 Food security scales of intervention and focus

The following Directorates and Departments are argued to already play a role in the urban food system and Cape Town’s food security. This report argues that these roles need to be acknowledged and included in discussions of future food system planning. The lists of legislation, local policies, strategies and by-laws are not comprehensive, but serve to indicate key documents.

Table 2.3 Importance of municipal directorates to food systems and food security

Directorate	Food System Role	Food Security Role	Level of importance
EESP	✓	✓	High
Transport	✓	✓	Medium
Health	✓	✓	High
City Management	✓	✓	Medium
Safety and Security		✓	Low
Utility Services	✓	✓	Medium
Human Settlements	✓	✓	Medium
Community Services	✓	✓	Low
Social Development & Early Childhood Development	✓	✓	Medium
Tourism, Events and Marketing	✓		Low

2.6.1 EESP

Spatial Planning & Urban Design: Spatial Planning and Urban Design (SPUD) leads and guides the spatial and physical transformation of the city through the co-ordination,

development and monitoring of spatial policies, plans and development. SPUD is responsible for preparing the citywide Spatial Development Framework. As such SPUD plays a key role in food system planning. The food system has particular spatial characteristics, such as location of industrial hubs that are centres of food production and the location of the urban edge, which impacts food production trends. Additionally, it oversees broader planning decisions which impact the spatial accessibility of food, such as transport planning and the Densification Strategy.

Planning & Building Development Management: Planning and Building Development Management (PBDM) regulates land use and building developing in Cape Town. PBDM's Land Use Management ensures that land is used according to its permitted land-use or zoning rights guided by the Cape Town Zoning Scheme. This department has a crucial role in food security as its work impacts the mix of land uses in a given area and therefore the spatial characteristics of the local food environment, such as retail and residential mix. Additionally, it is the Department that approves Development Plans and therefore has played a role in the emergence of the shopping mall as a township phenomenon that is profoundly changing the local food system.

Environmental Resource Management: The Environmental Resource Management Department leads the implementation of the Integrated Metropolitan Environmental Policy and manages the nature reserves within the City's Boundary. The main point of intersection with the work of the ERM with food security and food systems is through the Environmental Compliance Unit. This has particular relevance for the illegal dumping of solid waste on the Philippi Horticultural Area and the broader regulation of solid waste disposal sites, which impacts the possibilities of alternative approaches to food waste management.

Economic Development: The Economic Development Department is responsible for promoting economic growth, job creation, reducing poverty and monitoring inequalities. The most direct impacts of this department on the food system and food security are a) through the Urban Agriculture Unit and its guiding policy and b) through the management of informal trading, as this sector is an important source of food for the urban poor. Additionally, the Investment Incentives Policy, the Economic Growth Strategy, Business Development Strategy, can all be used to enhance the viability of local food producers and retailers.

Guiding Legislation: National Building Regulation and Building Standards Act, Land Use Planning Ordinance 1985, National Environmental Management Act, Removal of Restrictions Act 1967

Local Policies/Bylaws: Cape Town Zoning Scheme, Integrated Development Plan, Spatial Development Framework, Densification Policy for Cape Town, Land Use Enforcement Policy 2008, Business Support Policy 2003, Informal Beach Trading Policy 2003, Management of Urban Stormwater Impacts Policy 2009, Metropolitan Spatial Development Framework, Notification Policy for Land Use Development Applications 2010, Informal Trading By Law 2013, Urban Agriculture Policy 2007, Cape Flats Renewal Strategy 2004, Weltevreden Valley Smallholding Local Area Policy 2012, Investment Incentives Policy 2013.

Level of Importance: High

2.6.2 Transport

The City's Transport Directorate comprise of four departments: Transport; Roads and Stormwater; Integrated Rapid Transit Implementation and Integrated Rapid Transit Operations. The Department of Transport's role, inter alia, is to implement an

“Appropriate institutional framework for transport that will result in coherent, integrated and comprehensive planning, funding, extension and operation of transport functions in Cape Town;

The Design and implementation of the City Integrated Transport Plan; Integrated Public Transport Network; Infrastructure and Operations to meet access and mobility needs of all citizens, visitors, goods and services and maximize use of transport infrastructure to support job creation, social and economic development and minimize environmental impacts.” (CoCT 2012, 331)

As will be demonstrated in Section 3.8 transport plays an important role in the location of formal and informal food retail, and of households’ food procurement patterns. As such, the insertion of food-sensitive planning into existing transport planning could have significant impacts on food security.

Guideline Legislation: Municipal Finance Management Act 2003, National Road Traffic Act 1996, National Land Transport Act 2006, Legal Succession of the South African Transport Services Act 1989, Urban Transport Act 1977

Local Policies/Bylaws: Integrated Development Plan 2006, Constitution of Transport for Cape Town (draft), Public Transport Plan 2006, Footways Implementation Policy 2008

Level of Importance: Medium

2.6.3 Health

The Health Directorate’s main food system and food security role is through the work of the Food Control Programme of the City’s Environmental Health section. This regulates, monitors, evaluates and controls the quality and safety of food products supplied to citizens. The programme licenses and certifies food preparation facilities; conducts inspections of food preparation facilities; samples foods; investigates all reported cases of food poisoning; investigates all consumer complaints and concerns related to food services and food products, and manages the environmental health and milk control laboratory service.

Additionally, the City has an important role in nutrition monitoring through its Community Health Services.

Guiding Legislation: Businesses Act 1971, Health Act 1977, 2003, Regulations Governing General Hygiene Requirements for Food Premises and the Transport of Food 1999, Foodstuffs, Cosmetics and Disinfectants Act 1972, and the regulations promulgated under this act, most notably those that deal with the Certificates of Acceptability of food premises and milking sheds (Regulations Relating to Milk & Dairy Products 1997, Regulations Relating to Milking Shed and the Transport of Milk 1986,); labelling and advertising of foodstuffs; microbiological standards and the compositional standards for foodstuffs (Agricultural Product Standard Act 1990, S.A. Bureau of Standards.). The National Environmental Management: Air Quality Act 2004 governs any fuel burning appliances.

Local Policies/By Laws: Environmental Health Bylaw 2003, Keeping of Animals and Poultry Policy 2005, Air Quality Management Bylaw 2004

Level of importance: High

2.6.4 City Management

There are two components that fall under City Management that have relevance to food systems and food security. The first is the Extended Public Works Programme. The City has had success with its Elsie’s River Green Grow vegetable garden as an EPWP

initiative. There is scope for further food-centred EPWP initiatives. The second is the Urban Regeneration Programme, which aims to address under-development and socio-economic exclusion in Mitchell's Plain and Khayelitsha. The URP supported the Food Security Summit held in Khayelitsha in May 2013 and recognized the role of food-based planning as a means to achieve a number of the objectives of the programme.

Level of importance: Medium

2.6.5 Safety and Security

The Disaster Risk Management Centre plays an important role in disaster relief, rehabilitation, reconstruction, mitigation and preparedness. The Department partners with NGO partners to provide relief measures and work towards rehabilitation and reconstruction. There is a food-based component to the initial disaster relief, and the provisions of additional post-disaster resources play an important role in re-establishing prior levels of food security.

Guiding Legislation: Disaster Management Act 57 of 2002, SA National Disaster Management Framework 2005, Municipal Systems Act 32 of 2000

Level of importance: Low

2.6.6 Utility Services

The Solid Waste Management Department Integrated Waste Management Bylaw has a direct impact on the food system in terms of the processes that enable or hinder the diversion of food waste away from landfill, which therefore has an impact on food system sustainability. The Electricity Services Department impacts food security through its provision of electricity and setting of electricity tariffs. Rapid increases in electricity prices have impacted food security as households divert money for food to pay electricity costs, and change their food purchasing patterns to buy foods requiring less cooking (Section 5).

Guiding Legislation: Municipal Systems Act 2000, National Environmental Waste Management Act 2008, Integrated Pollution and Waste Management for South Africa White Paper 2000, Electricity Regulation Act 2006

Local Policies/By Laws: Integrated Waste Management Bylaw 2009, Waste Management Sector Plan 2012, 2013-14, Integrated Waste Management Policy, Electricity Supply By Law 2009

Level of importance: Medium

2.6.7 Human Settlements

The Human Settlements Directorate provides land for housing and coordinates the programmes that allow the City to maintain its housing stock. Additionally it is responsible for improving the quality of living environments and developing integrated human settlements. The location of housing, the composition of human settlements with reference to the location of food production and food retail, and the quality of housing in terms of storage capacity and temperature regulation have been identified as important variables in household food security. In addition, the balance between the demand for land for housing and the desire to maintain agricultural land is an important consideration with regard to food system planning. The Human Settlements Directorate therefore already plays an important indirect role in the food system and in the food security of Cape Town's residents. Adequate access to food is an essential part of improving the quality of living environments and developing integrated human settlements.

Guiding Legislation: National Housing Act 1997, National Housing Code 2009, Consumer Protection Act 2008, Breaking New Ground

Local Policies/By Laws: Policy for the Provision of Roads in Informal Settlements 2003, Allocation Policy: Housing Opportunities 2012, Proactive Re-blocking of Informal Settlements 2013

Level of Importance: Medium

2.6.8 Community Services

The Community Services Directorate has three minor roles within the food system. The first is the role of the City Parks Department in providing space for food gardens. The second connects to the first: The current Public Parks Bylaw prohibits the sale of any wares without written permission of the Director. The retail of food in parks has been found elsewhere to be a means to improve the quality of public open space (www.pps.org/blog/the-power-of-food-trucks-to-calm-a-turf-war). The third role is the potential use of City libraries as mechanisms to enhance community understanding of food security issues.

Guiding Legislation: Environmental Conservation Act 1989, Conservation of Agricultural Resources Act 1982, National Environmental Management Act 1998, Land Use Planning Ordinance 1985, National Environmental Management Biodiversity Act 2004

Local Policies/Bylaws: City Parks Development Policies 2004, Public Parks By Law 2010

Level of Importance: Low

2.6.9 Social Development & Early Childhood Development

While the registration of Early Childhood Development Centres is a Provincial Responsibility, the City issues land rights, approves building plans and assesses Health and Safety of ECDs. The City is proposing to work more closely with Province to streamline the engagement of ECDs with the State. Some of the health requirements for ECDs impact food security, namely the standards for cooling facilities for the storage of baby food/bottles, and for the Food Handling Areas. Additionally, there are proposals within the Social Development Strategy to work with the Provincial department to introduce a nutrition programme in ECDs. There is significant food distribution to ECDs by NGOs such as Food Bank and Stop Hunger Now. ECDs are therefore key sites of food security intervention.

The Youth Development Policy identifies a need to facilitate young people's entry into the job market. The Urban Agriculture Unit has identified youth participation as a key strategic focus. There is therefore a clear connection between the objectives of the Directorate and those of the Urban Agriculture Unit. This connection is further articulated in the draft Poverty Alleviation and Reduction Strategy and the Food Gardens Policy.

Guiding Legislation: NDP, Children's Act 2005, Integrated Provincial Early Childhood Development Strategy 2012, National Youth Development Agency Act 2008, National Youth Policy 2009-2014, National Youth Development Policy Framework 2002-2007

Local Policies/By Laws: Indigent Policy 2003, Food Gardens Policy in Support of Poverty Alleviation and Reduction 2013, City Development Strategy, Urban Agriculture Policy, Social Development Strategy, Early Childhood Development Policy 2013 (draft), Youth Development Policy 2013 (draft), Poverty Alleviation and Reduction Strategy 2013 (draft)

Level of Importance: Medium

2.6.10 Tourism, Events & Marketing

There is no direct role for the Directorate of Tourism, Events and Marketing in ensuring food security or governing the food system. However, as Section 1 indicated, the History of Cape Town is closely linked with the food system. Additionally, Cape Town has a wide range of food cultures. A more concerted focus on Cape Town's food heritage and food culture could enhance the work of the Directorate.

Guiding Legislation: White Paper on Tourism 1996, National Responsible Tourism Guidelines 2002, National Minimum Standards for Responsible Tourism 2009

Local Policies/By Laws: Tourism Development for Cape Town 2005, Spatial Investment Framework, Responsible Tourism Policy 2009, Tourism Framework for the City of Cape Town

Level of Importance: Low

2.7 Key Stakeholders

While Section 2.3 has indicated the substantial role of the City in shaping food security and the food system, the food system is influenced by a far broader set of stakeholders including national and provincial departments, private sector actors, trade unions and a range of NGOs, CBOs and other civil society organizations. This section provides an overview of the Stakeholder mapping process conducted for this report. The Stakeholder list is attached as Appendix A. Suggestions for future engagement of stakeholders with regards to food systems and food security are presented in the concluding chapter.

The aim of the stakeholder analysis was to identify key stakeholders, map current and potential interactions among stakeholders, delineate stakeholder mandates, and lay the foundations for potential models of on-going engagement of key stakeholders in food system governance and food security actions.

Stakeholder analysis has become increasingly popular with a wide range of organisations and in a variety of fields, and particularly for policy makers it can constitute a useful approach to identify the key actors that have a stake in a particular policy problem. Stakeholder analysis serves as a tool to create knowledge about the “relevant actors” to understand their behaviour, intentions, relationships and influence on decision making processes (Brugha and Varvasovszky, 2000). This knowledge is not only critical to take stakeholders' interests and concerns into account, but to actively involve them in processes of policy development and implementation to increase the quality and legitimacy of policies.

2.7.1 Who is a stakeholder?

The term ‘stakeholder’ is both a powerful one and an imprecise one that is defined and interpreted in multiple and sometimes contradictory ways (Phillips et al., 2003). The classical definition put forward by Freeman (2010) considers stakeholders as groups or individuals who are affected by or have the power to influence the outcomes of actions taken by decision-makers. This indicates that a relationship must exist between the activities, for instance, of policy makers, and those considered as stakeholders. This relationship can be unidirectional (the activities affect a certain group of actors *or vice versa*), bidirectional (the activities affect a certain group of actors *and vice versa*) and multidirectional (in complex systems relationships affect different groups at different

times). Clarkson (1995) adds that a ‘stake’ means having something to gain or to lose as a result of the [policy] activities, emphasising the consequentiality of the relationships between stakeholders and the actions of policy makers.

For the purposes of this study, stakeholders were understood to be any actor or organization influencing or influenced by the City of Cape Town’s food system. Although the application of the municipal boundaries achieves a clear geographical demarcation, the food system and its influences are not bound by this spatial scale. Some of the key stakeholders are therefore based beyond the City’s boundaries. Broad stakeholder categories were identified: government at all levels, the private sector (formal and informal), civil society organizations and research.

2.7.2 Rationale for stakeholder engagement in food system and food security governance

We can broadly distinguish between instrumental and normative perspectives on why stakeholders should become involved in policy making processes. Instrumental arguments largely pay attention to understanding how policy makers can identify and manage the behaviour of stakeholders to achieve the desired policy outcomes (Reed et al., 2009). Firstly, it is imperative to understand how stakeholders are involved in a particular problem - both from a basic ‘how are they affected by or how do they affect the problem?’ and a more strategic viewpoint in terms of the attitudes and concerns of stakeholders as well as their interests in solving or maintaining a particular problem. Secondly, involving stakeholders enables policy makers to recognise the relationships between stakeholders, how these relationships impact on the problem at hand and how they can be used during the policy process. Thirdly, stakeholders may have knowledge that can contribute to better understanding and contextualising a particular problem. This holds particularly for ‘wicked problems’ - such as food insecurity -, characterised by highly complex, dynamic and often uncertain cause-effect relationships, which call for the integration of multiple sources of knowledge and diverse perspectives. Finally, stakeholder involvement can help create an understanding of the possible intervention policies, how these may be supported or blocked by (coalitions of) stakeholders and how effective these policies are likely to be. Hence, the more stakeholders are integrated into policy making processes, the higher the chances to produce adequate and effective policy proposals (Edelenbos and Klijn, 2006). Normative perspectives add to these arguments by emphasising the importance of stakeholder engagement to build legitimacy of the policy and the public actors behind the policy as well as contribute to the stakeholder [citizen] empowerment (Bryson, 2004; Reed et al., 2009). Both factors are also suggested to contribute to increasing the likelihood of success of the policy.

2.7.3 Approaches to stakeholder involvement in policy-making processes?

Participation of stakeholders must be actively sought, as they are unlikely to become active unless invited and enabled. Experience with stakeholder involvement in policy processes shows that participation and engagement should be considered and organised as early as possible in the policy making process, with the understanding that participation starts from concept development and planning and extends until monitoring and evaluation of outcomes (Reed, 2008). Participation should also be based on a clear understanding of the objectives and desired outcomes of the process. This may require negotiation with and among stakeholders, but such processes of dialogue may contribute to establishing substantively richer goals and increased ownership from the outset (Reed, 2008). Premature problem closure, however, should be avoided as this may lead to inadequate solutions. Participation can feature along two dimensions, i.e.

breadth (the degree to which every affected entity is able to participate) and depth (the degree to which stakeholders are able to influence the final outcome of the policy process) (Edelenbos and Klijn, 2005). Both impact on the role of stakeholders in the different phases of the policy process, which range from stakeholders as actors who need to be informed or consulted (low levels of involvement), to stakeholders as suppliers of ideas or advisers (medium levels of involvement), and stakeholders as co-developers and co-decision makers of policies (high/er levels of involvement) (Edelenbos and Klijn, 2005). As stakeholders' interests often collide and may block decision making, active and adaptive process management (facilitation) is critical to maintain positive group dynamics, encourage actors to re-evaluate entrenched positions and find adequate solutions (Edelenbos and Klijn, 2005; Reed, 2008).

A key issue emerging from the current study is the recognition that the food system of the City of Cape Town is complex. Food insecurity can be described as exhibiting many elements of a “complex social challenge”, which requires different ways of understanding and responding (McLachlan and Garrett 2008): it is *socially complex* because there are many players required to address it and many perspectives about how to do so. The people involved see things differently, so perspectives become polarised and resolutions are not easily found. Food insecurity is *dynamically* complex because people have difficulty grasping the consequences of not dealing with it as the causes and effects are often intangible in space or time. Addressing food insecurity is *generatively complex*, as its causes and consequences are unfolding in unfamiliar and unpredictable ways.

This complexity entails three main dimensions when considering a stakeholder analysis of dimensions of food insecurity in Cape Town. First, complexity shows in *uncertainty*. Stakeholder analysis deals with the question of “who and what really counts” (Mitchell et al., 1997). Yet, while this may sound straightforward, it is far from simple. In the case of the City of Cape Town, the emerging database reveals a wide number of stakeholders, but certainly not all. Second, complexity is reflected in the *different perspectives* held by stakeholders of who the main stakeholders are and what linkages they have with each other. Finally, complexity is manifest in the *dynamic character* of stakeholders. While the report and database provides a picture of today's stakeholders, tomorrow's stakeholders may already be completely different. Stakeholders change, their relationships change and their influence on the food system also change. It follows that a stakeholder analysis must be a continuous, iterative process. This implies that beyond a broad scoping analysis (as undertaken in this study) stakeholder analysis around dimensions of the food system in Cape Town should be guided by specific questions. This will ensure that the appropriate stakeholders are included to address and engage a specific dimension of the broader issue.

2.7.4 Stakeholder identification

Deciding who is a stakeholder and who should be involved in policy making, how and when, is a key strategic choice (Bryson, 2004). Most analysts therefore suggest approaching this choice in a step-wise fashion. Reed et al. (2009), for instance, propose the following three steps. First, focus groups (small group brainstorming) help construct a preliminary stakeholder list, which is then checked and supplemented through semi-structured interviews with a cross-section of stakeholders. Snow-ball sampling techniques further add to the list of stakeholders. The results need to be reviewed in an iterative manner to identify missing, hidden or irrelevant stakeholders. Second, stakeholders need to be grouped into categories, for instance, according to urgency, legitimacy and claim (Mitchell et al., 1997), cooperation and competition (Freeman,

2010), or primary stakeholders (essential for achieving the goals of an initiative) versus secondary stakeholders (with whom the organisation interacts but who are not essential to the initiative) (Clarkson, 1995). Other popular methods distinguish between stakeholders who have power versus those who have an interest in the issue at hand, or between ‘key players’, ‘context setters’, ‘subjects’ and ‘crowd’ (Reed et al., 2009). The final step is to investigate and identify the relationships between stakeholders. These relationships are particularly pertinent in terms of ‘influence’ (who influences whom) to help structuring the problem area and establish (potential) areas for cooperation and conflict between stakeholders (Bryson, 2004).

A stakeholder analysis exercise was conducted as means of demonstration of the power and usefulness of the approach described above. The first step was to develop and consolidate a database of stakeholders that could be built upon and refined by the City of Cape Town as the process of engagement with food system issues develops and becomes more focused. The database development was initiated by identifying and collecting details of stakeholders with the help of those actors and organisations that previously established similar databases or were in contact with a wide variety of food system stakeholders. Networks included the African Food Security Urban Network (AFSUN) based at UCT, the Stellenbosch University Food Security Initiative (FSI), and the Southern Africa Food Lab (SAFL). Whilst this implies that the reach of the database is contingent upon existing information, it provided a useful point of departure to collect a wide variety of inputs from different, complementary sources. To reiterate, the approach implies that the database would be a “living document”, in need of a champion or custodian, who would ensure its continuous refinement to be useful for specific interrogation of particular questions.

In reviewing the database in collaboration with the City of Cape Town, it became clear that there were gaps and biases, something that was anticipated and likely to be an on-going challenge. Particularly the issue of informal stakeholders, such as hawkers, street vendors and traders, proved to be a fundamental challenge in that they are clearly important stakeholders - both affecting and being affected by food supply into the City - yet, they largely lacked formal, i.e. registered, structured and collective organisations. The informal sector is also highly dispersed and dynamic, with high start-up and failure rates and often run on individual and ‘survivalist’ modes (Charman et al., 2012). This made it difficult to identify specific individual stakeholders (or organisations) rather than merely listing them as a general category of ‘informal traders’. Through additional research, including internet searches and document analysis, the team identified a number of more or less formal collective organisations which represent at least some segments of this highly varied and multi-faceted stakeholder group. Once again, this demonstrates the approach required to maintain a database that would be effective and useful for stakeholder analysis.

The database included in the Appendix is intended to be understood as a flexible resource that can be added to as the City’s food system engagement develops. The current database lists 133 organizations and institutions categorized according to type of stakeholder, locality and position in (or around) the food chain.

2.7.5 Stakeholder clusters

Categorisation 1: Stakeholder groups

Businesses (formal and Informal)

- Retailers
- Wholesalers and markets
- Food manufacturers and processors

- Hotels, restaurants and caterers
- Financial service providers
- Consulting companies
- Trading companies
- Logistic companies and cold chain services
- Agro-chemical businesses and plant protection services

Non-governmental organisations

- Member-based service organisations
- Cross-sector partnerships
- Religious and faith-based organisations

Government

- Local and municipal government
- Provincial government
- National government
- Universities

Research

- Universities
- Research institutes and other organisations

Categorisation 2: Locality

- Wards
- Municipal
- Provincial
- National
- International

Categorisation 3: Position in (or around) the food chain

In the chain: economic actors

- Input providers
- Producers
- Processors and manufacturers
- Transport companies and logistical service providers
- Wholesalers
- Retailers
- Food service providers (including restaurants, home deliveries, etc.)
- Consumers
- Waste, recycling and disposal service providers

Around the chain: influencers & supporters

- Policy-makers
- NGOs and community organisations (including school feeding schemes, Food Bank, etc.)
- Financial service providers Researchers
- Media
- International actors (e.g. international NGOs and advocacy groups, research organisations)

This database – while far from complete – serves several purposes. Firstly, it provides an overview of the stakeholders that are in different ways engaged in the food system of Cape Town. Secondly, it offers a point of departure to categorise the various stakeholders. Whilst we commenced with the three types of categorisations mentioned

above, many more options would be possible and could provide value, depending on the objective of the exercise. For instance, another way of categorising stakeholders would be to look at their activities in the food system. Group 1 could encompass all those actors who are involved in selling and buying food; Group 2 could include all those actors who provide services to Group 1; and Group 3 could comprise those actors who influence Group 1 and Group 2 through regulation, lobbying or advocacy. Finally, the database comprises a large number of researchers focusing on issues of food security, food supply, production, and consumption. This reveals the considerable technical expertise in universities and other research institutions in the City region that can assist the City in their future engagement with issues of food system governance and food security.

While the listing and categorising of stakeholders provides the City with a useful database, it does not assist the City in developing strategies to work with the stakeholders and understand where synergies and disconnects might lie. For this reason a workshop was convened to bring together representatives from the different stakeholder groups to better understand how roles and responsibilities in the food system were understood. The approach taken was a Net Mapping approach (Aberman et al 2010) in which the network of key individuals and organizations engaged in the food system was identified, along with the interactions between them. In this approach, the dimensions of exchange, voice, power and authority were emphasized, as well as identifying the mandates of stakeholders. This approach was deemed to be important as it addressed the questions of how the food system actually operates and why. Key questions were therefore: What actors are involved in the food system? How are they linked? What kind of influence do they have? A full report of the outcome of these discussions is located in Appendix B.

2.7.6 An example of stakeholder analysis

At the behest of the City of Cape Town, and to demonstrate both the complexity of Cape Town's food system as well as how to utilise the database in a stakeholder analysis, a workshop was convened to incorporate the voices of different stakeholder groups, and build our collective understanding of the roles and relationships among these groups. Drawing on the database, a list of 35 key stakeholders from the main stakeholder groups representing the different dimensions of the food system (from pre-production to post-consumption, and including service providers) were identified. These stakeholders were identified based on their important knowledge on the different dimensions of the City's food system. They were then contacted and invited to participate in a stakeholder mapping workshop to map the existing and potential interactions between stakeholders in the Cape Town food system. The stakeholders were encouraged to participate not as representatives of their individual organisations, but rather as knowledge-holders of their respective stakeholder groups.

The workshop was held on 17 September 2013 and was based on the Net Mapping approach developed initially by the International Food Policy Research Institute and further refined by practitioners using it for a range of purposes (Aberman et al., 2012). The approach entails that small groups of participants jointly discuss and identify the network of individuals and organisations engaged in the food system, the interactions between them, emphasising dimensions of exchange, voice, power and authority, and the mandates that various agents have. Hence, 'simple' questions that were addressed during the workshop included: 1) What actors are involved in the food system?; 2) how are they linked?; and 3) what kind of influence do they have? The workshop highlighted that the question about relationships among stakeholders is particularly critical in determining the role of different stakeholders in the overall food system. Relationships can be varied, such as relationships of authority (power), influence (claim), interest

(voice), and exchange (of products or services). A detailed report of this interactive and participatory process was submitted to the City of Cape Town (included as annex).

Different stories emerged during the stakeholder mapping workshop, offering different answers to “who and what really counts” in the food system. As an example, the issue of property developers and their role to shape the future form of the food system arose. This was a powerful argument and perspective that allowed a group to interrogate the dynamics of this “hidden hand” in the food system and how engagement with these stakeholders could contribute to more sustainable and equitable outcomes in the food system. To reiterate: a range of stakeholders representing the Cape Town food system were selected based on their knowledge of the system and ability to reflect on its broad dimensions. They, in turn, were asked through a specific process to identify key questions that would shed light on particular dimensions of the food system. This revealed important perspectives that, through a multi-stakeholder process that enabled open dialogue, to probe and question how these dynamics could be better harnessed to meet the broader objectives of the City of Cape Town food system strategy.

2.7.7 Sub-topics within food security and their respective stakeholders

The following issues have been identified as key priority areas in the Food System study (see section 7.4 of the study). An initial stakeholder analysis has resulted in the following preliminary list of key stakeholders for each of these priority areas (does not include any stakeholders from the government):

Priority areas	Initial stakeholders
<i>Food governance</i>	<p>Southern Africa Food Lab</p> <p>Cape Town Partnership</p> <p>Western Cape Economic Development Partnership</p> <p>Sustainability Initiative of South Africa (SIZA)</p> <p>(In this case, we suggest identifying those organisations that could contribute knowledge to developing a model of food governance suited to the complexity of food insecurity in Cape Town. This does not imply that these are also the organisations eventually to be included in food governance.)</p>
<i>Agriculture and land</i>	<p>Agri Wes Kaap</p> <p>Hortgro</p> <p>Universities and research institutes involved in agriculture and land issues, e.g. PLAAS at UWC and Faculty of AgriSciences, Stellenbosch University</p> <p>NGOs: Black Sash, Surplus People Project, Women on Farms, Informal Settlement Network Cape Town, People Against Suffering, Oppression and Poverty (PASSOP), Conservation South Africa Green Choice, Abalimi Bezekhaya, Soil for Life</p>
<i>Food retailing</i>	<p>Formal food retailers (Pick ‘n Pay, Shoprite/Checkers, Spar, Woolworths)</p>

	Formal wholesalers (e.g. Massmart) Western Cape Informal Traders Coalition; local traders associations Somali Retailer Association Cape Town Fresh Produce Market Property developers NGOs: FoodBank, Stop Hunger Now, Triple Trust Organisation
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<i>Food processing</i>	Food manufacturers (e.g. Pioneer Foods, Tiger Brands, Unilever) Packaging companies (e.g. Nampak) Financial sector (e.g. Old Mutual) Agri Wes Kaap
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<i>Food price monitoring</i>	Universities: Bureau for Food and Agriculture Policy (BFAP)[UP, SU, NAMC]; PLAAS, UWC; African Centre for Cities, UCT Research institutes (e.g. CSIR and HSRC) Consumer Goods Council Agri Wes Kaap Financial sector (e.g. Nedbank)
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As mentioned earlier, this is merely an initial identification of stakeholders which would need to be expanded and refined through focus groups and snowball techniques, to ensure that all relevant, including hidden, stakeholders are identified. Stakeholder engagement would then commence, as described above, based on a clear understanding of the purpose of the activity.

3 South African Food Production and Food System Overview

Key Summary Points

- Food security needs to be understood in the context of the wider food system, not just in terms of agricultural production and the food supply.
- The food system is a system in which “nobody is in charge” (Seabright 2010), which leads to problems of lack of transparency and data availability, and of appropriate governance mechanisms.
- The South African food system is increasingly consolidated with key value chains, such as wheat, maize, dairy and poultry controlled by a very small number of companies.
- There is further concentration in the retail sector and the supermarkets are playing an increasingly important role in the food system as a whole, influencing production and processing downstream through vertical integration.
- Given this context, it is not possible to speak of a “local food system.” It is therefore necessary to view Cape Town’s food system in the context of wider national and international food systems.
- National agricultural trends are important determinants of Cape Town’s food security and food security.
- Local food prices are largely, but not entirely, driven by national food price trends.
- Due to the nature of the national food system, food consumed in Cape Town cannot be assumed to be locally produced; there is therefore a need for a national perspective.
- Post-apartheid agricultural and trade policy has led to a reduction in the number of farms and a consolidation of the agricultural sector. It has also led to a shift in production focus, with a marked increase in the production of horticultural crops for export, most notably a massive growth in grape production.
- The national agricultural sector is vulnerable to rising input and labour costs, long term climate change and extreme weather events, and changes in export markets – such as currency fluctuations and tariffs, and import standards.

The conceptual framework in Chapter 1 established that food security at the household level is not simply the outworking of household characteristics, but is enhanced or hindered by the structure of the wider food system. The food system is understood to

comprise of all food related activities of actors who grow, process, distribute, acquire, consume and dispose of food, and how they interact with other systems and actors.

It is therefore essential to identify the conditions in the food system that can enhance food security, according to the 5 As of food security identified in the conceptual framework: Availability, Accessibility, Adequacy, Acceptability, Agency. For the purposes of this study, these conditions have been summarized as: Reliability, Sustainability and Transparency.

Reliability refers to price and price stability, nutritional quality of the food the system makes available, and the safety of the food made available.

Sustainability refers to the environmental, economic and social sustainability of the system.

Transparency is important to ensure agency and refers to how available data and information are to both state and civil society.

This section (3.1) provides an overview of the overarching characteristics of the South African food system, extending well beyond the City scale, but impact food security within the City's boundaries. The question therefore is what role has the City in a) creating the conditions for households to meet their food security needs, b) generating strategies/policies to generate reliability, sustainability and transparency within those components of the food system operating within the City's boundaries, and c) engaging with national and provincial government to address the food system and food security challenges identified outside of the City's jurisdiction.

Central to the structuring of these arguments and the provision of food system-related detail is a shift in the understanding of the role played by the city in the food system. For the last 100 years Cape Town has simply been a recipient of flows of food where the city and society as a whole has had less and less say (agency) about how these flows function. The food system study is the start of a process whereby the city starts to engage more directly with these flows and seeks out ways in which it can engage with the attendant flows more directly, responding to the food security and food system needs of the residents of Cape Town. In order to do this, the food system and the nature of the flows require greater understanding.

The following sections therefore all begin with a discussion of the reliability, sustainability and transparency of the food system component being described, followed by a discussion of the role of the City in governing this aspect of the food system in the interest of achieving food security for its residents, according to the 5 As.

South African agriculture and the South African food system more broadly have undergone significant transformation in the last 20 years, in the process significantly reshaping national and local food systems. This chapter situates these changes in a global context and then reviews the process of transformation at the national level and in the Western Cape. The chapter then examines the key productive areas in Cape Town itself. It is essential to understand the relationship between these wider agricultural systems and Cape Town's food system. Not only do national and global trends determine food availability and prices, but also trends and practices within the Cape Town farming sector are influenced by these national patterns.

3.1 The Global Food Regime

While the focus of this section is largely the South African and more local food system, it is essential to understand this system within the wider Global Food Regime.

The concept of the Global Food Regime provides a framework to explain reconfigurations of the global food system, and to understand that although the local food system is in some ways unique, many of the trends reflect a global shift. The current food regime is centred on private regulation of food trade. The food regime thesis enables appreciation of how and why global systems of food provisioning, connected to political systems, are influenced by economic activities and the role that policy plays in this process.

Currently the food system faces several challenges. Apart from that of food insecurity, there is erosion of local food production systems and eating patterns that have accompanied the net flow of food from poorer to richer countries (Kent, 2003). The market in South Africa is experiencing considerable consolidation, both at the farm scale and within the value chain. This reflects a global trend (Thu, 2009). Consolidation within the value chain is also evident: in the US three agribusinesses control 81 percent of maize exports (McMichael, 2009: 289). Fewer and fewer players control global food flows. The idyllic image of the family farmer producing society's food is no longer the case. This has been replaced by "industrialised food and global de-agriculturalisation" (Thu, 2009: 14).

Consolidation results in vertical integration in the value chain and the emergence of what has been referred to as "Big Food" (Stuckler and Nestle, 2012; Igumbor et al, 2012). This phenomenon is becoming increasingly evident in developing countries. South Africa led the way on the African continent. Big Food has been argued to be the driving force behind significant changes in both what is consumed and how certain foods are consumed, resulting in dramatic changes in diet with the consumption of certain food types increasing significantly (Stuckler et al, 2012). Such changes in diet have implications for nutrition and health (Peretti, 2012). These changes speak to two changes taking place within the food system, the supermarket transition and the nutrition transition. Both transitions are linked to the demographic shifts associated with the urban transition. However, the main driver of the supermarket transition is economic and linked to wider investment opportunities.

Understanding the implications of the food regime shifts and how these intersect with rapid urbanisation offers new ways of understanding how the food system and the city intersect. It is at this intersection that new forms of urban food system planning can emerge. Considering the nature, extent and challenges associated with the urban food system as a whole is a prerequisite for effective holistic city-scale urban food system planning.

This planning requires a detailed understanding of a variety of different aspects of the food system. Despite the earlier critique of the predominance of a production orientation in solutions to food system faults, it is necessary to understand the food system, how the different food systems, from city-scale to national and then out to international scales interact and intersect. Table 3.1 is provided as an illustration of the increasingly global nature of the South African food system.

Table 3.1: South African trade in agricultural goods

	1965-1969	1970-1974	1975-1979	1980-1984	1985-1989	1990-1994	1995-1999	2000-2005
Exports								
Total exports (Rm)	1 222	2 092	7 305	20 746	45 164	72 534	133 623	272 382
Total agricultural exports (Rm)	430	689	1 412	1 946	3 613	5 520	12 132	22 293
Gross value of output (Rm)	1 237	2 100	4 234	8 458	16 087	25 581	42 349	68 282
Agricultural exports as % of total exports	35.21	32.92	19.33	9.38	8.00	7.61	9.08	8.18
Processed agricultural exports (Rm)	182	341	724	942	2 010	2 865	6 650	13 384
Unprocessed agricultural exports (Rm)	249	347	688	1 004	1 604	2 654	5 482	8 909
Processed agricultural exports/total exports	42.18	49.56	51.25	48.42	55.62	51.91	54.81	60.04
Imports								
Total imports (Rm)	1 862	3 243	6 536	18 240	32 499	55 122	125 364	264 682
Total agricultural imports (Rm)	56	174	290	870	1 689	3 476	8 317	13 687
Agricultural imports as a % of total imports	3.02	5.38	4.43	4.77	5.20	6.31	6.63	5.17
Import cover	4.55	8.30	6.84	10.29	10.50	13.59	19.64	20.05
Openness	39.34	41.10	40.19	33.30	32.96	35.16	48.29	52.69

(Source: Vink and van Rooyen 2009: 9)

3.2 Introduction to the South African Food System

"In Eastern Europe and the countries that used to belong to the Soviet Union, even after the collapse of their planning systems there has been persistent and widespread puzzlement that any society could aspire to prosperity without an overall plan. About two years after the breakup of the Soviet Union I was in discussion with a senior Russian official whose job it was to direct the production of bread in St. Petersburg. "Please understand that we are keen to move towards a market system", he told me. "But we need to understand the fundamental details of how such a system works. Tell me, for example: who is in charge of the supply of bread to the population of London?" There was nothing naive about his question, because the answer ("nobody is in charge"), when one thinks carefully about it, is astonishingly hard to believe. Only in the industrialised West have we forgotten just how strange it is." (Seabright 2010, 10)

The process by which food produced in either local or distant locations reaches consumers in cities is complex, but also largely opaque. The previous Chapter (Chapter 2) asked the question of where the responsibility for ensuring that the food system meets the need of Cape Town's residents. In this section a range of stakeholders within the Municipality and beyond were identified. The critical challenge for the City is how to ensure that a system in which, as characterised by Seabright (2010), "nobody is in charge" works. It is acknowledged that a lack of overall control is characteristic of any market situation, however it is argued that the food system is in some ways unique. Although food is a private good, it is also a Constitutional right. Despite this Right, there

is no clear set of roles and responsibilities within the State to ensure this right or tools to monitor or evaluate the food system. In the post-apartheid era, the systems and structures that governed and monitored the food system have been eroded, making the system harder to govern.

In order to address this challenge it is essential to understand the dimensions of the current food system, and to understand what is knowable and what is unknowable within this system. Many of previous engagements to address food insecurity have focused exclusively on addressing household poverty and have identified unemployment as a key determinant of food insecurity. However, recent work by BFAP has found that for a household to consume a “balanced daily food plate” of food, it would have to have an income of around R5 630 (BFAP 2012, 49). Using this as a baseline, it is clear that even employed households would struggle to achieve a balanced diet. According to Census 2011, 61.5% of Cape Town’s households earn less than R6 400 per month. This has led to the assertion that the problem of food insecurity needs to be understood as being caused in part by problems in the food system, which make healthy foods unaffordable for the majority of the population.

This poses the question of what kind of food system exists and what kind of food system is desirable. The assertion of this report is that the food system should have a stronger focus on the food security outcomes of the system. This report argues, in accordance with the work of Kirsten (2012) on food price responses, that government responses have been too focused on “second class” interventions that aim to mitigate the impacts of food system problems. It calls for a wider suite of engagements that address both household and community scale mitigation as well as making food system interventions.

Chapter 3-8 therefore present an overview of the current food system in South Africa, with a particular focus on Cape Town. Data on the food system has tended to cluster at two points, farm production and consumption at the household level. However, farm gate prices are not sufficient to understand consumer pricing, as the difference between PPI and CPI trends indicates (Figure 3.1). It is estimated, for example, that just 25% of the final cost of a loaf of bread derives from the wheat flour that is the base ingredient (NAMC 2012). Additionally, the prices that farmers are paid for their produce is determined not by the cost of production, but by the prices set by the market. It is therefore essential to view the food system as a whole to understand the determinants of availability, accessibility, adequacy, acceptability and agency that encompass food security.

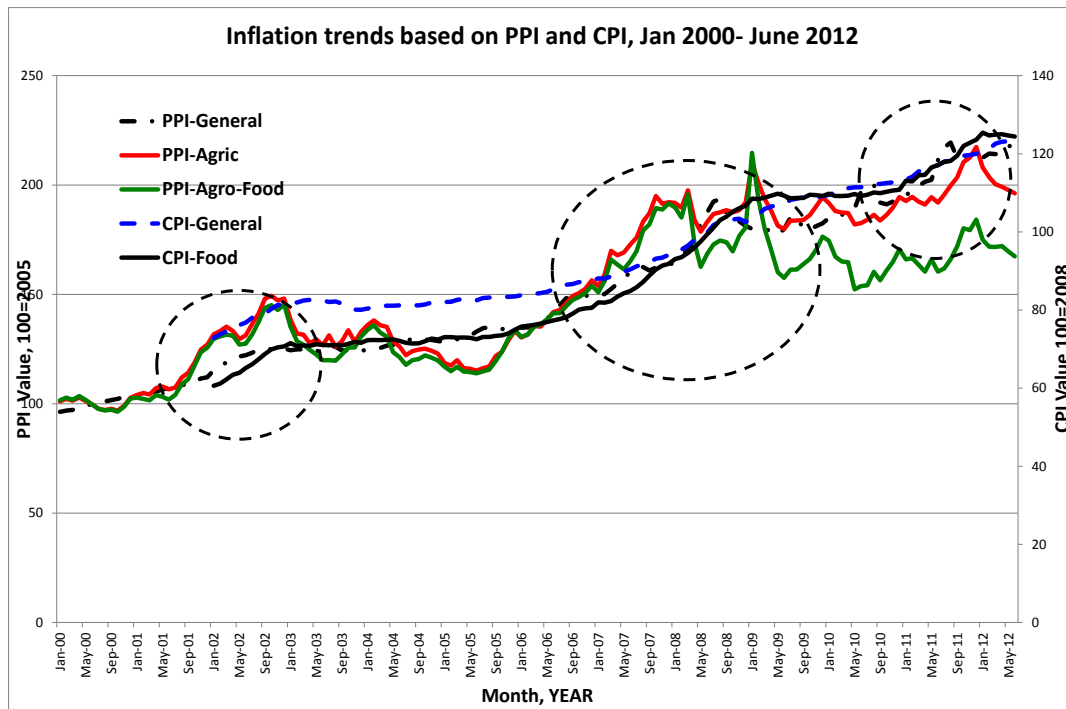


Figure 3.1 CPI and PPI inflation trend Jan 2000 to May 2012 (Source: Jacobs 2013)

As explained in the Conceptual Framework (Section 1.3) the food system is understood to encompass production, processing and packaging, distribution and retail, and consumption, as well as waste. Although these components are presented as independent in the report, it is important to recognize that they are all part of the same over-arching system and have experienced similar trends.

One of the most notable trends, which will be discussed further in the individual sub-sections is the increased consolidation of the food system along the value chain in the post-apartheid era. By way of example, Box 3.1 provides an overview of a few key products.

Box 3.1: Consolidation in the Food System (Source: Cutts & Kirsten 2006, DAFF 2011, 2012)

Maize: There are approximately 9000 farmers (Smallholder and commercial) nationally. 85% of the grain storage capacity is held by 22 silo owners. 73% of market share is held by four companies

Wheat: There are 5000 to 6000 farmers. 4 main wheat millers control 87% of the market. Most of the major mills are integrated with plant bakers.

Milk: There are approximately 5000 dairy famers. There are 13 milk buyers, of which the 4 largest process around 65% of total commercial milk delivered to dairies. Of these four, two are also price leaders.

Broiler chickens: Two main producers produce 50% of broiler meat in the country.

Eggs: The three main companies produce 51% of all eggs. The largest, NuLaid, produces 32%

Stephen Greenberg (2010, 11) provides an overview of the concentration of the agro-processing sector:

“About 70% of agricultural output is used as intermediate products in manufacturing and related sectors (Louw et al. 2007:4). There were more than 2 200 companies involved in food and beverage manufacturing in 2003 (Vermeulen et al. 2008:200). But the food and food products sector is one of the most concentrated sectors in South African manufacturing. Between 1975 and 1996, the contribution to output of the top 5% of firms increased from 65% to 75%. The top 15% of firms had 90% of output in 1996 (Louw et al. 2007:14). A few large corporations dominate the South African food industry: National Brands, Pioneer Foods, Tiger Brands, and Nestle SA. This concentration is a historical consequence of restricted licensing procedures and – in sectors not under the control of the [former] boards – technical barriers to entry that limited the number of processors under the segregationist apartheid era (Mather 2005). Nevertheless, this concentration varies from commodity to commodity. In the 1990s, concentration was the highest in breakfast foods, starches and starch products; dairy products; and coffee, coffee substitutes and tea, where the top four companies held over 80% of the market share. On the other end of the spectrum, the top four companies in the meat, fish, fruit, vegetables, oils and fats categories had less than 20% market share (Mather 2005:611).”

There is further concentration in the food retail sector. The supermarket sector is an increasingly important actor in the food system, with its share of the food retail market increasing from 62% to 68% from 2008 to 2010 (Planting 2010, 34). Four major companies account for 97% of sales within the South African formal food retail sector. Shoprite Checkers currently controls around 38% of the formal food retail market, followed by Pick n Pay at around 31%, Spar with around 20% and Woolworths with around 8% (GAIN Report 2012). In addition to their dominance of the retail sector, the supermarkets are increasingly influencing production and processing downstream through vertical integration (Beinabe & Vermeulen 2008, Louw et al 2008). These processes guarantee volume and quality for the supermarkets, but concerns have been raised by academics and civil society groups about the impact of this concentration on the agricultural sector and consumer agency (see for example van der Heijden 2010, Neven et al 2009, Kirsten & Abdurahman 2009, van der Heijden & Vink 2013). It is worth noting that, based on engagements with stakeholders for the production of this report; there are differences between the major retailers in terms of product profiles, sourcing, distribution and operational strategies.

This consolidation of the food system has made the food system less traceable as large companies are unwilling to share their data. Commenting on this challenge, Isabel Schmidt from StatsSA has noted:

“Statistics South Africa has noted that the abolition of marketing and control boards in the food sector has resulted in significant information gaps in relation to food systems in South Africa. Furthermore the activities of the Competition Commission is increasingly making non-regulated associations and large scale conglomerates unwilling to voluntarily provide information about their activities to the Agricultural marketing board and other state entities.” (Schmidt, StatsSA, Pers. Comm. 2013)

Given the changes in the food system, it is no longer (if it ever truly were) possible to speak of a “local food system”. It is therefore necessary to view the information presented on the Cape Town Food System in the context of the wider national and international food systems.

3.3 The South African Agricultural System

Reliability: The deregulation of the agricultural sector and liberalization of trade policies post-apartheid have transformed South Africa's agricultural landscape. Although the intention was that this would create a more equitable and reliable agricultural sector, the findings of this section suggest that the recent consolidation of the farming sector has failed to produce the conditions of reliability that would ensure food security for low-income residents of Cape Town. The consolidation of the agricultural sector, high barriers to entry, concentration of ownership, vertical integration and anti-competitive behaviour in the pricing of food (Competition Commission 2008), have all failed to enhance the reliability of food pricing (as is discussed further in Section 3.10).

The reliability of nutritional quality and balance is not directly affected by the state of agricultural production itself. The NDP has however, called for a realignment of agricultural production to have a greater focus on fruit and vegetable production in order to better align the sector to nutritional intake guidelines. As is evident from this section's findings, the system has historically focused on grains and horticultural crops for export and not had an explicit focus on the nutritional quality and balance of goods produced. Additionally, as Chapter 6 indicates, the increasingly open conditions of trade, have led not only to increased export of horticultural products, but a massive increase in the import of highly processed foods, which compromise the reliability of the food system in terms of nutritional quality and balance.

The reliability of the agricultural sector in terms of providing safe food is an area of increasing concern, particularly with reference to water safety. This has been highlighted by the WWF (Oberholster & Botha 2014) and Water Research Commission (Britz & Stigge ed, 2012). Although this report does not directly engage the issue of GMOs, it is worth noting that there is increasing concern among citizens about the safety of consumption of foods containing GMOs

Sustainability:

The changing agricultural sector has been argued to have a number of sustainability challenges associated with it. South Africa's agricultural resource base is vulnerable on a variety of fronts. Climate changes are already impacting on production with variable rainfall and other temperature and general climatic changes driving changes. When these challenges intersect with a vulnerable resource base, generally poor soils and both water scarcity and poor water management, these challenges are compounded, the vulnerability is compounded. These challenges and a more globalised market have prompted responses from farmers that while providing short-term relief, could increase vulnerability.

Poor soils and erratic weather has resulted in a heavy reliance on external fertilizers and pesticides. These items are often linked to the global petrochemical market and as such, the rapid increases in these markets, particularly those linked to oil price increases, reverberate through the food system, ultimately resulting in increased food prices.

The agricultural economy associated with these changes is one of high risk. At a large scale, success is often driven by changes in the approach to farming. One such change is to consolidate farm holdings and to mechanize. These changes have resulted in a significant decline in farmers and an even more dramatic decline in agricultural

employment. This decline in employment has resulted in a dismantling of the rural economy, one that is today propped up by social grants and remittances. Driven by these challenges, the current agricultural sector has been argued to have economic sustainability challenges. The consolidation of the farming sector is in part due to the extreme economic pressure facing small and medium scale farmers. Farmers are increasingly price takers and struggle to stay economically viable. In addition, the recent well-documented failures of DAFF to compensate farmers for losses due to extreme weather events, and ongoing uncertainties regarding land reform have placed farmers in a position of financial uncertainty. This lack of economic sustainability has led to the highly consolidated agricultural sector that is dominated by supermarkets and large processors.

Transparency

The agricultural sector as a whole has relatively good transparency. The Department of Agriculture, Forestry and Fisheries' Agricultural Abstracts and StatsSA's Agricultural Censuses provide adequate information to generate a good picture of national scale production. As will be discussed in subsequent sections, it is difficult to disaggregate these data sets at a finer spatial resolution and some concerns have been raised about the reliability of the data.

Role of City

Although profoundly impacted by national agricultural trends, there is little direct role for the City in governing of this aspect of the food system. However, the City's ability to understand what food is produced within the City boundaries and its ability to base planning decisions on the viability of agricultural land would be enhanced by the data collected and collated for the Agricultural Census being better spatially aligned to recognized City boundaries. The Agricultural Census uses Magisterial Districts as its finest grained spatial disaggregation. This does not align to any City governance processes or to the Agricultural Areas described in the Agricultural Land Review. The City could therefore request to StatsSA that future Agricultural Censuses use boundaries more appropriate to City functions. The City could further request that the Western Cape Department of Agriculture conduct more frequent reviews of these areas enhancing the reliability and utility of these data.

3.3.1 Agricultural Policy

For most of the 20th century, South African agricultural policy was dualistic in nature, a dualism supported by legislation such as the 1913 and 1936 Land Acts, the 1937 Agricultural Marketing Act, the 1939 Agricultural Co-operative's Act and the 1970 Act on the Subdivision of Agricultural Land (Aihoon et al 2009). This dualism was aggressively asserted in the 1984 White Paper on Agricultural Policy that identified commercial farming as a vehicle to reach "self-sufficiency in respect of food, fibre and beverages and the supply of raw materials to local industries at reasonable prices". A key means of controlling prices was the Agricultural Marketing Act (Act 59 of 1968 as amended), which allowed for marketing control of commodities enforcing strict price control through 23 marketing schemes (Kirsten & Van Zyl 1996).

Beginning in the mid-1980s, international political and economic pressures, under the auspices of the WTO (World Trade Organisation), precipitated a deregulation of the agricultural sector in South Africa. The macroeconomic trend of market liberalisation eroded state control over the agricultural sector. In line with this, the General Agreement on Tariffs and Trade (GATT) negotiations, which intended to replace quantitative control on external trade with tariffs, and the appointment of the

Committee of Inquiry into the Marketing Act, were key drivers of agricultural market deregulation in the early 1990s (Kirsten & Van Zyl 1996).

The Marketing of Agricultural Products Act (Act No. 47 of 1996) and the 2001 Strategic Plan for Agriculture paved the way for the development of liberalised and “open” (competitive) agricultural markets aimed primarily at greater foreign trade in agricultural products. The 2001 Strategic Plan for Agriculture (DoA 2001) is arguably the most far-reaching adoption of a deregulated and liberalised agricultural sector in South Africa, envisioning and calling for “market forces” to direct business activity and resource allocation

After deregulation, the prices of field crops adjusted downwards to world market levels. This resulted in commercial farmers shifting to minimum interventions production systems. This was accompanied by an on-farm shift in field crop production to better quality soils and a second shift away from more marginal areas. The result of this has been a simultaneous consolidation of production in large commercial (industrial) farms and an increase in the number of smaller commercial farms, leading to an overall increase in average farm size (Vink and van Rooyen 2009).

The concentration of the food system and the consolidation that has taken place was driven by the deregulation that occurred after 1994. The dismantling of trade barriers and protection, following more liberalized trade policies, was intended to facilitate a more equal agricultural landscape. In hindsight, this has not happened. As the Competition Commission states:

It is now clear that liberalisation has not necessarily created competitive markets but in many areas it appears as if state intervention has been supplanted by private regulation in the form of anti-competitive conduct. In addition, agricultural value chains remain characterised by high levels of concentration, as well as vertical integration by a few major firms. Overall, the picture is one of high levels of concentration in the manufacture and supply of inputs such as fertilizer, and high levels of concentration also in processing, packaging and retail. The actual farming is relatively unconcentrated, meaning farmers are price takers on both sides (Competition Commission 2008, 2)

The far-reaching liberalisation has not yielded the desired policy outcomes, in that the agricultural value chain appears to be still largely characterised by anti-competitive outcomes, including high concentration, high barriers to entry, concentration of ownership, vertical integration, as well as anti-competitive behaviour in the pricing of food. These have serious consequences for the welfare of the poorest households given the importance of key staple foodstuffs in South Africa. Further, the highly concentrated and vertically integrated market structures of the industry may ultimately hinder constructive responses to a more developmental state approach including increasing participation in the sector (Competition Commission 2008, 4)

The impact of liberalisation and the role played by international agreements such as GATT is particularly relevant to agriculture in the Western Cape. Before discussing some of the national trends, the Western Cape exposure to these open markets will be highlighted in an attempt to provide a sense of the potential consequences to the region brought on as a result of being subject to agreements negotiated at an international scale.

Export orientation means a significant level of vulnerability for farmers as a result of specific international agricultural practice stipulations. One example is the Producer Support Estimate (PSE) agreement. The producer support estimate (PSE) (formerly producer subsidy equivalent) is an indicator of the annual monetary value of gross transfers from consumers and taxpayers to agricultural producers, measured at the farm gate level:

The PSE in Switzerland is 68%, 58% in Japan, 33% in the European Union and 16% in the USA. In the case of Australia and South Africa it is 5% and for New Zealand it is 2%. In practice this means that a farmer in Switzerland receives 68% of his/her income in some form of government support (DAFF-WC 2010: 17).

For South African farmers and the entire agricultural sector, these onerous WTO driven agreements take place at bilateral discussions far removed from an area where any farmer has direct input or voice. Efforts to address the imbalances present within international agriculture trade regimes are being debated in the ongoing Doha Round of discussions.

One of the stated objectives of the Doha Round of the WTO negotiations is to tilt this playing field in favour of developing countries. However, what is happening in practice is that for each gain on the tariff front more stringent sanitary and phyto-sanitary measures are being introduced ... In other words, standards prescribed by some of the major retailers in developed countries ... are enforced to 'prevent' market access. For Western Cape farmers compliance with such standards are ... often experienced as an insurmountable barrier to entry by new entrants to agriculture. (DAFF-WC 2010, 17)

3.3.2 Changing Character of South African Food Production

Agricultural land in South Africa covers 100 665 792 hectares and comprises 82.3% of all land within the country (Table 3.2). However, only 13,7 % of the total land is deemed suitably for arable with only 3% receiving sufficient rainfall to be considered high potential agricultural land. While irrigation can be used in other areas, this comes at a high cost. Water as a resource is also increasingly under pressure from other uses, including domestic consumption and industry (particularly mining). The relationship between rainfall and arable land is a key determinant in the nature and scale of agriculture in South Africa.

Table 3.2: Agricultural Land Use in South Africa

	Total area	Farmland	Farmland as % of total area	Potentially arable land	Potentially arable land as % of total area	Grazing land	Grazing land as % of total area	Nature cons as % of total area	Forestry as % of total area	Other land as % of total area
	ha ('000)		%	ha ('000)	%	ha ('000)	%	%	%	%
Total agriculture in SA	122 320	100 665.8	82.3	16737,7	13.7	83928,1	68.6	9.6	1.2	6.9

Source: DAFF Agricultural Abstract 2013: 6

Over the last twenty years there has been a marked decline in the number of commercial farming units in South Africa (Fig 3.2). Between 1990 and 2008, there was a 76% decline in the number of farmers in the country (Vink and van Rooyen 2009). While the number of farming units has declined, agricultural productivity has not. What is taking place is a consolidation of the agricultural sector, with 'mega-farmers' (generally industrial farms) emerging (Table 3.3 and Box 3.1). Agriculture has become more industrialised and consolidated, so much so that one of the leading four food

retailers recently stated that they procure 80 percent of all their fresh produce from just 10 agribusinesses (Pienaar 2011).

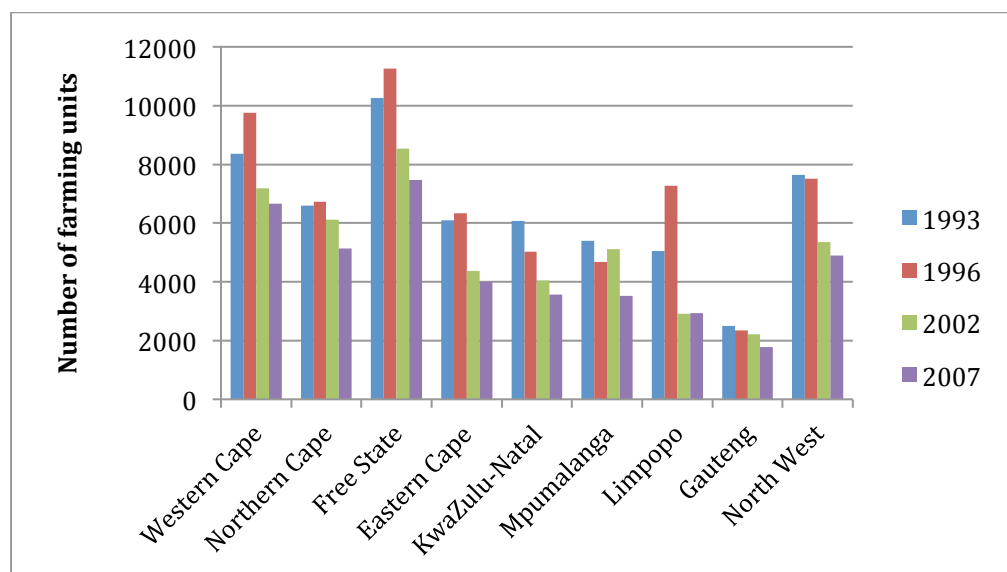


Figure 3.2: Decline in net commercial farming units since 1993 (Source: DAFF, Agricultural Abstract 2013).

Production unit	Turnover	Ownership and management	Number	Binding constraint	Support required
Large commercial on private property	>R2 million	Family owned but incorporated multiple farms Rent in land – professional Management	± 5 400	Market size Equity capital	Export market access Financial market Innovation
Medium commercial on private property	R300 000 to R2m	Family owned, could be incorporated. Some renting in of land – family management	17 000	Land capital management	Mortgage capital for land access Management training
Small commercial on private property	< R300 000	Family owned, generally part time. Some lifestyle farming (game ranches, weekend farms)	24 000	Management Time	
Commercial in communal areas	> R300 000	Communal ownership Development projects Private ownership	-	Capital management infrastructure	Grants for land access Property rights Comprehensive farmer support Credit Physical

					Infrastructure
'Emerging' commercial in communal areas	< R300 000	>20 hectares Communal ownership Small farmers in development project Private ownership	35 000	Land (property rights) Capital labour management Employment opportunities	Grants for land access Property rights Comprehensive farmer support Physical infrastructure Institutional infrastructure
Subsistence farmer in communal areas Allotments Market gardens		<20 hectares Communal ownership Private ownership Little formal market Participation	1.256m	Employment opportunities	Social welfare Transfers

Source: Vink and van Rooyen 2009: 35

These changes within the agricultural sector are connected to trade liberalization, market deregulation, changing input costs, changing labour costs and regulation, conversion to feed-lotting within the meat sector and land reform. As farms have consolidated and industrialised, many farmers have shifted to greater mechanisation reducing the number of employees. From the early 1960s, there was long-term decline in farm labour accompanying the mechanisation of dryland production. In the period after 1994, farm employment stabilised for a while as South Africa's commercial farmers were able once more to compete in international markets and exports of labour-intensive fruit and wines started. However, after 2002 it continued its downward trend (Figure 3.3) (BFAP 2012). The 2013 Agricultural Abstract shows that between 1975 and 2011 a total of 772 500 jobs were lost in commercial agriculture with 427 000 of these lost since 2006 (DAFF, 2013).

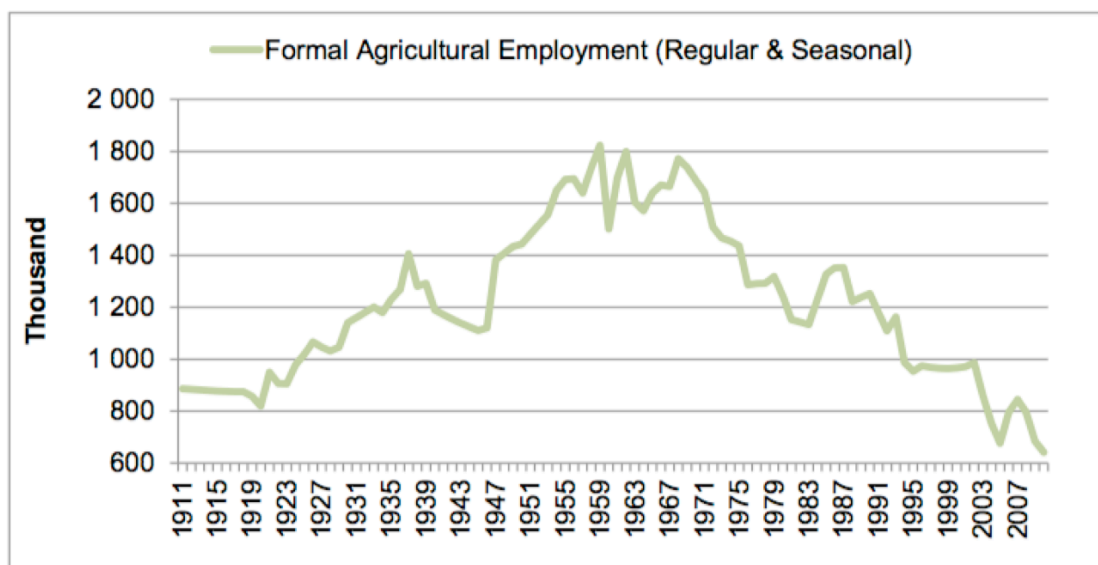


Figure 3.3 Employment in Commercial Agriculture, 1910-2010 (Source: BFAP 2012)

Many commercial farmers have shifted from using permanent workers to seasonal workers, who no longer live on farms referred to as a trend towards casualization. There are two main reasons for this. First, there is the uncertain investment climate created by speculation around property rights. Here the Extension of Security of Tenure Act (No 62 of 1997) and other related legislation have supposedly played the major role. Second, labour legislation provided the motivation for farmers to increasingly use the services of labour brokers to avoid the problem of directly employing large numbers of workers for short periods of time. Despite these changes, agriculture remains a major source of employment nationally, contributing some 8-9% of all employment (BFAP 2013). Large-scale agriculture is often perceived to be more productive, generating good returns and better remuneration (Table 3.4).

Table 3.4: Farming statistics by income group between 2002 – 2005

Income (R per year)	Number of farms	Cumulative (%)	Wage per employee (R per year)	Gross farm income (R'000 per year)	Cumulative (%)
> 10 000 000	673	1.5	10 503	17 850 383	33.5
4 000 000 – 9 999 999	1 657	5.1	7 758	10 330 484	52.8
2 000 000 – 3 999 999	3 041	11.7	4 872	5 056 986	62.3
1 000 000 – 1 999 999	5 214	23.1	643	7 351 291	76.1
300 000 – 999 999	11 805	48.9	4 729	5 335 646	86.1
< 300 000	23 428	100	4 266	7 404 322	100
Total	45 818		6 298	53 329 052	

Source: Vink and van Rooyen 2009: 32

According to Metelerkamp (2011) job shedding is often a key strategy in mediating price increases in non-labour input costs (themselves often linked to the embedded nature of inputs and the petrochemical industry). An increase in fuel prices, for example, generally translates into an increase in the cost of other inputs (not just the transportation of the inputs but many are derived from oil industry by-products). Contrary to the generally held belief that fuel is a key driver in food prices, other inputs (which may also increase due to fuel price fluctuations) have increased more rapidly in price. This means that other factors are impacting on food price increases and managing or seeking to mitigate the impact of increases in the fuel price alone, will not suffice.

When year on year increases in the price of inputs are measured in percentage terms, they are significantly higher than inflation with the average increase per year being just less than 15% year on year for the period between 2007 and 2012 (DAFF, 2013). Within this period, three inputs, packaging materials, dips and sprays and fuel reflected an annual price increase of just under 20% each. Inflationary changes in certain inputs are also linked to food system changes. Packaging, cleaning, portioning and even preliminary processes are increasingly being delegated from retailers to producers. This means increased costs for items such as packaging (often without the benefit of bulk buying). The increased demand for stock and poultry feeds indicates a clear shift to more industrialised animal production where feed is being supplemented, driving demand for these inputs. A further driver of demand could be linked to the diversion of such products to alternative sources such as biofuels. The increase in stock and poultry feed is symptomatic of a dietary transition, driven in the main by urbanisation.

The production of field crops is made all the more complex by the variety of financial mechanisms by which farmers can set prices, take out a variety of “insurances” (future or options contracts) against these prices and, in so doing, cover risk. Many field crops are also traded on the commodity derivatives market, the South African Futures

Exchange or SAFEX, now a subsidiary of the Johannesburg Stock Exchange. These different market mechanisms play a direct role in price setting and are often subject to international price fluctuations that translate into net price changes for the consumer.

3.3.3 Food Production Trends

Fieldcrops

Field crops are critical to the South African agricultural landscape. These crops include the key rain-fed crops from which key staple foods are derived: maize and bread (from wheat). Soya has also seen a significant increase in production, often at the expense of more traditional field crops. The general trend is a reduction in the net areas planted for most food-based field crops. For example, the area planted under sorghum declined from 219 000 ha in 1980 to 49 000 ha in 2012 and groundnuts from 306 000 ha in 1980 to 45 000 ha in 2012. While there are many different reasons for this, these shifts reflect a significant trend. This does not mean that less land is being farmed (a trend only evident in the Western Cape), but rather that staple crops are being replaced by other crops, generally oil seed crops, with the main replacement crop being soya. Should the soya be diverted to fuel (soybean fuel accounts for about half of US biodiesel feedstock (US EIA, 2013)) this would mean a diversion away from land used for food production. The other two crops seeing increased hectares planted are canola and sunflowers.

The Western Cape is the key wheat-growing region in South Africa, accounting for over 35% of all wheat produced (averaged over an 18 year period) (Figure 3.4). The extent of wheat cultivation in other regions is influenced by the overall market price for field crops. If high maize prices are anticipated, less wheat is grown and vice-versa. As with many field crops, viability is determined by the ability of the producers to get good prices at the mills where the produced crop is beneficiated into the consumable product. Maize production takes place predominantly in the so-called the “maize quadrangle” in the North West and the north-western Free State – an area which produces 75% of the country’s maize (van Niekerk 2013: 61). Less than 1% of the country’s maize is grown the Western Cape (Figure 3.5). The dramatic increase in soya production over the last decade is concentrated primarily in Mpumalanga and, to a lesser extent, the Free State (Figure 3.6).

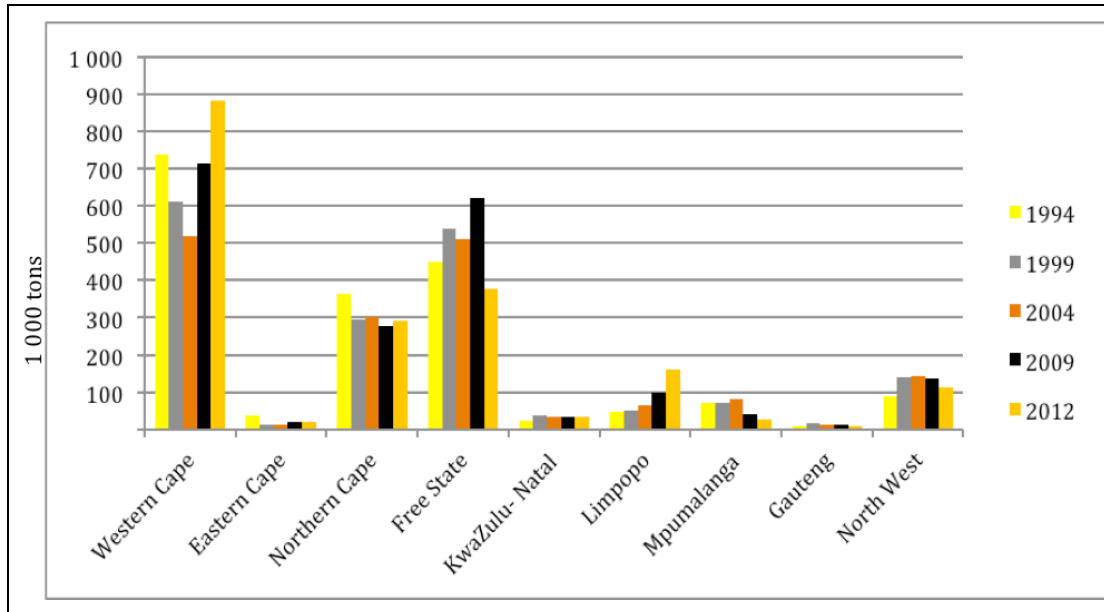


Figure 3.4 Wheat production per region since 1994 by 1 000 tons (Source: DAFF Agricultural Abstract, 2013: 12)

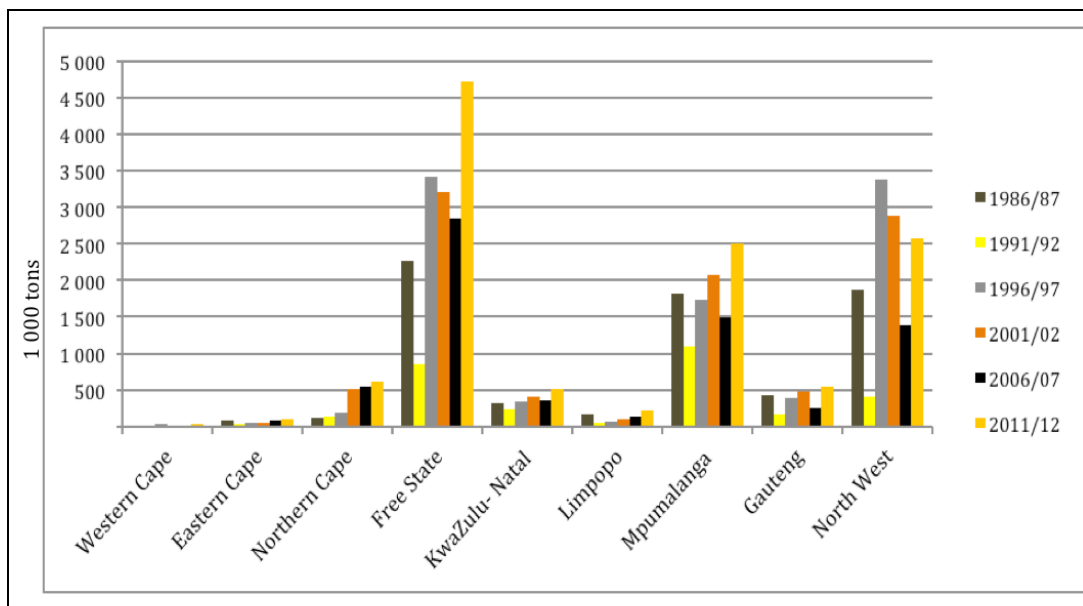


Figure 3.5 Maize production distribution measured by 1 000 tons (Source: DAFF Agricultural Abstract, 2013: 7)

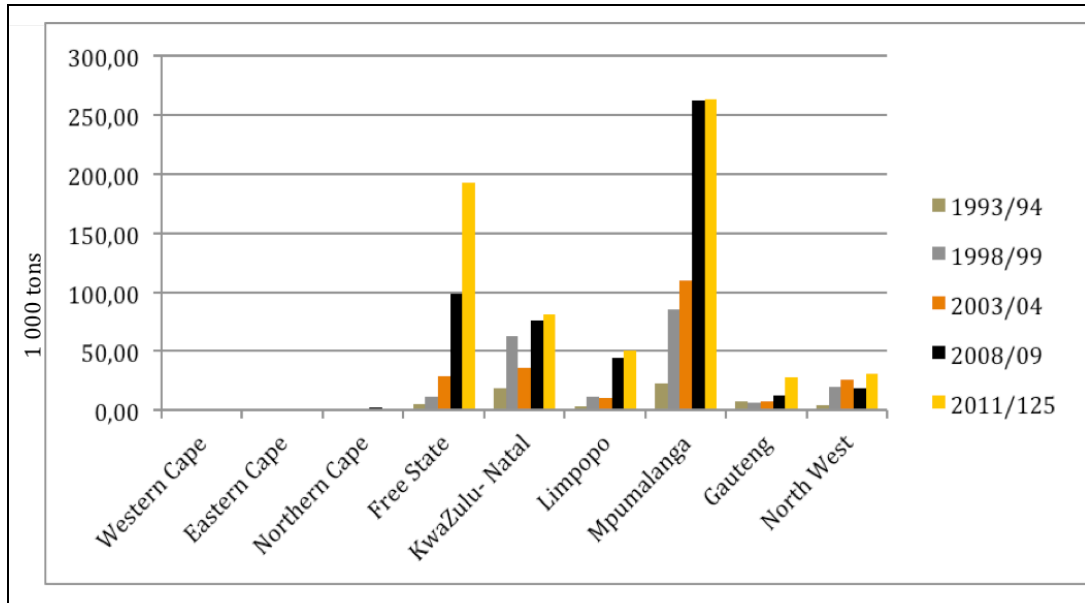


Figure 3.6 Soya production trends in 1 000t (Source: DAFF Agricultural Abstract, 2013: 19)

Livestock

Poultry is the key source of meat protein for most South Africans. Per capita consumption of chicken meat is 36.16kg per annum (SAPA 2013: 11). The consumption of white meat (all poultry products) is reflected in the production figures for white meat which have seen a significant increase and an exponential trend line increase, reflecting a continual increase in tons produced (Figure 3.7). Between 2005 and 2008, broiler production increased by over 28%. Between 2009 and 2012, growth slowed considerably as a result of the downswing in the economy, reduced demand and increased imports. National chicken production, including subsistence farming and depleted breeders in the broiler and egg industries, was 1.488 million tons in 2012.

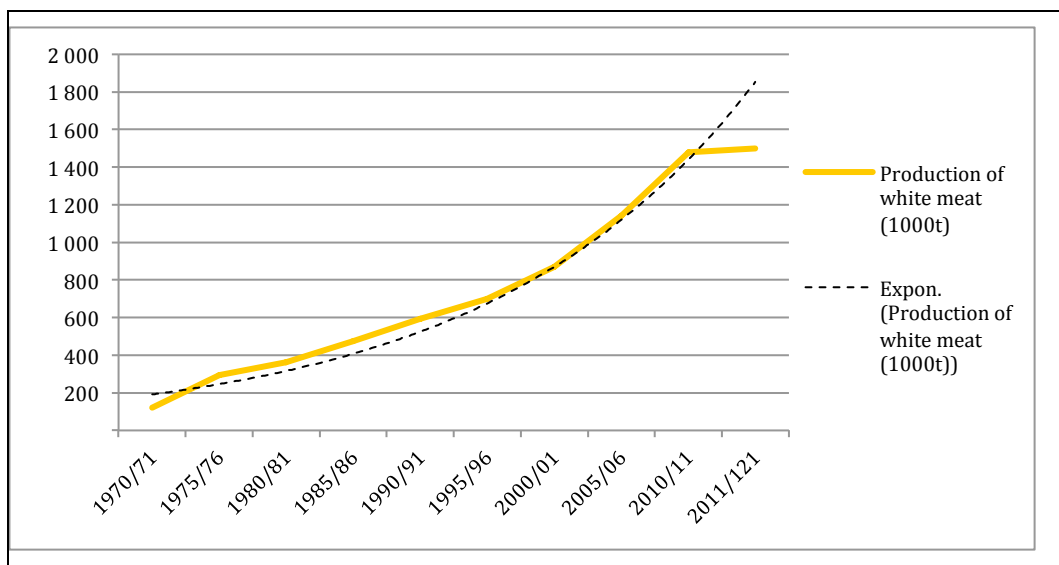


Figure 3.7 White meat production with trend line (Source: DAFF Agricultural Abstract, 2013)

Annual poultry imports amounted to 404 163 tons in 2012, a 15.4% increase over 2011. The value of total poultry imports increased by 29.4% in 2012, totalling R3.562 billion. Chicken meat accounted for 91.8% of all poultry imports by volume. The primary source of imports (over 70%) is Brazil. The Trade and Industry Minister recently altered the trade import tariffs in order to stem the flow of cheap imported poultry products into the country.

The poultry industry is linked directly to field crop production as field crops are the key feed in the chicken industry. A total of 3.576 million tons of feed were used in broiler rearing in 2012. The projected figure for 2013 is a total of 3.749 million tons, an increase of 4.8%. Adding the broiler breeders' feed usage, the total broiler feed usage for 2013 should reach 4.283 million tons, an increase of 4.5% (SAPA 2013: 3).

The beef herd in South African has remained fairly constant between 1970 and the current figure of just over 8 million head (Figure 3.8). What has changed is the mix in terms of calves, cows, heifers and bulls. This is a direct result of the classification or grading of meat in South Africa. Grading is done on the basis of age and higher premiums are obtained for younger animals. Feedlot farming has experienced rapid growth and been subject to significant integration from feed to the feedlots, to distribution and processing. Regardless of the changes in herd composition, the year on year slaughtering trends reflect a slight increase over time. In 2012, 2.9 million head of cattle were slaughtered. Pig numbers increased in the mid to late 1980s, levelling off in the early 1990s and numbers have remained relatively constant since then. Over 2,5 million pigs were slaughtered in 2012 for commercial markets or own consumption.

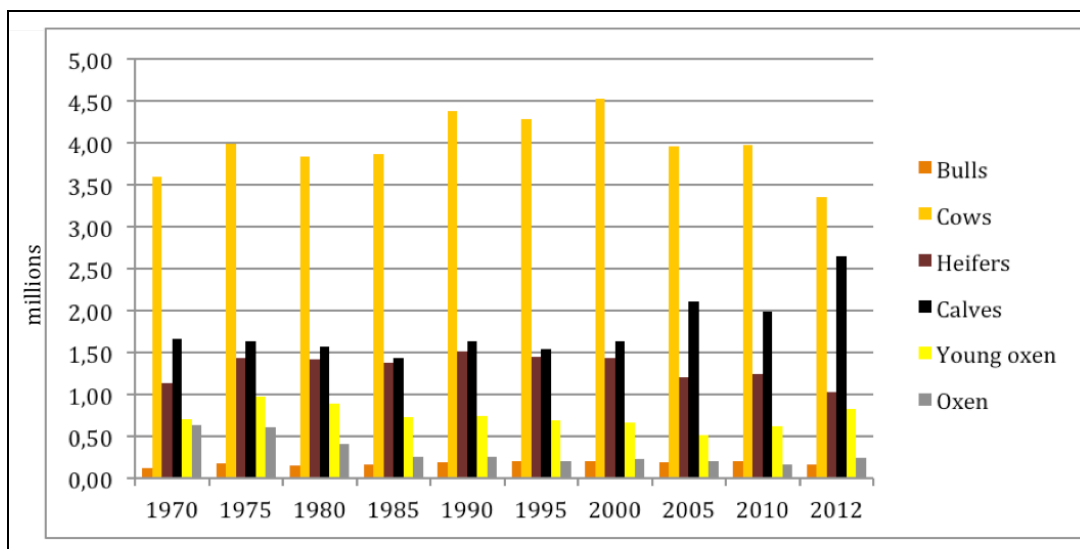


Figure 3.8 Composition of cattle herd in millions (Source: DAFF Agricultural Abstract, 2013)

Overall, there has been a significant shift in the eating habits of South African consumers towards white and away from red meat (Figure 3.9).

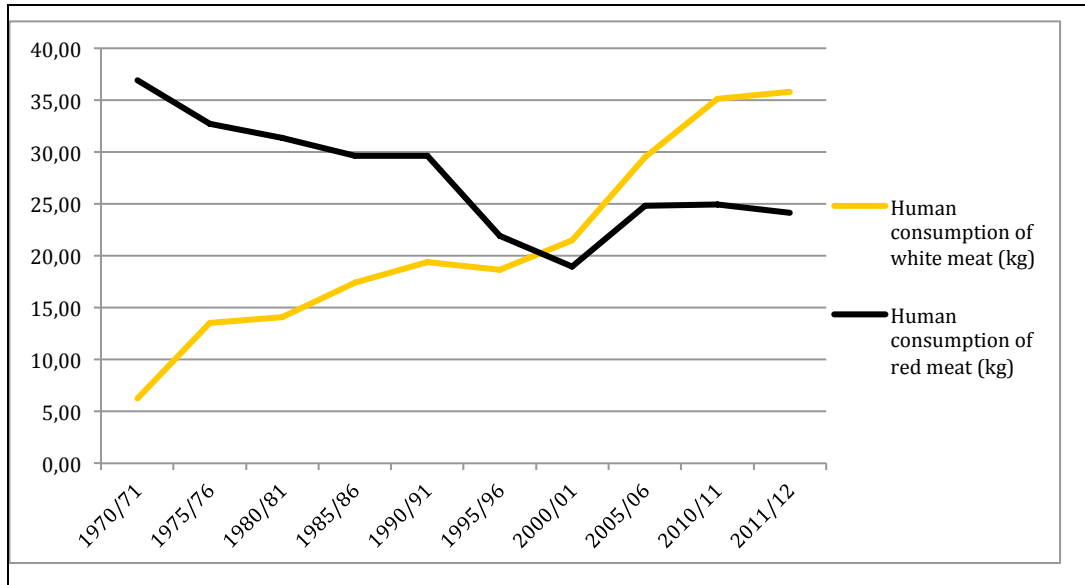


Figure 3.9 Consumption comparison white and red meat (Source: DAFF Agricultural Abstract, 2013: 69)

Horticulture

Of twelve major vegetables grown in South Africa, only potato production has shown major increases in the last two decades (Figure 3.10). Potatoes are produced all over South Africa in different climatic regions ensuring a continuous supply of potatoes through the year. The major potato producing provinces include Free State (30%), Limpopo (18%), Western Cape (19%) and Mpumalanga (10%). The rapid expansion in potato production reflects changing market and consumer demand.

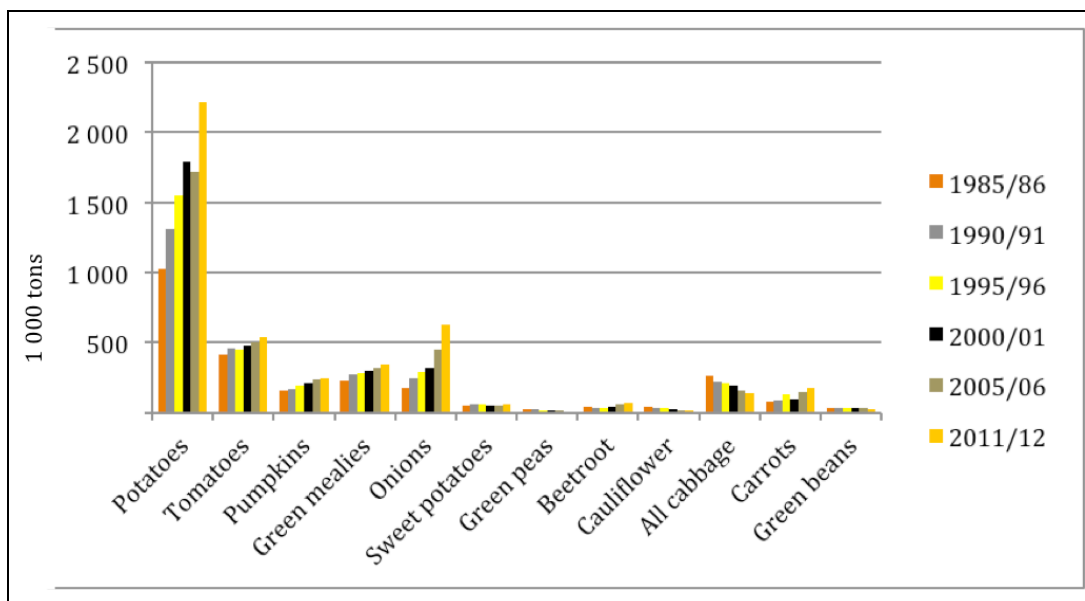


Figure 3.10 Vegetable production (1000t) (Source: DAFF Agricultural Abstract, 2013)

The opening of export markets after the end of apartheid led to a significant expansion of the global market for South African fruit. The export-driven expansion of the fruit industry was particularly significant for the production of table grapes and, especially, wine grapes for the wine industry (Table 3.10). The significant increase in the grape and wine export market is important for the financial viability of agriculture and agro-processing, but the role of this sector in food security is less clear. In addition to grapes, there has been a significant export-driven increase in apple production which has almost doubled since 1985.

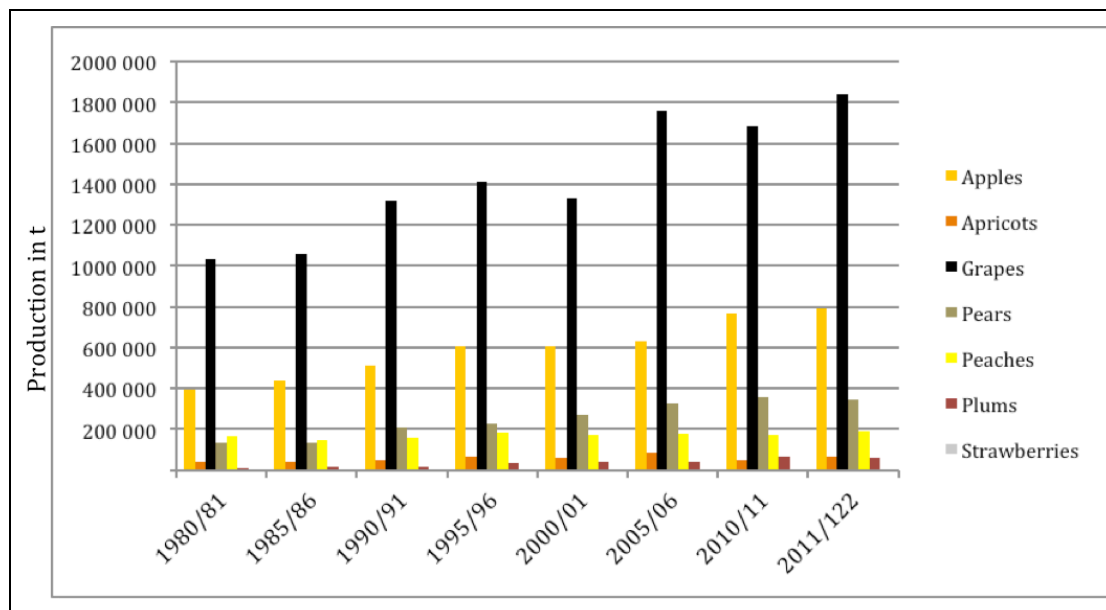


Figure 3.11 Key horticulture fruit crops (total production in t) (Source: DAFF Agricultural Abstract, 2013)

Fisheries

South Africa's fisheries resources reflect a general trend of deteriorating resource status with near-shore resources more accessible and likely to be overexploited than resources farther offshore. This has implications for artisanal and subsistence fishing (either with or without legal permits). When considering a selection of the generally consumed marine products, deep-water hake remain depleted but the status of this resource is improving, whereas shallow-water hake are considered optimal to abundant. The implementation of precautionary management approaches in the hake fishery in recent years has resulted in a faster-than-anticipated recovery of deep-water hake. Small pelagic resources are in optimal or abundant states and fishing pressure is optimal to light. Recruitment of all three species was relatively low in 2011 and the anchovy stock is at the lowest level observed during the past 15 years, but sardine and round herring stocks continue to increase.

Different markets exist for fish products. The canned and processed fish market engages in an open and internationally traded market where fish products caught in South African waters may be processed in South Africa but traded in South Africa or through international markets. Fresh fish or fish with low processing is also traded on the international market with fish often being caught in South African markets, prepared for export and then shipped to international destinations through highly effective and controlled supply chains.

Fish trade does however span the entire market spectrum often driven by seasonality. Fresh fish may be sold in formal retail outlets but also by “bakkie smouse” on the side of the road. These different markets do enable access to a valuable source of protein for many city residents.

Recently however, some of the challenges associated with the fisheries value chain were highlighted by the fact that retailers have argued that they have found the pricing of South African harvested fish products uncompetitive resorting to the importation of certain traditional South African fish species, such as snoek. This reflects an interesting tension in the fisheries value chain.

Not necessarily as a way to intervene in these challenges, the DAFF has started pay particular attention to aquaculture, arguing this to be an area of possible economic development.

At the time of drafting this report, significant changes are taking place within this sector of the food system where artisanal and small-scale fisher operations have been denied access to permits. The consequences of this to this industry, employment and access to this source of protein need immediate attention. The consequences of the current licensing process could have far-reaching and adverse consequences for a wide range of food system stakeholders.

3.4 Food Production in the Western Cape

Summary of Key Points

- The Western Cape's agricultural sector accounts for almost 21% of the country's agricultural production and 45% of the country's agricultural exports.
- The Province is a major contributor to national primary agricultural employment, and upstream and downstream employment.
- The export orientation of agriculture means that high levels of agricultural production do not necessarily translate into food security outcomes.

Connection to Conceptual Framework

Reliability

The Western Cape is the country's main producer of deciduous fruits and has a significant horticultural sector. As will be discussed in Chapter 6, the presence of local fruit and vegetable production is argued to have a moderating effect on the prices of these foods. The presence of local production therefore provides a degree of reliability in pricing. This is particularly the case for the low-value, heavy vegetables grown close to Cape Town, which provide the staple vegetables for low-income residents. These include cabbages, carrots, onions and butternut.

The presence of a viable horticultural sector in the province ensures that there is good reliability of nutritional quality. It cannot be assumed, however, that all food grown in the Province necessarily feeds into the Cape Town food system. However, the evidence presented in Chapter 6 indicates that even given leakage into other provinces and a substantial export focus, residents of the Western Cape have better access to lower priced fresh produce than residents of other provinces.

As in the rest of the country, there are growing concerns about the safety of food being produced in the Western Cape. There has been particular concern about the levels of faecal contamination of rivers which provide irrigation for fruit and vegetable farmers. Many of the most viable horticultural areas in the province are located near to urban areas, such as Cape Town, Stellenbosch and Paarl. The sanitation challenges experienced by growing urban areas therefore have a direct impact on potential long-term food security. The water quality problem has implications for food safety within the province, but issues a significant economic sustainability challenge for the agricultural sector, given its export orientation.

Sustainability

The agricultural sector faces a number of sustainability challenges, not least the challenge of climate change. The long-term projections indicate that most of the province will become drier, and experience a greater number of extreme weather

events. This will place significant stress of the deciduous fruit and viticulture sectors. The areas with less climate variability and fewer extreme events, and therefore providing some system resilience, are under significant pressure from urban expansion.

It is unclear whether the current export focus of the agricultural sector is economically sustainable. The EU is a major importer of produce from the Western Cape and has high safety standards. Concerns have been raised a number of times about the safety and quality of local crops. Most recently the EU banned the import of South African citrus, following a black spot outbreak. Concerns have also been raised about faecal contamination in the past. Furthermore, the extreme currency volatility currently experienced by South Africa, increases the economic vulnerability of the farming sector.

The transitions of the past 25 years within the regions agricultural sector have not been able to effectively address the social challenges. The revenues generated within the sector may be interpreted as success but these benefits have not accrued to all within the region. The changes within the sector have intersected to make farming communities more, rather than less vulnerable, The consolidation and attendant job shedding has resulted in less employment and higher numbers of seasonal workers. The complicated (yet necessary) labour requirements have resulted in farm workers being subject to exploitative labour practices where the increasing use of labour brokers has meant that farm workers have little voice, agency and recourse, increasing vulnerability.. Further legislation linked to the Extension of Security of Tenure Act (ESTA) has further served to increase vulnerability, driving both job shedding and increased evictions. This has resulted in farm workers leaving farm dwellings, often homes for generations, and moving into precarious housing situations in the regions towns, compounding vulnerability. The dismantling of the social structures that existed on farms and the new ways of living in towns has often been a traumatic shift that has not been without consequences.

The consequence of these challenges means that the agricultural community is one that is both vulnerable but also subject to high levels of volatility – as noted in recent labour unrest in the region.

Transparency

As at the national scale, there is relatively good transparency in the agricultural sector in the Western Cape.

Role of the City

As at the national scale, there is little direct role for Municipal government in the management of the provincial agricultural sector. There are however some aspects of Provincial government's agricultural policy that hinder the achievement of food security within Cape Town. The City can engage with the Provincial Department of Agriculture through PSO8 Working Group 4.

The first point is that the Provincial Department of Agriculture's documentation and orientation is to separate food security from agriculture more generally. Its only focus on food security is through the farmer support and development programme, agriculture in general is viewed purely as an economic activity, disconnected from food security. This effectively disconnects food security from the wider food system. Through its membership of PSO8 Working Group 4 the City should seek to embed more systemic thinking, which aligns more closely with the values articulated in the NDP.

The second point is that the purely economic, and largely export agriculture, driven orientation of agriculture in the Western Cape has led to a series of valuations of agricultural land which have enabled the encroachment of development onto horticultural land, which has been valued as less important than viticultural land. The marginalization of food security to social safety net status within the Department of Agriculture has undermined commercial agriculture's role in ensuring food security. This issue needs to be raised by the City, as poor urban consumers are dependent on the market for their food security, and it has been demonstrated that local horticultural production provides some measure of price stability for the City.

3.4.1 Food for Export

According to the Western Cape Department of Agriculture, there are approximately 11.5 million hectares under cultivation in the province. An estimated 1.85 million hectares are used for dryland agriculture, concentrated in two areas: along the West Coast and along the Southern Coast of the Province. The balance of the farmland is only suitable for veld grazing (DoA WC, 2010: 18). The most productive farming areas are concentrated in the South-Western part of the province; close to the city of Cape Town. This is also the area where most of the 349 000 hectares under irrigation (231 732 permanent and the balance temporary) can be found. One of the key contributors to the success of Western Cape agriculture (namely the low farm asset to debt ratio) is the product type and the income generated from these products. When the five key product types are measured; field crops, horticulture, animals, animal products and aquaculture and other products, the Western Cape contributes to over 20% of national agricultural production with the next closest region being the Free State at just over 15% (Figure 3.11)

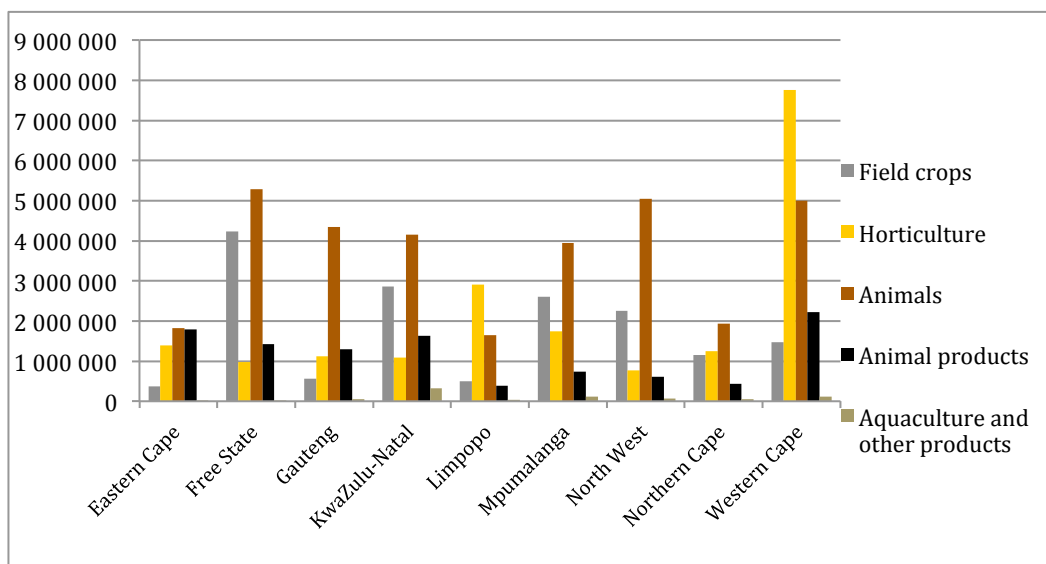


Figure 3.11 Gross farming income by main division in R'000 per province (Source: Census of Commercial Agriculture 2007 (StatsSA, 2009: 12))

Agriculture in the Western Cape has many unique features. For example the Western Cape produces little or no maize, a staple grain in the province. Additionally, the Province has a very strong export orientation accounting for 45% of the country's agricultural exports

(PGWC 2010, 68): The Western Cape 2010 Draft Strategic Plan identifies the “well-developed export-oriented agricultural sector, especially strong in viticulture, deciduous fruit, table grapes, grains and ostriches” as an area of comparative advantage (PGWC 2010, 9). Products for export pass through Cape Town but they are not consumed there,

“In 1997 the total value of agricultural exports (primary and processed products combined from the Western Cape was more than R4.1 bn increasing to more than R16.1bn at current prices by 2006 ... the wine industry of South Africa exported 21 million litres of wine in 1992, this volume increased to more than 312 million litres in 2007 [1321%] ... The export of spices have similarly increased by 705%, meat by 429%, vegetable fibres by 341% and fruit juices by 225%” (DoA WC 2010, 17).

These export patterns are driven by world demand for the kinds of produce grown. However, they are also influenced by infrastructural limitations and opportunities. The Provincial Department of Agriculture notes that the rail infrastructure is deteriorating, which forces farmers to use road transport which is more expensive than rail transport. This is compensated by the Cape Town harbour and the province’s airports, which make the “export driven industries more competitive” (DoA WC 2010, 19).

The importance of the region is evident in the fact that some of the major items produced play a significant role in the net agricultural production value for the entire country. Using 2011 figures, wheat is the third highest value earner of field crops, while deciduous fruit, citrus fruit and viticulture dominate the horticulture production in terms of value (Van Niekerk, 2013, 45).

The Bureau for Food and Agricultural Policy (BFAP) projects a decline in winter wheat in the short term (30 000ha) with a levelling out at this reduced level and constant production trend into the future. This is contrary to the summer wheat projections which reflect growth (BFAP, 2013: 34). When summer and winter wheat production is considered collectively, two key trends are evident: firstly, increases in Barley production, primarily for malt in the beer industry is replacing areas under wheat. Secondly, currently local wheat production currently exceeds imported consumption but this is expected to change in the near future with a greater reliance on imported wheat (BFAP, 2013). This reflects a change in the wheat value chain with potential implications for the Western Cape.

3.4.2 Agricultural Transformation

Agriculture in the Western Cape is undergoing a period of transition. First, although the region is the largest net agricultural employer in the country, casualization of the workforce is increasing (Figure 3.12 and Table 3.5). High levels of casualisation present significant challenges to the poor and food insecure and have a direct impact on the regional food security (Table 3.5). Here distinct hunger seasons are noted, particularly in the few months preceding a harvest. This was arguably one of the reasons for the high levels of volatility within the Winelands region at the end of 2012 and the beginning of 2013. which correlates with the grape harvest season that generally begins in mid February. Communities with high levels of temporary employment will be most vulnerable in the periods prior to employment cycles. This vulnerability results in high levels of food insecurity in the same areas where agricultural produce is in abundance.

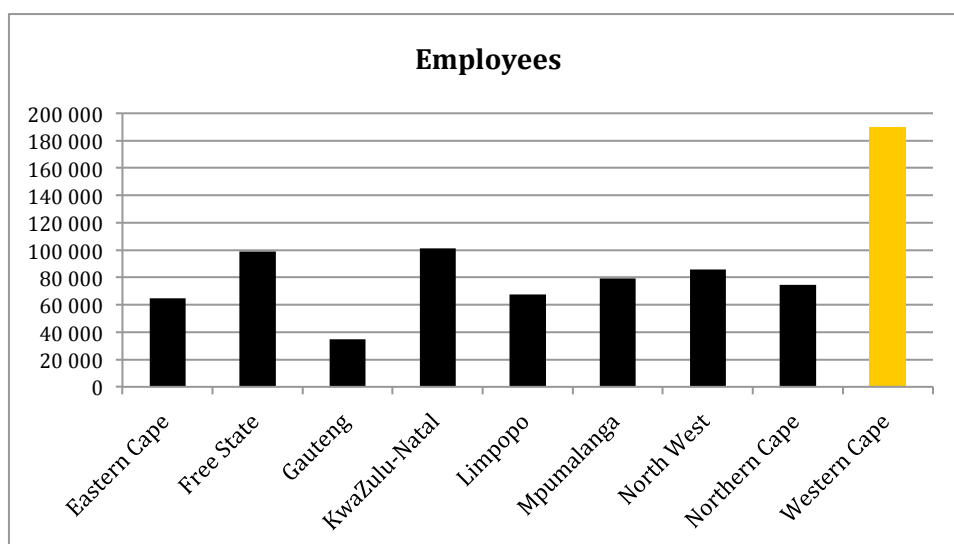


Figure 3.12 Number of paid workers per province (Source: Census of Commercial Agriculture 2007 (StatsSA, 2009: 19))

Table 3.5 Net full time to casual employment numbers and ratio comparison

Province	Full	Seasonal/Casual	Casual/Full
Eastern Cape	34 253	30 565	0.89
Free State	53 944	45 150	0.84
Gauteng	22 979	11 957	0.52
Kwa-Zulu Natal	66 685	34 383	0.52
Limpopo	35 728	31 833	0.89
Mpumalanga	46 520	32 826	0.71
North West	53 741	32 008	0.60
Northern Cape	26 871	47 874	1.78
Western Cape	90 943	98 546	1.08

Source: Census of Commercial Agriculture 2007 (StatsSA, 2009: 19)

Second, net farm land is being lost. While there are multiple and complex reasons for this trend, some of the key factors include the rezoning of land for prestige lifestyle (at times with golf) residential areas (examples of De Zalze, and Erinvale in the Stellenbosch/Somerset West region), peri urban-land lost for housing and the conversion of agricultural land into nature conservation areas. Land near urban areas is under increased demand. While policies such as the Land Use Planning Ordinance and the Subdivision of Agricultural Land Act may limit the potential for portioning off land near urban areas, the reality is that land is in great demand and not necessarily for agriculture.

Third, consistent with national trends (see Figure 3.2), the number of farming units is in decline in the Western Cape. This decline means that farms are consolidating resulting in the amalgamation of farms. The reasons for this consolidation are varied and relate to increased competition, both locally and internationally, a more competitive market environment, reduced support from the state, the role of other players in the market, including multinational organisations, such as in the dairy industry, and consolidation in the value chain (Vink and van Rooyen, 2009; Metelerkamp 2011). In the Western Cape in particular, a number of factors are argued to have driven this consolidation. These factors are similar in principle to the rest of South Africa, but reflect specific regional crops. One example was derived from a conversation with a collection of farmers within the wine industry in 2013. In the wine industry, one of the key drivers of change is compliance and legislation costs. As a large portion of the wine industry is driven by exports, external costs are also imposed, often at the bidding of South African wine industry bodies. These costs include third party verification of labour, production and health standards (all separate). In addition to these international marketing costs are often prohibitively high, meaning that smaller operations cannot cover these costs, even when driven through industry bodies such as Wines of South Africa (WOSA). These costs mean that most small operations remain marginal. Any price shock, failed harvest, or other additional costs drive these businesses out of the market. The consequences of this are that either farms are sold or productive land is leased to larger operators. These challenging operations prompted Mohammed Karaan to suggest that in the future, the Winelands region would either reflect significant consolidation or the formation of multiple “ego estates” where the land is procured as a lifestyle investment and not as an agricultural entity (Karaan, per comm, 2010). Jara (2013 and others) argue that the free market drives these changes in the agricultural landscape and the removal of protection offered to farmers after 1994. Although consolidation may result in improved efficiencies and consistent food output, the social consequences of this are problematic. This can be seen in the reduction of employment opportunities in the sector. Regardless of the reasons for the decline, the reality is that consolidation is taking place and less farms are responsible for the production of the regions food.

Although somewhat dated, the land valuation report from the Western Cape Department of Agriculture highlights a trend whereby smaller portions of land appear to carry higher sale value (see Table 3.6), placing increased pressure on land particularly from those wishing to utilise land for reasons other than those designated.

Table 3.6 Cape Metropole rural zoned land prices

Area	R/ha	Ha	Transaction Value	Average Farm Size	Average Transaction
Cape Town/Peninsula (0-20ha)	R 175 693	65	R 10 545 000	13	R 2 109 000
Cape Town/Peninsula (21-50ha)	R 124 127	193	R 23 935 000	32	R 3 989 167
Cape Town/Peninsula (>50ha)	R 91 052	229	R 28 000 000	115	R 14 000 000
Average	R 130 290	487	R 62 480 000	53	R 6 699 389

(Source: DOAWC, 2006 Provincial Land Value Report)

Agriculture in the Western Cape may play a critical role in national agricultural production but it is also highly vulnerable. Most of the climate change models indicate that the region will become dryer as the impacts of climate change start to take hold (Schulze 2007;

Akoon, et al 2009). At a more localised scale, small changes can also impact on production where, for example, changes in the frequency and range of chill units (distinct periods when the temperature goes below a certain point) may have direct impacts on the pomme fruit (apples, etc.) industry (Schulze 2007). The climate challenge manifests in other ways, interacting with other challenges, such as water availability. Not only are many of the agricultural water sources under severe threat, climate change will amplify the threat. These all require proactive mitigation strategies.

As a response to climate change, carbon taxes are and will be used as a means to drive a reduction in GHG emissions. If carbon taxes were to be introduced for South African fruit this would have significant implications for Western Cape agriculture given the current export orientation. Due to South Africa's energy regime, driven by dirty coal, significant taxes could be imposed on produce being exported from South Africa to other regions, particularly Europe. These taxes will have a material impact on the export viability of agricultural produce, significantly undermining any comparative or competitive advantage.

The Western Cape is a critically important and highly productive agricultural region in terms of contribution to GDP, employment and food production. However, the characteristics of Western Cape agriculture do not necessarily translate into food security. Food produced in the region may leave the region, or even the country. This challenge is one of many that highlights the disconnect between the needs of Cape Town and the production environment within the region. However, the importance of the City of Cape Town to the broader regional food system means that the infrastructure, knowledge, networks and support systems present within the region have the potential to support city scale activities.

Agriculture within the Western Cape is increasingly geared towards export-oriented production. However, the sector plays a critical role within the regional economy through primary employment and upstream and downstream jobs. Many of these employment opportunities are in Cape Town (see Section 7). The Province's share of national horticultural production is critical for Cape Town residents and the relationship between the productive agricultural areas and the city could potentially result in lower prices at the point of sale for customers (see the section on CTFPM in Section 6).

4. Food Production in Cape Town

Summary of Key Points:

- There is substantial agricultural production within Cape Town, although the format of the Agricultural Census data makes it difficult to determine where this is given its use of Magisterial Districts as its organizational frame.
- While there is large-scale production of grapes and other fruit for export, there is also high production of staple vegetables and livestock for local consumption – an outcome in part of proximity to the urban market.
- Local production of carrots, cabbages and onions accounts for 23.9% of Cape Town’s total consumption of vegetables. Local production of potatoes accounts for 38.1% of Cape Town’s consumption of potatoes.
- Local production plays a role in moderating prices.
- Although the current SDF calls for “high-potential and unique agricultural areas” to be protected for food security purpose, the areas classified under the Agricultural Land Review as such are not primarily the food production areas of the city. This separation of agriculture from food security is also evident in the progression of the treatment of food within the City’s IDPs.
- The following recommendations are made
 - *There is an urgent need to revisit the indicators used in the Agricultural Land Review if its classifications are to be used to infer value of land for food security.*
 - *Productive agricultural spaces should be integrated into future food security plans for the Cape Town and be re-connected to food security within the IDP*
 - *A productive land use management strategy should be developed*

Reliability

The City of Cape Town has a number of agricultural areas within or adjacent to its boundaries. This provides a degree of buffering against food price inflation, and ensures that there is a supply of staple vegetables to the City throughout the year. This provides both reliability in terms of pricing and nutritional quality. As at the national and provincial scales, there are concerns about the future reliability of foods in terms of safety. In 2012 there was news coverage about the water quality of the Lotus River feeding the northern sections of the Philippi Horticultural Area. It is important to note that all food that enters the supermarket sector in South Africa has to have EuroG.A.P certification. Additionally, fresh produce from within Cape Town sold to the informal trade sector is produced on the same farms as food sold to supermarkets, and therefore abides by the same standards. Long-term pollution of the Cape Flats Aquifer by agriculture and by urban development is an ongoing concern.

Sustainability

The long-term sustainability of the productive spaces of Cape Town is compromised not by factors inherent in local agriculture, but by the pressure of conversion of agricultural land to other land uses. This is informed by real needs of the City, but also through a series of decisions and understandings of the food system that have undermined the importance of the productive areas of the City for food security. These are elaborated upon within this section (Section 3.4.4 in particular).

The current state of the productive land areas reflects a number of environmental and social opportunities. Environmentally, these areas play an important role in flood control where certain areas are allowed to remain waterlogged during periods of high rainfall, providing a retention benefit. Additionally, these areas have been argued to provide access to nature for a number of vulnerable communities for whom such access is often limited. The social and environmental benefits of this, while not formally quantified are of great importance to these communities.

The productive land areas provide employment, often to those with the lowest education for whom formal employment is a challenge. The employment opportunities enable benefits beyond just wages where food and other benefits are also part of the farm labour “package”. The changes taking place in the areas mean that a number of emerging farmers are actively farming these areas. A number of organizations have been formed to support these processes, reflecting the building of social capital and cooperation.

Transparency

As with the national and provincial scale, there is relatively good transparency at the local scale. However, the data aggregation at the Magisterial District scale makes it difficult for the City to interpret where food is being produced. There are also concerns about the veracity of some of the data gathered by the Agricultural Census at the local scale. The Agricultural Census has significant gaps at the local levels which obscure the true production on the land. The Agricultural Census at the City scale does not capture the range of crops being produced. Within the PHA for example there is a wide diversity of crops, including farms growing low-value staple vegetables as well as high-value herbs as a means to survive financially and serve local needs. Additionally, the Agricultural Census only gathers data on commercial agriculture, missing the large number of smaller producers growing food within the City. There is therefore a need for a more fine-grained data set on food production with the City.

City’s Role

The City plays an important role in the viability of this agricultural land. The section argues that the Agricultural Land Review conducted in 2008 and the disconnection of agriculture from food security within the IDPs following the promulgation of the Urban Agriculture Policy in 2007 have undermined the long-term viability of maintaining this agricultural land. There is therefore a need for the City to consciously re-engage the valuation of agricultural land.

Food consumed within a modern city is rarely all derived from its local agricultural hinterland. Despite an international “slow food” movement that suggests the key to sustainable cities is for them to grow much more of their own food, there are many constraints to the realization of this utopian vision. At the same time local food

production can be of benefit to a city, particularly in terms of delivering cheaper food and bringing greater dietary diversity.

The production and future viability of agriculturally productive areas in Cape Town is therefore a key concern. Cape Town has significant local food production, and is a key point through which much provincial and even national agricultural produce is beneficiated, both for export and national consumption. This infrastructure supports a more localised set of food system activities. Food production within Cape Town benefits from these structures which, at the same time, are made more viable by regional food production. The Cape Town Fresh Produce Market and the fisheries industries are good examples here. The Cape Town food production infrastructure and future viability is, however, under stress. These stressors are linked to international and national trends but also to very real challenges at the local scale.

A central organizing theme of this chapter is the tension between the valuation of agricultural land in terms of its contribution to food security versus alternative means of valuation. This chapter therefore presents data on what is being produced by commercial agriculture within the City of Cape Town, with particular attention to the Philippi Horticultural Area. Production from community and household urban agriculture is also addressed. Finally, this chapter provides an overview of the impact of the City's policies and frameworks on food production in the city.

4.1 Agriculture in Cape Town

The most reliable dataset on production in Cape Town is the 2011 Agricultural Census of Commercial Agriculture data generated by StatsSA, gathered in 2006 and 2007. available. The Census recorded the data at the Magisterial District scale (see Figure 4.1), which does not align with ward boundaries or with the boundaries of the 13 productive spaces identified by the City in its Agricultural Land Review. (CoCT, 2008) This poses a challenge for aligning national data sets with the planning realities of the City.

Agricultural Census data shows significant agricultural activity and the fact that multiple agricultural approaches are being applied with different areas offering benefits in terms of different crop or livestock types. These benefits offer unique value to specific areas. The following section discusses production figures from the recorded areas according to the magisterial districts.



Figure 4.1 Magisterial Districts in Cape Town (Source: DRD&LR 2006 7th edition)

Table 4.1 shows the scale of horticultural and field crop production within the City's eight magisterial districts. There is considerable variation in production between the different districts as a result of different geographical, soil, climatic and even water access conditions. Key food crops including potatoes, cabbages and onions, as well as fruit, are all being produced within the city-region. The production profile does differ from that of the Western Cape as a whole, with a greater focus on horticulture compared to the viticulture and wheat production that dominates the wider province. The focus on horticulture is a function both of climatic conditions in the greater Cape Town region and the historical connection of local food production to the consumption needs of the city.

	Wheat (dry land)		Potatoes		Onions		Carrots		Cabbages		Apples & Pears		Wine grapes	
	Plant ha	Prod in metric tons	Plant ha	Prod in metric tons	Plant ha	Prod in metric tons	Plant ha	Prod in metric tons	Plant ha	Prod in metric tons	Plant ha	Prod in metric tons	Plant ha	Prod in metric tons
Bellville	2271	6 546									434	17 788	2 465	28 097
Goodwood											10	436	47	595
Kuilsrivier			207	5 275			196	7 102	124	10 892			996	11 208
Mitchells Plain			5	180			15	662	24	1 102			13	159
Simon's Town							9	20			5	180	76	595
Somerset West	521	1285	120	3 292							734	20 231	1 762	25 622
Strand											333	5261	574	6 776
Wynberg			71	3 488	417	12360	275	9 177	131	8 533	411	15475	886	9 555
Totals	2792	7 831	403	12 235	417	12 360	495	16 961	279	20 527	1 927	59 371	6 819	82 607

Source: StatsSA-WC, 2011

The key vegetable products grown in the city cover less than 15% of the productive agricultural land (calculated on hectares planted) but are vital in producing the essential vegetables that flow into the various food channels and enable a more diverse and affordable diet for the residents of the city. The remainder of the productive land is used for the production of grapes and apples that reflect how the city is embedded in an export agricultural economy. Only a small portion of the city's productive agricultural land is used for the production of food.

Agricultural productivity within the city is high (Table 4.2). The monetary value of the crop (measured in Rand per hectare) is also high (Table 4.3). The combined production value of potatoes, cabbages and carrots in Mitchells Plain and Wynberg highlights the importance of this area. Kuilsrivier is also an ignored but critically important production area. The sandy soils in the area known as "Die Eiland", between Weltevreden and Vanguard roads, is a highly profitable carrot producing area (now under threat from land invasion and recently included in rezoning applications.)

t/ha	Wheat	Potato	Onion	Pumpkin	Carrot	Cabbage	Apple	Pear	Wine grapes
Bellville	2.88						42.96	31.22	11.40
Goodwood							43.60		12.66
Kuilsrivier		25.48		24.44	36.23	87.84			11.25
Mitchells Plain		36.00			44.13	45.92			12.23
Simon's Town					2.22		36.00		7.83
Somerset West	2.47	27.43					31.23	23.31	14.54
Strand							41.00	14.61	11.80
Wynberg		49.13	29.64	24.40	33.37	65.14	40.28	30.29	10.78

Source: StatsSA-WC, 2011

R/ha	Wheat	Potato	Onion	Pumpkin	Carrot	Cabbage	Apple	Pear	Wine grapes
Bellville	5 114						121 858	93 136	38 286
Goodwood							87 400		30 319
Kuilsrivier		34 222		22 488	66 357	70 112			24 492
Mitchells Plain		36 000			77 666	40 708			29 384
Simon's Town					2 777		72 600		15 000
Somerset West	3 368	46 666					55 378	33 991	29 463
Strand							99 533	41 556	64 407
Wynberg		73 774	57 417	25 000	46 000	47 603	76 462	59 101	26 569

Source: StatsSA-WC, 2011

Table 4.4 details livestock holdings in the city according to the Agricultural Census. It is important to note that the Census captures data from commercial farming alone. Large numbers of cattle, sheep, goats and chicken in the city are therefore not included in the census. Livestock are generally part of mixed farming strategies. Farmers often use the silaged manure from the animals as a productive input to support field and horticultural crop production. This reduces input costs and enhances viability. This practice has significant implications when the amount of agricultural land is reduced, precipitating real conflict where farming areas abut residential areas. Clean air and environmental health concerns raised by residents are a direct challenge to farming viability.

Table 4.4 Livestock holding in districts as of 28 February 2007

	Cattle	Sheep	Pigs	Ostriches	Chickens
Bellville	2 756	7 427	3 147	155	1 232 738
Goodwood	346	2 499			7 040 122
Kuilsrivier	730	311			12 764
Mitchells Plain			4 000		7 642
Simon's Town					71 267
Somerset West	1 397	3 490			
Strand		2 046		300	170 472
Wynberg	1 445	410	3 866		930 072
Total	6 674	16 183	11 013	455	9 465 077

(Source: StatsSA-WC, 2011)

Stock sales are reflected in Table 4.5. The complex nature of the food system means that all sales were not necessarily to Cape Town consumers. However, a sizeable proportion likely supplied the local market. In excess of 60 million chickens are deemed to have been sold out of the Goodwood area (although this figure has been questioned).

Table 4.5 Livestock sales per magisterial district

	Cattle	Sheep	Pigs	Ostriches	Chickens	Milk & cream	Wool	Eggs
	#	#	#	#	#	Litres	Kg	Dozen
Bellville	1 800	4 665	4 752		2 303 707	9 494 108	9 053	6 355 952
Goodwood	123	2 126			60 461 969	1 957 002		
Kuilsrivier	806	236			19 483			
Mitchells Plain			6 300		31 564			
Simon's Town					396 579	27 000		
Somerset West	175	1 042				2 254 609	6 652	
Strand		2 115		115	647 834			
Wynberg	1 090	780	7 000		1 643 383	6 092 977		

Source: StatsSA-WC, 2011

Table 4.6 reflects the Rand value of the sales detailed in Table 4.5. Over R1.3bn was raised in the sale of chicken in the Goodwood magisterial district alone with almost a quarter of a billion rand in dairy produce sales in the Bellville district. While these sales figures are not necessarily significant when compared to other industries, they do reflect an active economy and significant income generation, offering a multiplier effect to other secondary industries and, most important, employment. The connection between these products, the horticultural industries and the Cape Town food processing industry is not clear but there appears to be a mutually beneficial relationship.

Table 4.6 Sales values in ZAR of livestock related products detail in R '000

	Cattle	Sheep	Pigs	Ostriches	Chickens	Milk and cream	Wool	Eggs
	R '000	R '000	R '000	R '000	R '000	R '000	R '000	R '000
Bellville	8 525	2 707	2 894		38 688	25 585	279	41 314
Goodwood	532	1 158			1 330 540	5 248		
Kuilsrivier	3 566	144			336			
Mitchells Plain			5 500		544			
Simon's Town					3 603	80		
Somerset West	1 053	566				6 764	211	
Strand		1 081		211	15 692			
Wynberg	5 402	391	4 632		28 686	13 607		

4.2 Concerns of Farmers

For the purpose of this report, interviews were conducted with 17 farmers on City of Cape Town productive land: Atlantis (2), Blackheath (1), Philadelphia (1), Joosenbergvlakte (1), Kraaifontein (4), Kuilsriver (3), Macassar (1), Ottery (2) and Philippi (1). The section below provides a brief overview of the farmers' concerns

Risk Factors

The biggest concern in all areas was crime, and the perceived lack of concern and support from the SAPS. The lack of response from the local police force has forced many farmers to spend a large portion of their income on security. A number of farmers commented that either the scrap metal trade should be shut down or that far greater penalties need to be applied to traders found with unaccounted for stock.

Governmental/Municipal support

About half of the farmers had negative comments about the Provincial Departments of Agriculture and Water Affairs, due mainly to unresolved issues, poor performance and inefficiency. The major dissatisfaction aimed at the municipality is the cost of electricity, mainly used for irrigation (while there is an opportunity for solar pump installation, crime levels make this impossible).

Impact of new legislation

New labour and land tenure legislation has led to a deliberate move toward mechanisation wherever possible. The labour issues relate to both increased wage determinations via the revised sectoral determination following the 2012 labour protests in the region and increased administrative costs of managing labour. In addition, farmers argue that the legal requirements and associated industrial relations aspects place a burden on operations both in terms of time and costs. This was argued to drive the outsourcing of labour provision. The Extension of Security of Tenure Act was cited by farmers as a concern as staff that were dismissed as well as not farm-employed family members were seen as a potential concern to farmers.

Pricing

Farmers are moving away from selling at the Cape Town Produce Market. Better prices are obtained from chain store suppliers, with only the 'left-overs' sent to the market.

Input costs (seeds, fertilisers, labour, irrigation, electricity, etc.) have increased by between 300 and 500% over the last 5 years, but produce sales prices have dropped by about 40%.

4.3 Proportion of local consumption provided by local production

Local food production in Cape Town from the various production areas is deemed to be of importance to the overall food system of the City. Providing off-take figures in comparison to other areas and to describe the exact nature of flows from these areas into the Cape Town food system is not possible for reasons detailed at length in this report. As articulated repeatedly, particularly within the flows section, no answer can be given as to the percentage contribution of the entire city's food supply that derives from the productive areas, given the weaknesses of existing data and its aggregation. For clarity, statistics provided by government agencies are not only significantly out of date but are also measured by magisterial district, a scale that overlaps certain areas and missed others. These data also include other aspects such as certain processed food products but excludes other processed products.

However, using the available data it is possible to draw some inferences about the importance of these productive spaces to fresh produce consumption in Cape Town.

As noted in Section 6.1 the estimated total food consumption in Cape Town, using StatsSA 2013 figures, is 1 607 097 tonnes. National estimates are that vegetables account for 13% of national consumption, and potatoes a further 2% of national consumption.

Using the Figures presented in Table 4.1 it is possible to calculate the proportion of consumption that could be provided for by local production (assuming local production is locally consumed). It is acknowledged that there is extensive production of crops not listed in Table 4.1, such as butternut. However, the total combined tonnage of onions, carrots and cabbages is 49 948 tonnes. Assuming Cape Town's consumption patterns align with national averages, these three crops alone account for 23,9%% of Cape Town's required vegetable tonnage. The local potato production of 12 235 tonnes is equivalent to 38,1% of Cape Town's annual potato consumption². Local production therefore contributes significantly to local consumption.

These figures do not tell the full story of local food production, presenting data on only a very limited number of crops and not providing insights into the flows of food from the farm gate. As such, other measurements of value have been applied and for this reason, the various pieces of research carried out in the PHA are deemed to offer valuable insights which offer indicative data on both the changes in production taking place in the various areas (increases in production and areas under production) as well as details on how farmers are responding to market shifts and changes taking place in the food system.

If the material in the flows analysis and sources of food sections are considered and aligned with data from the Cape Town Fresh Produce Market then it is clear that a large

² If the consumption figures calculated from the DAFF 2013 Agricultural Abstract are used, then total consumption in Cape Town is 1 850 825 tonnes. These data state that vegetables account for 10.1% of national consumption and potatoes 3.7%. Using these figures, Cape Town production of carrots, cabbages and onions accounts for 26.5% of required vegetable tonnage to feed the city, and the potato crops account for 17.6% of required potato tonnage.

amount of Cape Town's food does come from local and regional sources. The productive spaces within the City, particularly areas like the PHA, which grow food types specific to the needs of low-income residents in Cape Town, do require far greater recognition and protection. These areas also require a concerted management effort to ensure that the areas receive the necessary services to ensure their continued protection and viability.

As per the discussion of the Agricultural Land Review in Section 4.4 below, the indicators used to assess value of these productive areas are not aligned to food security principles. If indicators such as wider food security, food system resilience and food price mediation are considered, these areas then escalate in value.

4.3.1 Case Study of the Philippi Horticultural Area

The Agricultural Census captures data only on key crops and trends in agricultural production. However, this does not provide insights into the challenges and opportunities experienced by local producers, or about other, less-important, agricultural products. This provides limited understanding of the actual production and the connection of local production to the Cape Town Food System. Finer-grained analysis is therefore required. For this reason, this section therefore draws on in-depth research conducted in the Philippi Horticultural Area (PHA) to reflect on and provide insights into the nature of food production in the city.

This section is not intended to make specific judgments pertaining to the case study area, but rather the use the case study as way to reflect on and provide insights into the nature of food production in the city.

A review of the PHA commissioned by the City in 2009 argued, "there is scope for limited urban development arising from the rationalisation and consolidation of the boundaries of the horticultural area (but) the PHA is not a significant opportunity for the development of housing in Cape Town" (CoCT, 2009: 11). A second independent review of the viability of the PHA was carried out by the African Centre for Cities and funded by a Canadian NGO, Rooftops Canada (Battersby and Haysom, 2012). The review team conducted interviews with a variety of stakeholders including the Philippi Economic Development Initiative (PEDI), environmental groups such as the Skaapkraal Civic and Environmental Association (SCEA), the Kaapse Vlakte- en Distrik - Boerevereniging (Cape Flats and District Farmers Association), commercial farmers and new and emerging smallholder farmers (represented through the Skaapkraal Developing Farmers Association.)

Other actors directly impacted by decisions about the PHA included local farmstalls within the area, and vegetable traders in and around the PHA (including spaza shop traders, small street vendors located on street curbs along direct access road routes, traders located on the pavements at or near larger retailers and supermarkets and traders operating near the Cape Town Fresh Produce Market (CTFPM)). A total of six emerging or small-scale farmers and six larger commercial farmers were interviewed. A number of other farmers were engaged with informally in meetings and other area activities. A further eight non-farming stakeholders were also interviewed including managers of the agricultural coop in the area, other businesses and farmstall owners.

The report found that between 2009 and 2012 more land had been brought under production, reflecting an investment by farmers into the area. Farmers have also been processing their own produce and selling directly to retailers or retail agents - or selling to those farmers involved in processing. Over 50 different crops were being produced

and much of the produce enters the Cape Town food system through a wide variety of market channels and to a wide variety of retail outlets, from formal supermarkets to informal street traders. The main crops being produced were: Cabbage, Lettuce, Cauliflower, Broccoli, Spinach, Carrots, Potatoes and Onions. Only four of these are reflected in the Agricultural Abstract. The contribution of these areas to the total vegetable tonnage required for Cape Town is therefore higher than the figures derived from the Agricultural Abstract suggest.

Farmers estimated that around 80% of their produce went direct to retail, about 12% went to CTFPM and about 2% went straight to the informal trader network. While precise calculation of PHA off-take that entered the Cape Town food system was not possible,³ large volumes of “heavy-low-cost” produce (specifically cabbage, broccoli, pumpkins and butternuts) enter the Cape Town food system from PHA. Due to the supply of these foods, the PHA served to depress food prices enabling lower cost fresh produce for Cape Town consumers.

The PHA also has various secondary benefits including over 3 000 job opportunities, generally for women from poorer communities in Cape Town. The benefits of enabling affordable food and job creation are directly linked to the specific geography of the PHA. The relationship between climatic conditions and hydrology means that farming seasons can be extended and farming practices are also adapted to suit the unique geography of the area. For example, crops were planted in short cycles enabling continual harvests and a regular supply of specific foods into the market. The farmers of the region have developed unique farming approaches to draw the most benefit from the area.

The emerging farmers were, in the main, at the establishment phase, seeking out specific niches in the market and adapting their production and market distribution systems to support their own capacities, funds and networks. While some emerging farmers were partnering with established farmers in order to access formal retail markets, others were farming for new markets not previously served by the PHA, including faith groups, niche market buyer such as organics and other community groups. The emerging farmers were also actively seeking to promote the area as a vehicle for the development of alternative views of opportunity and nature. This was evidenced in the establishment of birding clubs or the facilitation of school visits to communities from gang or poverty affected neighbourhoods.

4.3.2 Impact of local productive areas on food prices

Local production areas produce almost a quarter of the vegetables (using carrot, cabbage and onion production figures alone) and 38% of potatoes required for local consumption. Given the nature of the food system it cannot be assumed that local production is necessarily locally consumed. However, data provided by the four largest retailers (whose distribution system capacities would make it most viable for food to travel out of its region of production) indicates that there is considerable local consumption of locally produced vegetables. Table 6.10 indicates that 56% of vegetables stocked by the major retailers in Cape Town are produced within 200km of point of sale.

Local production has been argued to have both environmental and economic benefits. The cost of transport has been identified in South African and international cases as

³ As farmers react to specific market opportunities and actively trade for the best price, tracking retail destinations was not possible. Further, many farmers either sold to agents or sold surplus directly to the CTFPM which then on-sold the produce to other agents. Tracking the distribution channels of these agents and through the farmer sales was further complicated by the fact that sales are highly dynamic.

accounting for between 3.5% and 8% of the total shelf cost of food (Deloitte 2013, BFAP 2013). This proportion varies between products. According to NAMC figures, for example, 13% of the cost of a loaf of bread is generated by distribution costs (See Figure 8.12). The proportion of final price accounted for by transport is greater in high volume, bulky vegetables (DAFF 2011). The local production of potatoes, butternut, cabbage and other bulky vegetables therefore may serve to lower local prices.

There have been no studies examining the connection between local food production and local prices. However, the data made available by the Cape Town Fresh Produce Market (CTFPM) discussed in Section 6 indicate that prices of produce sold at the CTFPM have been on average 3.9% lower than the national Fresh Produce market prices over the period 2005-2012. Operators at the CTFPM explained that the further from the market a product is source, the greater the extent of seasonal price fluctuations. As noted in Section 6, this does not translate specifically into a call for localisation strategies, it points to the fact the greater the distance between the key product source and the Cape Town market, the more volatile the price will be and the more susceptible that product will be to other shifts such as transport, energy and storage costs.

The price moderating effect of local production was argued by an employee at Golden Harvest produce market, “[I]f we buy from a farm in Philippi, chances are our prices will go down because there is no huge transport cost. If we buy from Johannesburg, the opposite is true.” While these interview excerpts do not contain any hard evidence of the price moderating effect of local production, it needs to be acknowledged that the opinions expressed are those of individuals who deal with fresh produce and its pricing on a day-to-day basis and whose businesses depend on understanding how these systems work.

A second and related argument is that local production does not just reduce prices, but provides a degree of stability. Within the 2009 Report on the Philippi Horticultural Area made to PEPCO the climatic conditions within the PHA were noted to provide particularly stable conditions for year-round production of crops, when other areas were too warm for production. This assertion was supported by largest fresh produce traders at the CTFPM, “All the green veg and salad is grown in Philippi. The conditions are right there – it’s cooler than Robertson and those places further out of Cape Town. So carrots, parsley, lettuce, beans, cabbage is all from Philippi, we call it the Golden Ground”. The year round local production ensures that seasonal price fluctuations are lower than elsewhere, as noted in Figure 6.11.

A final aspect of the price-moderating role of the local productive areas is that the proximity of farms and their farm stalls near to the city allows informal traders a wider range of procurement options. Traders need to be more responsive to their customers’ pricing needs, and therefore shop around to find the best rates for fresh produce. The range of procurement options enables them to moderate prices.

While there is evidence that local production can and does play a price-moderating role, there is a need to recognize that this may not operate across all sectors. One of the four largest retailers sources 80% of their fresh produce from within 200km, however, there is no clear evidence of local discounting as a result. Pricing structures within major retailers are not transparent and may be adjusted to have one market price nationwide. However, within the smaller independent retailers and the informal trader sector there is more of a case for evidence of local production reducing consumer prices. Given the importance of the sectors for the food insecure in the city, local productive areas are particularly important for the food security of the food insecure in Cape Town. Additionally, given the focus of these areas on staple vegetables that make up the fresh produce market of the urban poor, they are an essential part of the food system ensuring low cost fresh produce to the food insecure.

This study therefore confirms the position articulated in the SDF regarding the need to protect valuable agricultural areas to promote food security and mitigate food price increases.

The following section (4.4) investigates the existing agricultural land valuation system and argues that these have failed to accurately identify the agricultural areas most important for food security and the mitigation of food price increases.

4.4 Role of the City in Determining Agricultural Land Use

The 2002 Rural Plan for Cape Town highlighted the ongoing challenge of administering productive rural zones areas within the City:

Rural areas of a metropolitan region are complex areas to manage given the involvement of all spheres of government in rural affairs. The jurisdiction and responsibilities of the different parties is not always clearly defined ... The different spheres of government generally have adequate legislation and policies in place to regulate rural land usage ... [but] the problem experienced is a lack of consistency between different policies, a lack of capacity to enforce and implement, poor co-ordination between different authorities, and poor political commitment to the rural areas of Cape Town (Setplan 2002: iv).

The Plan noted that prior to 2001, the rural areas of the Cape Metropolitan Area (CMA) were under the jurisdiction of 6 different local authorities and two adjoining district municipalities, each of which had its own approach to management of its rural areas (Setplan 2002: i).

The day-to-day management of these areas, in terms of different mandates and levels of accountability, remain a significant challenge. Put rather baldly, using an urban management strategy and an urban management infrastructure to manage areas functioning in a rural manner does not work. However, a number of policies and strategies do place direct responsibility on the City to effectively manage these areas. The 2008 Agricultural Land Review noted that the legislative mandate to protect rural zoned areas (not just the PHA) are contained within the Conservation of Agricultural Resources Act (Act 43 of 1983), Subdivision of Agricultural Land Act (Act 70 of 1970), the Land Use Management Bill (2004) and the Sustainable Utilization of Agricultural Resources Bill (2006) (CoCT 2008, 17).

Critical decisions need to be made about agriculturally productive areas within the City. Such decisions are inevitably informed by the ways in which land significance is defined since this determines how land is managed within the city and how competing land-use interests are evaluated. The next section provides an analysis of the mechanisms that have been used to confer value on agricultural spaces in the city. Again, the focus is on the PHA using research conducted by on a research project funded by the funder (Formas).

4.4.1 Valuation of Agricultural Land

The City's 2008 Agricultural Land Review identified 13 designated production areas within the city (Figure 4.2):

Helderberg – Erinvale Area

Helderberg – Sir Lowry's Pass Road Area

Macassar and Faure Area
Bottelary and Blackheath Area
Botfontein Area
Joostenbergvlakte Area
Olyfantsfontein Area
Dassenberg Area
Mamre Area
Tygerberg Hills Area
Constantia Area
Philippi Horticultural Area
Philadelphia Area

The Review recognised that many of these agricultural areas are under threat from urban encroachment and developed an evaluative framework to provide the City with a decision-making framework informed by land's "socio-economic empowerment role in terms of food production, food security and contribution to LED; its economic role in food production and other commodities (e.g. Wine), especially as input to the secondary and tertiary industry; and its relationship to the City's green structure and biodiversity corridors" (CoCT 2008, 1). The findings of this review have informed the City's planning with regard to the preservation of agricultural land. Figure 4.3 shows the current classification of agricultural areas within the City.

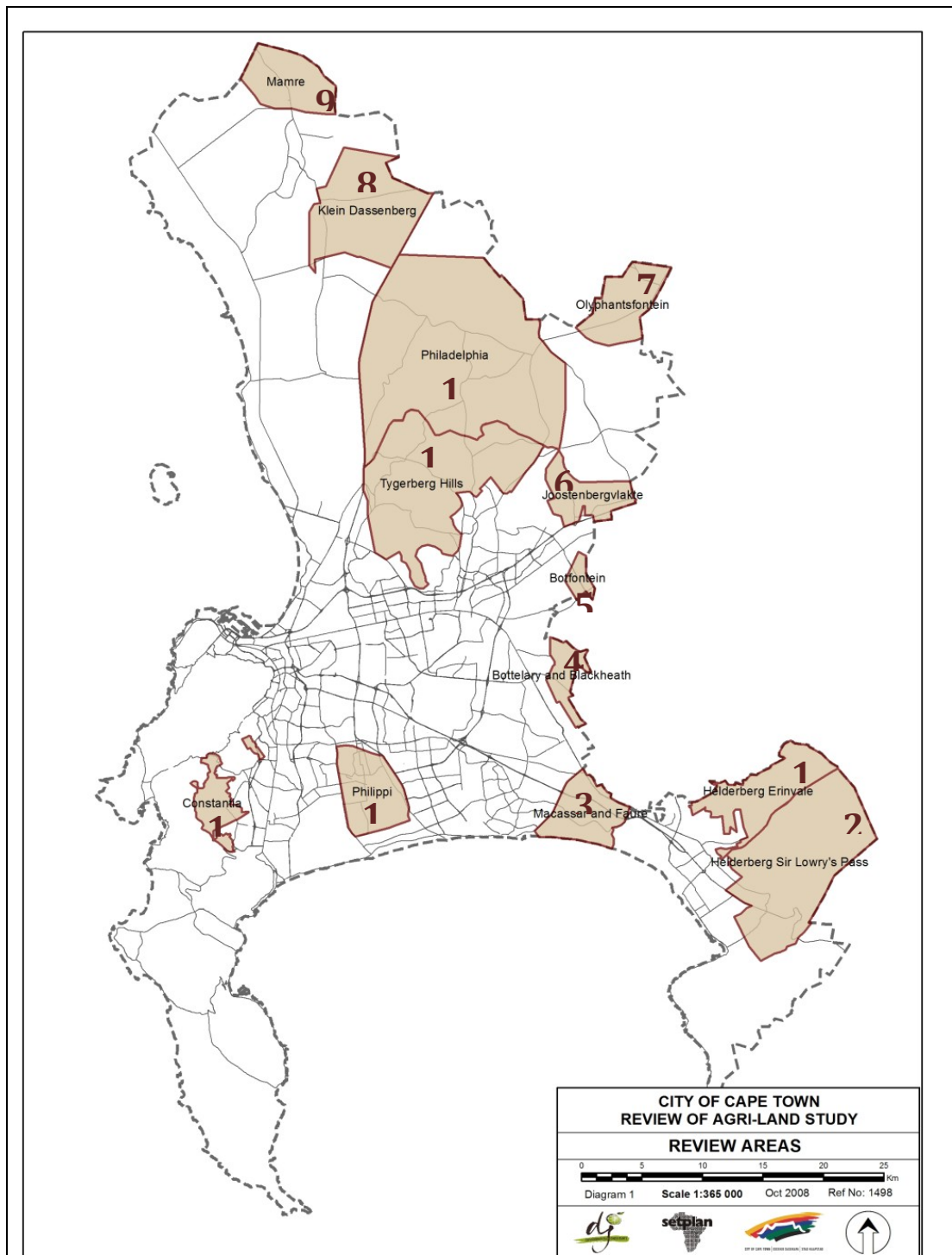


Figure 4. 2: Productive and designated agricultural areas within City of Cape Town (Source ALR, 2008 and CoCT, 2013)

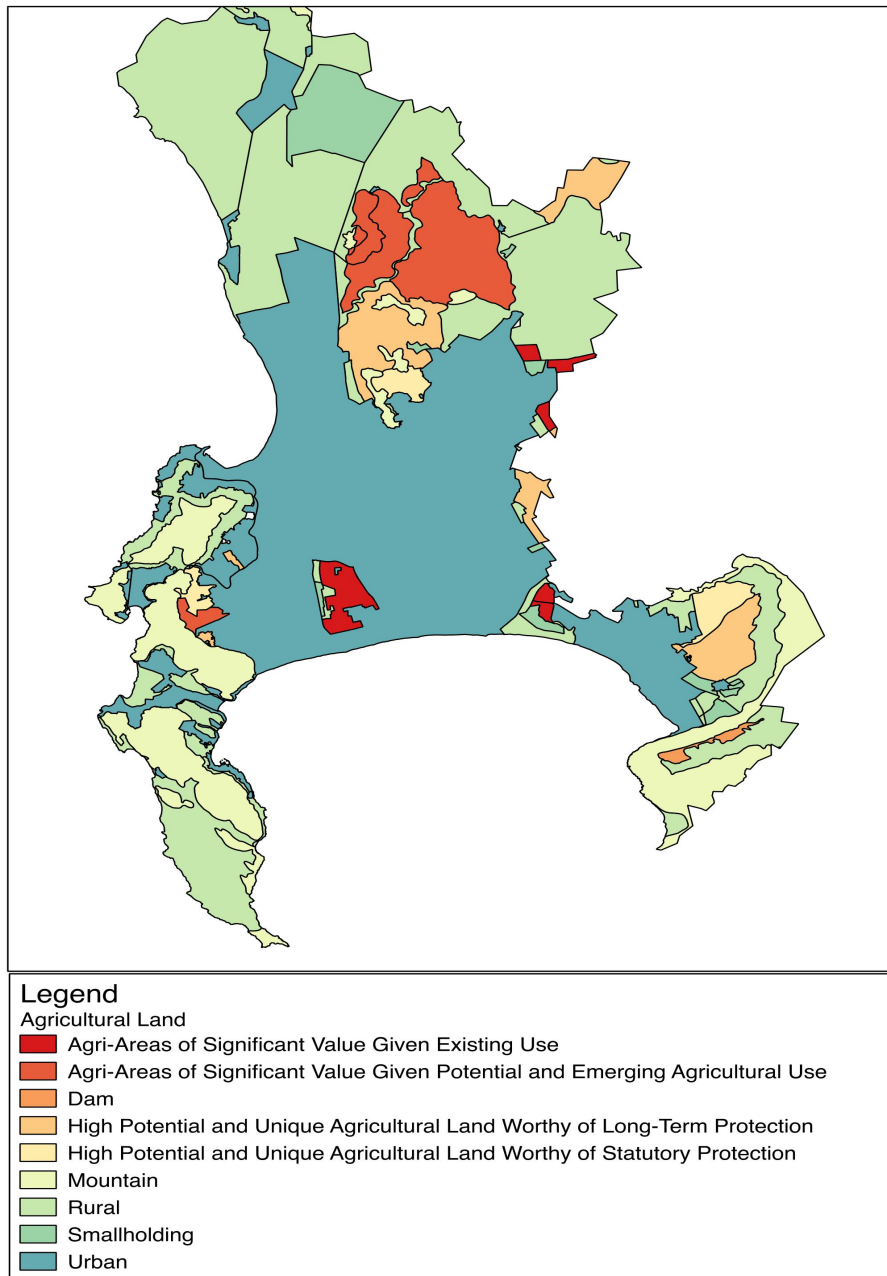


Figure 4. 3: Current classification of agricultural areas within the City of Cape Town

A key consideration for the City is whether the valuations developed in the Agricultural Land Review are the most appropriate in the context of linking food systems to food security. As discussed earlier, the current agricultural system in the Western Cape is increasingly export orientated and views agriculture primarily as an economic activity. This focus may well reduce rather than enhance food security, and leave the local food system vulnerable to currency and other shocks.

The SDF argues that agricultural areas are essential for food security in Cape Town:

To promote food security and mitigate food price increases, the City should therefore consider having 'high-potential and unique agricultural areas'... declared as agricultural/cultural landscapes by the highest appropriate level of authority; investigate ways in which all agricultural areas of significant value... could receive local protection (over and above the urban edge). Options include environmental or heritage overlay zones

applied through the relevant zoning regulations; ... inside and outside the urban edge proactively prepare and implement action/management plans that prevent encroachment and unlawful land use in agricultural areas, minimise negative impacts of urban development on farmed land and manage the use of water and other natural resources. (CoCT, SDF Statutory Report, 2012, p.65)

However, the areas that produce large volumes of staple vegetables, and higher value vegetables and herbs, are not identified as “high-potential and unique agricultural land”, but as an “agricultural area of significant value” and therefore have lesser protection. These valuations have their roots in the 2008 Agricultural Land Review, which assessed value to the city based on the criteria listed in Table 4.5.

Table 4.5 Agricultural Land Review Evaluation Criteria

Agricultural potential	Economic Significance	Land Use Significance	Landscape Significance	Environmental Significance
Soil potential Overall Perennial Annual Horticultural Terroir Irrigation Scheme /Groundwater / WWTW	Agri-production Primary Secondary • Critical Mass • Agri-tourism • Food Security • Market Proximity / Crop Perishability	• Existing Agriculture • Homogenous Farming Area • Rural Living • Land Use Buffer / Interface	• Agricultural Working • Cultural / Heritage • Natural	• Biodiversity • Biodiversity Interface • Open Space • Recreation

Source: CoCT, 2008

Each was assessed by a team of agricultural specialists who ascribed a value of “low”, “medium” or “high” to the sub-categories listed above. Through this somewhat subjective assessment, the PHA was listed as the fourth (of 12) most important agricultural areas for the Cape Metropolitan Area. The top three areas noted as high potential and unique were namely Constantia Hills, Helderberg/Erinvale and Philadelphia. Significantly, the top two areas are primarily viticulture areas and so cannot be considered as areas that promote food security and mitigate food prices, as articulated in the SDF (Battersby unpublished).

In addition, the Agricultural Land Review sought to understand the following aspects in developing an understanding of the land value within the City.

Consideration of the “homogenous farming area” to which the affected agricultural area relates.

Assessment of current and future potential agricultural activity performance of the affected agricultural area.

Scrutiny of agricultural potential informants of the Land Type Units informing the agricultural potential classification of the affected agricultural area.

Assessment of the environmental performance of the affected agricultural area and its immediate environs in terms of biodiversity significance.

Consideration of heritage, cultural and aesthetic attributes of the affected agricultural area, specifically agriculture and culture. (CoCT 2008)

The cumulative impact of the Agricultural Land Review approach is that certain agricultural areas are of global importance and thus irreplaceable (specifically the contributions of Constantia, the Durbanville and Tygerberg Hills and the Helderberg

Basin). In contrast, the PHA and other horticultural (i.e. vegetable) producing areas of Botfontein and Joostenbergvlakte contribute more directly to food security, and job creation, but are not considered irreplaceable. The grain areas of Bellville and Somerset West also contribute to food security and job creation but their role is seen as limited and they therefore cannot claim the same protection status as viticultural and horticultural areas (CoCT, 2008: 5).

The PHA's ranking in this agricultural hierarchy is particularly interesting as the current SDF argues that the PHA should be "retained for horticultural purposes and the exploitation of silica in the long term". It further notes that "only uses related to the extraction of materials and farming should be considered in the extraction areas". The Philippi Horticultural Area (PHA) was declared a horticultural area in terms of the Physical Planning Act in 1967. The earliest documents engaging with the PHA -- the Cape Metropolitan Area Guideplans -- articulate the value of the PHA to the City in terms of its underlying mineral resources (CMA 1967, 1975, 1977). The PHA has been identified as the most important silica sand deposit for the Greater Cape Town area and was thus protected for future mining by Proclamation Number 1760 of 1968 (Hill and Theron 1981 in Cole 2011, 6). The PHA is also one of three key building sand sources for Cape Town. It has been argued that the protection of this source of sand within the city is essential, as it is not economically viable to transport construction sand further than 80km (Cole and Viljoen 2001 in Cole 2011, 8).

Three key assessment approaches have dominated (Box 4.1). First, within the context of overall resource availability, soil and water were deemed critical determinants with an ability to amend these being viewed as less important. Soil quality or what was termed *terroir* held a particularly important role in the assessment. Secondly, the role of climate was seen as important but this appeared to be argued disproportionately, where the climatic benefits to vineyards, enabling specific cultivars, held greater weight than that of climatic conditions specific to horticultural areas. Finally, assessing agricultural landscapes from an aesthetic point of view and how these contribute to gateway impressions of the city does raise questions as to the interpretation of the importance of food security to the overall wellbeing of the city. A further question is one of how value is assigned. While all such value assertions carry a measure of subjectivity, the relegation of aesthetic values assigned to land as lower for communities in poorer areas such as the Cape Flats, Macassar and Faure to those in the "gateway" tourist regions of Constantia and Tygerberg does raise questions about assertions of value.

The agricultural potential of a farm is fundamentally determined by the availability and quality of the natural resources; namely soil, climate and water, and for extensive grazing purposes, also the composition of the natural vegetation.

A further complicating factor is the fact that a reasonable degree of modification of the soil and water supply to crops can be made through soil preparation, agronomic practices and irrigation (given water availability). Climate is less modifiable and often the main determinant in the range of crops suited to a specific site. The very favourable and unique mesoclimates for wine grapes in the designated areas place an exceptional agricultural value on the land, amplified by the fact that good soils are also found there (pg 7).

However, the agricultural and working landscape contributes to the unique rural landscape, which is the physical and visual setting for Cape Town, with the rural landscape also informing the setting of the City's gateway precincts.

Agricultural areas require to be managed fundamentally different to the urban environment in order to achieve a functional rural hinterland.

Informed by Agricultural Considerations and the Review of Agricultural Areas, the following categories of protection and future use are put forward within the Review Areas:

- High potential and unique agricultural land worthy of statutory protection given unique production, cultural and heritage attributes.
- High potential and unique agricultural land worthy of long-term protection given production attributes.
- Agricultural areas of significant value given existing use (e.g. vegetable production areas) and food security.
- Areas of significant value given potential and emerging agricultural use due to new cultivation technology, availability of irrigation water, new varieties and crop types, and the realization of *terroir* qualities.

Box 4.1 General Assessment Criteria ALR (Source: CoCT, 2008)

In arguing the “contribution of agricultural production” the Agricultural Land Review distinguished between wine production and vegetable production. These particular characteristics reflect the different value assertions and speak to very different views of value, aesthetics, utility and preservation importance. If different grades of importance are ascribed to different production types, different decisions are made about the use and protection of different areas. By way of example, Box 4.2 highlights how different areas enable different benefits to the city of Cape Town:

Wine (Constantia, Durbanville and Tygerberg Hills, Bottelary Hills and Helderberg Basin):

Direct income generation; high wine quality due to most favourable *terroir* (i.e. inter-relatedness of meso-climate, terrain and soils). Wine production under rain-fed conditions can still generate a high income, despite low yields per hectare compared to irrigated vineyards elsewhere, due to the impact of excellent *terroir* and accessibility of the wine farms for tourists and product price.

Indirect income generation; the multiplier effect of attracting tourists to the City's winelands (e.g. Constantia, Durbanville) as a premier tourist destination with diverse activities, especially for short-stay City visitors.

Vegetables (Botfontein, Joostenbergvlakte, PHA):

Type; mainly highly perishable products with a short shelf life and frequent delivery requirement.

Quality; high soft vegetable quality due to short travelling time to the market compared to other production areas located further away from the market (i.e. outside the City boundaries).

Affordability; low transport cost due to close proximity to the market. Critical mass for input suppliers (e.g. vegetable plant nurseries in Philippi) allows for a viable scale of production or provision of inputs. Alternative production areas outside the City's boundaries will bring extensive logistical and probably environmental challenges, as well as a higher cost of production

Box 4.2 Characteristics of different production types and zones (Source: CoCT 2008, 5)

The current classification of agricultural areas within the City of Cape Town does not align to the statement within the SDF that seeks to align "high-potential and unique agricultural areas" with the promotion of food security. It is essential that the classification of agricultural areas is re-assessed in order to align with the stated food security argument within the SDF. The assessment criteria of the Agricultural Land Review must be reconsidered in order to provide better protection for areas producing fieldcrops for local consumption. As illustrated in Section 4.3, these areas produce almost a quarter of the vegetables (using carrot, cabbage and onion production figures alone) and 38% of potatoes required for local consumption, but are argued as less significant than areas that are predominantly used for viticulture.

This report argues that, as per the SDF, the City should investigate ways in which the most significant agricultural areas could receive local protection, over and above the urban edge. Support for these areas should extend beyond protection of zoning, but also to effective management and policing strategies. This report argues that the areas producing staple vegetable crops, such as carrots, cabbages, onions, potatoes and butternuts, should be considered to be such areas. The use of Magisterial Districts within the Agricultural Census makes it hard to align the data to the City's mapping of agricultural areas (compare Figures 4.1 and 4.2). However, the data in Tables 4.1 and 4.2 suggest that the most important productive Magisterial Districts are Wynberg and Kuilsriver. These areas largely align to the Philippi Horticultural Area (Wynberg) and Joostenberg Vlakte (Kuilsriver).

4.4.2 Food and Agriculture in the IDPs

The City's approach to agricultural land is also informed by its Integrated Development Plans. The 2003/04 IDP expressed concern about low-density urban sprawl's impact on the natural environment, specifically with reference to the loss of agricultural land and biodiversity (CoCT 2003, 33). It also expressed concern about the City's food security, noting that 70% of households had gone without food in the past year (CoCT 2003, 28). The focus on food security appears to be connected to the National Department of

Provincial and Local Government's draft workplan for urban renewal, which had a food security focus (CoCT 2003, 71).

The 2004/05 IDP also voices concern about the loss of natural and agricultural environments, but articulates this concern in terms of these areas being "critical to Cape Town's competitive advantage" (CoCT 2004, 81). It is concerned with the City's ability to strategically position itself, rather than the inherent value of such environments. Food security is mentioned in the context of food relief measures only, hence separating agricultural productive systems from food security.

Neither agriculture nor food security are included in the 2005/06 IDP. The 2006/07 IDP however, has a significant focus on agricultural areas and provides the strongest case hitherto for the need to protect food-producing areas in the city. This IDP reflects on City planning and management as part of the Provincial Spatial Development Framework, which is in turn informed by the National Spatial Development Perspective. These areas are viewed as key strategic resources for the city for food security and a host of other economic and social benefits:

A key consideration for a regional strategy is the establishment of a regional system of urban agricultural complexes. Currently, the Philippi Horticultural Area and Joostenberg Vlakte are the only examples of such complexes. A regional system of these, extending beyond Cape Town's current boundaries will ensure the ongoing sustainable production of food for the city, provide important income-generating opportunities for new arrivals to the city whose only income-generating skills are often limited to agricultural activities and provide a new way of addressing housing, economic and land restitution issues while at the same time safeguarding key parts of the city's agricultural resource base (CoCT 2006, 136)

The document argues that the first of five critical decisions that the City should take when identifying areas for new growth is that "areas that should not be developed because of high biodiversity or agricultural value or areas exposed to natural or manmade hazards must be identified" (CoCT 2006, 142).

The 2008/9 IDP provides a further rationale for the value of agricultural land:

Geophysical features (such as the mountains, plains and coastline) and natural resources (such as a valued system of biodiversity and agricultural lands that have a high potential, water systems and cultural landscapes) act as both a constraint and an opportunity in guiding the direction of future city growth and, ultimately, greater economic prosperity. These crucial assets need to be identified and define where intense urban development cannot be permitted (CoCT 2008, 9)

Under this framing, agricultural land with high potential is to be protected. What 'high potential' means is unspoken, but given the 2008 Agricultural Land Review, it is assumed that the same criteria are considered. This reduces the perceived value of the food-producing areas and their protected status.

In addition, this IDP marks a complete uncoupling of agriculture from food security. In 2007 the City passed the Urban Agriculture Policy and established the Urban Agriculture Unit. As a result, the IDPs after 2007 focus exclusively on household and community gardens as the source of urban food security. This theme continues in the 2009/10 and 2010/11 IDPs. The outcome of this uncoupling and the particular framing of the value of agricultural land is evident in the 2010/11 and 2011/12 IDPs. Both speak of the need for considerable investment in electricity infrastructure to "meet the demand from extensive prospective developments in the Philippi horticulture area." (CoCT 2010b, 64)

Agricultural land has been increasingly identified as "natural resource", usually in the same sentence as areas of high biodiversity. This is land that is important for its 'value'

to the city and the competitive advantage it provides. Within the IDPs, these areas are articulated as acting “as both a constraint and an opportunity in guiding the direction of future city growth and, ultimately, greater economic prosperity.” In order to identify and prioritise the protection of these areas, they are ascribed economic, environment and social values. This is informed by the ecosystem service approach and the value production process is often quite opaque and subjective. The full value of the land is lost in a narrow and somewhat limited value determination.

The 2008 Agricultural Land Review represented an attempt to extend the rationale for the preservation of agricultural land from its food production value to the economic value of the agricultural product and a series of ancillary services supported by the land. This approach mirrors that used by the biodiversity department in their efforts to prevent urban encroachment. While this approach has been helpful in articulating a rationale for preservation of agricultural lands, it has undermined the status of the food-crop producing areas in relation to other productive landscapes in the city region, namely those with higher productive value (i.e. viticulture) and those that have greater aesthetic and tourist appeal. (Battersby unpublished draft)

Agriculture in and near urban areas and urban planning have long been at odds. Just as the division between urban and rural has been institutionalised, so has the separation between agriculture and urban land uses (Binns & Lynch, 1998: 777). This tradition has its roots in the Victorian-era municipal reforms in which agriculture was prohibited in cities for health reasons (Mougeot, 1994: 5).

This point was evident in the Cape Town Rural Plan document of 2002, which argued the following:

Rural areas of a metropolitan region are complex areas to manage given the involvement of all spheres of government in rural affairs. The jurisdiction and responsibilities of the different parties is not always clearly defined, leading to confusion and delays in the implementation of rural programmes. The different spheres of government generally have adequate legislation and policies in place to regulate rural land usage and ensure sustainable rural resource utilization. The problem experienced is a lack of consistency between different policies, a lack of capacity to enforce and implement, poor co-ordination between different authorities, and poor political commitment to the rural areas of Cape Town. (Setplan 2002, iv)

Historically agricultural land has not played a significant role in urban structuring. This arises from farmland being poorly defined (e.g. zoned rural), its reservation being determined by a single factor (e.g. soil potential), and the fact that agricultural land is often mono-functional (e.g. wheat lands) and perceived to be in relative abundance. The Rural Spatial Framework intended to redress this anomaly through the designation of agricultural areas as an important structuring element in the long-term growth of the city. The designation of agricultural areas was based on the need for intensive agricultural production areas (e.g. horticulture) in close proximity to the city. What informed this need and the reasons for the shift away from this need is not known and remains a critical question in terms of how land is understood. The argued de-coupling of food security from wider city needs and the assumption that food security will be resolved through household or community-scale urban agriculture is one possible reason for this. A further possible reason is a perceived disconnect between the city and the food system, driven in part by a perspective that views large scale industrial agriculture as optimum due to the ability of this typology to achieve economies of scale. This view sees food production taking place well outside the city. Within this perspective, the city is a recipient of these flows and has no direct role in this process. However, as argued in Section 4.3.2, local productive areas play an important role in the local food system, both reducing prices and providing buffering against seasonal fluctuations.

4.4.3 Reviewing the Agricultural Land Review

The principles underlying the existing Agricultural Land Review are not well designed to assist the City in identifying the areas most important for food security. They also do not align with the organising principles of the study, namely that in the interests of food security, the City must work towards a food system that is reliable, sustainable and transparent. These principles view reliability as stable and consistent prices, the nutritional quality of available and accessible food, and food safety. Sustainability means that the food system does not degrade the environmental, economic and social environment. Finally, transparency refers to the legibility of the system and its control by the state and citizens.

It is beyond the scope of this study to design the revised terms of the Agricultural Land Review. However, it does make the following recommendations. The current Review prioritises “unique agricultural land”, which is “land that is or can be used for producing specific high value crops.” This focus does not prioritise the food security of the poorest and does not work towards food system reliability. The revised review should be informed by the call within the NDP to link agriculture and nutrition by prioritising vegetable and fruit production. This therefore requires a review of the evaluation criteria used and the means of classifying areas. Most importantly, the weighting of the economic significance category needs to be adjusted, so that areas that produce high value crops are not considered the most important areas for protection, if the rationale is ensuring food security.

There is a need to approach StatsSA to revise their data aggregation in the Agricultural Census. The aggregation at the Magisterial District scale does not provide the City with data that can be attributed to the City’s demarcations of agricultural areas. This makes ongoing monitoring of production difficult.

There is also need for a finer grained analysis of farm offtake to capture the full range of crops being produced. Interviews conducted with farmers indicate that they produce a far wider range of crops than is represented in the agricultural census and that this mix of crops ensures continuous production, stability of income and enhances soil fertility. The Agricultural Land Review needs to be able to capture these nuances.

The final recommendation is that the revised review expands its definition of agricultural land. This would allow the City to generate a more integrated view of its productive spaces, and would challenge the commercial farming/urban agriculture binary distinction and view productive areas along a continuum. This would provide the City with a better view of its food system and provide it with a basis to protect spaces for food security more effectively.

This study recommends five categories. The first would be “urban farms”, which are the conventional, commercial agricultural lands. These are located outside the urban edge. Next are urban productive spaces, which are more mixed-used farming areas, such as the Schaapkraal and Macassar smallholding areas. Following this are food sensitive green spaces, such as Princess Vlei and the Macassar Dunes, where natural harvesting can take place, but mixed with other uses. Following this are designated urban agricultural spaces with a degree of permanence, and finally community garden spaces that are zoned for a period of time with requirement for renewal on the basis of ongoing use.

4.5 Conclusion and Recommendations

A distinctive feature of the City of Cape Town is that its relationship with food production is deeply embedded within the historical development and structuring of the city. This has meant that there are a number of agricultural areas within and on the city boundaries. Managing these areas poses a unique challenge to the City, one that has consequences for these areas but also for food access within the city. This has resulted in stress on these areas with numerous alternative land use requests being made of city officials. The complexity of the nexus between urban agricultural land use and other development needs makes decision making a significant challenge.

Regardless of the precarious nature of these areas, they are generating significant agricultural products and while some may reflect high value grapes, essential foods required by the city's residents are being produced and processed in these areas. The review of the production figures reported through the Agricultural Census highlights the volumes and viability of the different areas. The same census also highlighted how different agricultural commodities are grown in different areas. Considered collectively, these areas provide a viable and necessary functioning of the Cape Town food system. This utility is most evident in the case of fresh produce items critical to the diets of the poor. These include cabbages, potatoes, butternuts, carrots and onions – identified by informal traders as essential items (Table 6.16) and by PACSA in their basic basket (Table 8.3).

However, the long-term viability of these areas is challenged in a number of ways. One of the most critical is in how the protection status of the areas is arrived at and the methods and metrics used to arrive at the assertion of value. Assigning values associated with aesthetics and export viability may align with specific regional perspectives but obscures other values such as the contribution to food security and improved nutrition.

It is essential to note that decisions about the protection of agricultural land do not take place within a vacuum, and that the City faces a number of pressing development needs. It is idealistic to argue that decisions about land within and beyond the urban edge be made solely with food security perspective. However, there is a need to generate and protect conditions that ensure food security for the City's residents and to consciously build a food system based on the principles of reliability, sustainability and transparency to ensure the constitutional right to food. This report has argued that local productive areas are an important element of such a system. The City has a responsibility under the constitution to work towards the progressive realization of the right to food. These productive areas fall outside of the current urban edge, and the City's 2010 Evaluation of Developable Land within the Urban Edge found that there is sufficient land available for development within the urban edge to accommodate the City's needs until 2021 (CoCT 2010a, 9). It is beyond the scope of this study to identify what areas should be developed if not agricultural lands, but it is understood that in principle, state-owned land should be the primary target and that the Housing Development Agency should facilitate the release of such land.

The following recommendations are therefore made:

1. *Review of Agricultural Land Review:* A detailed review of the 2008 Agricultural Land Review is required. The revised review needs to consider the critical food system and food security needs of the city and assign suitable and representative values to these aspects associated with food production within

the city. It is understood that Provincial Department of Agriculture is undertaking a review of agricultural land within the Provincial. It is not clear though what aggregation and valuation approaches are being employed within this study. This review will need to be commissioned and completed before it can be used to inform land use planning. There are however ongoing applications to rezone agricultural land. It is recommended that in the interim the SDF's Policy Statement to protect vulnerable agricultural areas in the interests of food security be accepted and the findings from this report be used to support the protection of the areas identified as most important for food security, namely Joostenbergvlakte and the Philippi Horticultural Area, as a precautionary principle until the new review has been completed.

Level of Importance: High

Responsibility: Spatial Planning and Urban Design, Provincial Department of Agriculture

2. Integrate the productive agricultural spaces into future food security plans within the city applying a food security lens to the value of off-take from these areas.

Level of importance: High

Responsibility: Spatial Planning and Urban Design

3. *Formulate a productive land areas management plan* aligned to measures that are broader than just export production and aesthetic value.

Level of importance: Medium

Responsibility: Spatial Planning and Urban Design, Provincial Department of Agriculture

4. Following from the productive areas management plan, formulate a mechanism whereby productive areas are governed by a single city unit or entity, with designated staff and responsibilities that are derived from the management plan development process.

Level of importance: Medium

Responsibility: Proposed Food system working group.

5 Urban Agriculture in Cape Town

Key Summary Points

- Urban agriculture has been the main urban food security intervention advocated by the State.
- There is substantial support for urban agriculture by both the State (local and provincial) and the NGO sector. However, because of different ideological and economic approaches, the State and NGO sectors have not always been able to work together to achieve shared objectives.
- The City of Cape Town's Urban Agriculture Unit provided support to 201 gardens (1849 beneficiaries) in 68 Wards between July 2011 and July 2013. The Provincial Department of Agriculture's Farmer Support and Development Programme offers 114 gardens and 756 beneficiaries.
- There are over 100 NGOs working on urban agriculture in Cape Town, the three largest: Abalimi Bezekhaya, SEED and Soil for Life have innovative programmes that connect farmers to markets, provide wider skills training and have a strong focus on sustainability.
- While the focus of urban agriculture has traditionally been on low income areas as a food security or livelihood strategy there is a rise of "other" urban agricultures, which seek to address social and environmental concerns. Whilst predominantly associated with wealthier communities, there is clear evidence of residents of lower-income areas using urban agriculture for social benefits, such as reclaiming spaces associated with crime, and building social networks.
- The rise of "other" urban agricultures can be connected to a growing food consciousness in the city, as evidenced by the rise of Lifestyle Markets and Organic Box Schemes. However, at present these markets are disconnected from urban agriculture projects. This is an important opportunity.
- The focus areas of the City's Strategic Development Plan for the Promotion and Development of Urban Agriculture are supported by this report's findings. The areas are: Awareness and advocacy for urban agriculture; Policy, legal and regulatory framework; Research, knowledge and technology transfer; Production and marketing – horticulture; Production and marketing – livestock; Youth Engagement
- Recommendations include
 - *Greater focus on over-coming barriers to youth participation in agriculture through generation of opportunities along the food value chain*
 - *Promotion of access to markets and a better understanding of barriers to access resulting from current market structure. Included in this is a recommendation of development of value-adding activities*
 - *Audit of land available for urban agriculture.*

Reliability

Urban agriculture, in the form of household and community gardens can provide a means to ensure access to affordable foods, and therefore provide a degree of reliability in pricing. Additionally, it can provide better access to nutritious foods. There are however few studies that address actual production and consumption of urban agriculture produce. It is far from clear that urban agriculture products can compete in terms of price with the produce sold by informal traders. The reliability of urban agriculture products in terms of safety is generally good, particularly for projects that are able to access water from boreholes.

Sustainability

The focus of the major NGOs supporting urban agriculture is on both social and environmental sustainability. These NGOs promote the reuse of materials, the careful planning of gardens to reduce the need for inputs, and the training of individuals to ensure project longevity. Concerns have been raised that such sustainability principles are not embedded in state sponsored projects, and that there is therefore high attrition rate.

Transparency

Although there is excellent information available from both City and Province on how to obtain urban agriculture support, and good training and extension support, there is poor data collection to assess the impact of the projects supported. This makes it hard for the City to determine the role of urban agriculture in food security and the wider food system.

Role of the City

The City has had an urban agriculture policy in place since 2007 and works with the Province and NGOs to promote and support urban agriculture. The new Strategic Development Plan for the Promotion of Urban Agriculture in the City of Cape Town plots the direction for future engagement with urban agriculture. It is essential to note that this study argues strongly that urban agriculture should not be the City's only or even central entry point to address food insecurity.

Urban agriculture has been the central (sole) component of the response to urban food insecurity of all three spheres of government to date. This can be understood to be the logical outworking of the dominant framing and the location of food security strategies within National and Provincial government's Agricultural Departments. However, this focus needs to be questioned, both in terms of the understanding of food insecurity as being the outcome of a wider set of systemic challenges, and evidence of the relatively limited uptake of urban household and community food production.

The 2008 AFSUN survey, which focused on three low-income areas of the City found that less than five percent of households acquired food from own production. The recently completed 2013 AFSUN survey, which sampled 2500 households in 400 EAs across the City found that just 2.3% of households in the sampled low income EAs ever sourced food from own production, compared to 75% of households in the middle income sampled EAs and 9.6% of households in the high income sampled EAs.

This chapter reviews the current government engagement with regard to urban agriculture. It highlights critical gaps in current approaches and discusses potential

interventions to better connect urban agriculture with other food system components and meet the City of Cape Town's objectives economic, social and environmental objectives.

5.1 Existing Policies and Programmes

5.1.1 National

The promotion of urban agriculture has been the major food security intervention at the urban scale. It has consistently been the point of entry for the national government to engage the urban food security challenge. The current Strategic Planning document of DAFF engages the urban only through the lens of urban agriculture and notes:

While urban agriculture is supported by various levels of government and certainly by civil society organisations, there remains a need to create an encompassing strategy on urban and peri-urban agriculture. The purpose of such a strategy would be to promote best practice, enhance the role of agriculture in urban and peri-urban livelihoods, and improve coordination and cooperation among role players in this field. A particular focus of such a strategy would possibly be on using agriculture to support residents of informal settlements at the fringes of towns and cities. (DAFF 2013, 13)

5.1.2 Provincial

The Provincial Department of Agriculture supports a large number of household and community gardens through the food security sub-programme of the Farmer Support and Development (FSD) programme. This programme aims to "assist and provide vulnerable communities and households with the means to produce their own food and increase their accessibility to safe and healthy food" (DoA WC 2010, 46). This programme provides training and support, farming implements, seeds/seedlings, compost, irrigation, boreholes, and rainwater-harvesting barrels. Households for support are identified through the indigent registers held by Municipal Social Development Departments.

The work of this programme connects to the Provinces broader Strategic Objectives and locates itself with PS08 – Increasing Social Cohesion. Although not codified, the FSD programme works with a number of other Provincial Departments to meet its objectives, most notably the Departments of Social Development, Education and Human Settlements.

5.1.3 City

Urban agriculture has been the City's key point of engagement with the challenge of food security within its IDPs since 2007, when the City's Urban Agriculture Policy was passed. A revised Urban Agriculture strategy is currently under review. The main implementing department for the policy is the Urban Agriculture Unit, located within Economic Development Facilitation in the Economic Development Department. This Unit implements the Policy, the main objectives of which are:

Create a common vision for urban agriculture in the City of Cape Town

Identify key enabling imperatives and strategic objectives to guide urban agricultural development.

Clarify the role and responsibilities of stakeholders.

Introduce consultative forums for stakeholder participation and consultation.

Establish an institutional framework that can facilitate the development of urban agriculture

Determine an urban agricultural assistance programme by the City.

The Policy facilitates the release of Municipal land for agricultural practice, provides subsidized water for participants and provides support to agricultural projects in the form of training and the provision of agricultural resources such as tools, seeds/seedlings and fertilizer.

The City also has a new Food Gardens Policy in Support of Poverty Alleviation and Reduction (Policy number 12399c) designed to guide the Social Development and Early Childhood Directorate. This policy seeks to address food insecurity through the establishment of sustainable food gardens. It also seeks to alleviate poverty through linking food gardens with ECDs to provide nutritional meals (CoCT 2013a, 4). This policy aligns itself with the strategic focus area of the Caring City – “Provide access to social services for those who need it”. The policy therefore differs from the existing Urban Agriculture Policy, which is framed more as a means to create local economic development opportunities (CoCT 2007, 1).

The new Strategic Development Plan for the Promotion and Development of Urban Agriculture in the City of Cape Town (2013/2014-2015/2016: A multi-year programme) has seven key focus areas, which seek to translate the Urban Agriculture Policy into concrete actions. These focus areas are:

1. *Awareness and advocacy for urban agriculture*
2. *Policy, legal and regulatory framework*
3. *Research, knowledge and technology transfer*
4. *Multi-stakeholder participation, communication and the urban agriculture network*
5. *Production and marketing – horticulture*
6. *Production and marketing – urban livestock keeping*
7. *Youth Engagement. (CoCT 2013b)*

5.2 The Extent of State-Supported Urban Agriculture in the City.

The City of Cape Town has supported 201 community gardens within the City between July 2010 and June 2013, with 1 849 beneficiaries (Figure 5.1). The vast majority of these gardens are vegetable gardens, with just five receiving support for livestock activities.

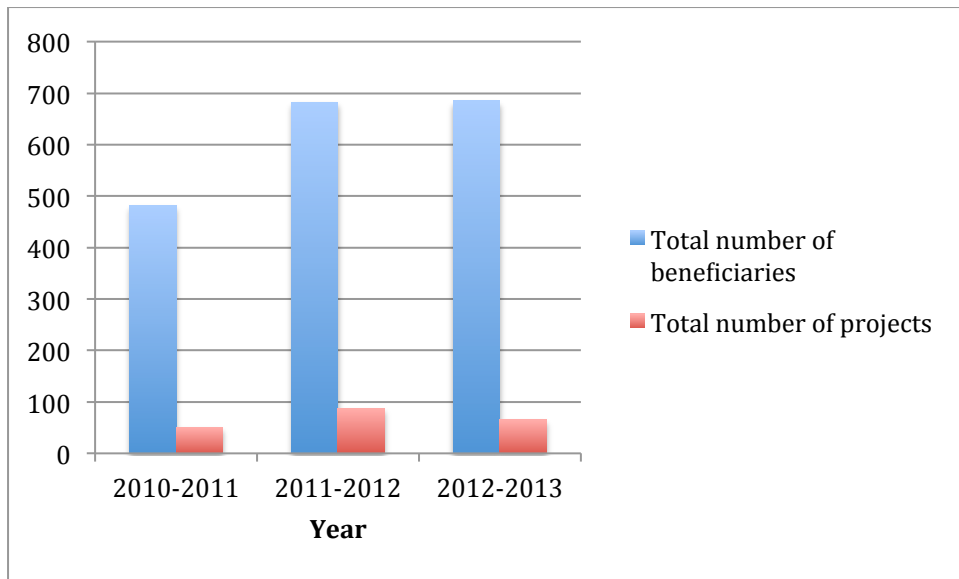


Figure 5.1 Number of projects and beneficiaries supported by the Urban Agriculture Support Programme.

These projects are widely dispersed across the city, with at least one project present in 68 of the City's Wards. The projects are overwhelmingly concentrated in areas of low income and high unemployment. Postal addresses for all projects were not available, but Figure 5.2 illustrates the location of projects that received compost and kraal manure inputs from the Urban Agriculture Support Programme from May 2011 to the present.

In addition, the Social Development and Early Childhood Development Directorate support 38 projects. These projects are located in Nyanga (5), Bloekombos (4), Harare (3), Du Noon (7), Khayelitsha (2), Wallacedene (2), Uitsig (2), Ruyterwacht (2), Mfuleni (6), Gugulethu (1), Lavender Hill (2) and Sir Lowry's Pass (4). These projects have received compost or manure, sawdust, seed packs, hosepipes, rakes, spades, forks and wheelbarrows.

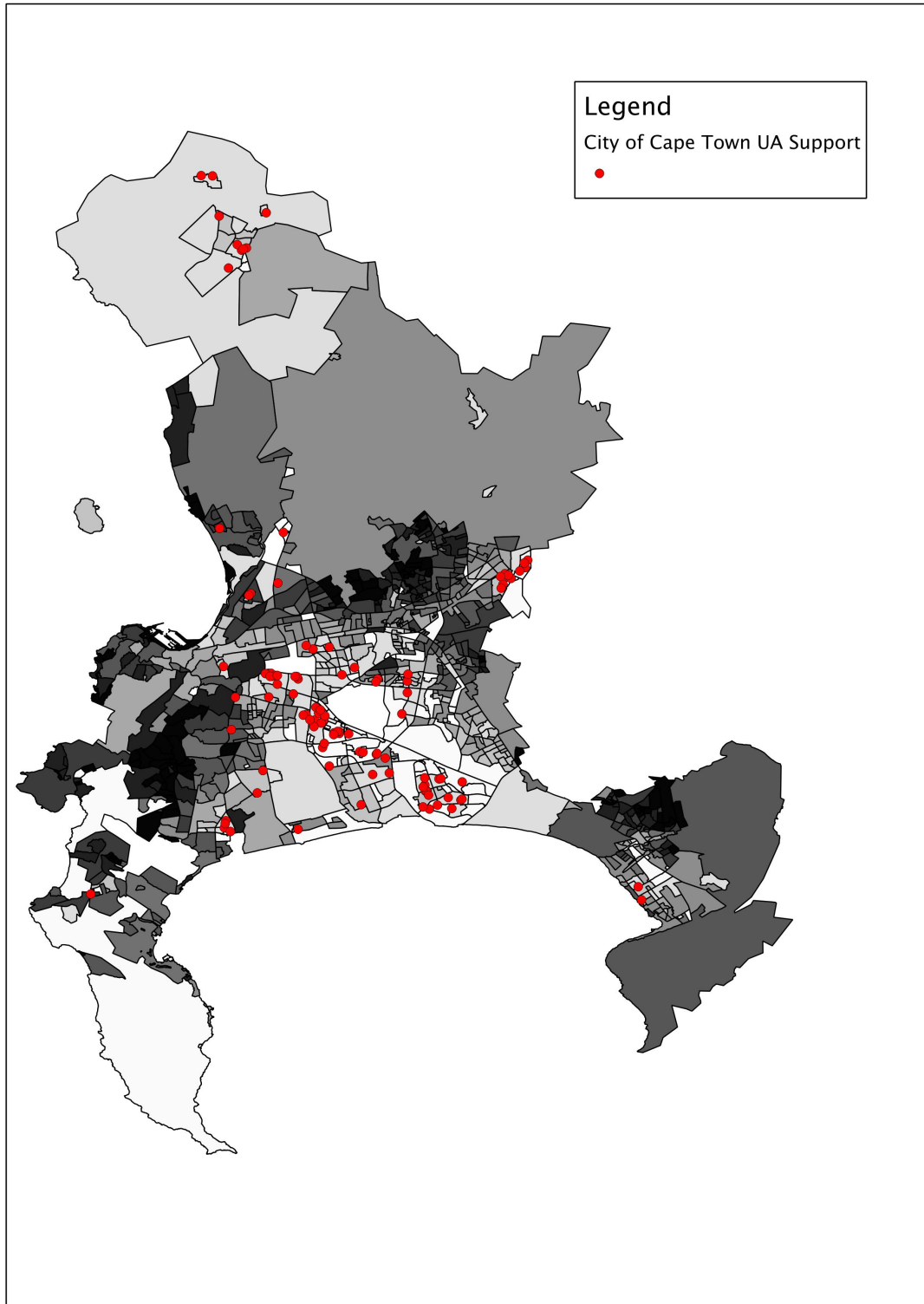


Figure 5.2 Agricultural projects receiving compost or kraal manure from the UAU (May 2011-Present)⁴

⁴ All maps use Census 2011 average income per subplace data as their background. Income bands are derived by using 10 category decile quantile system.

The Provincial Department of Agriculture has supported 114 community gardens within the City from 2008 to present (Figure 5.3). There were 756 beneficiaries noted in the community garden projects. The data held by Province do not indicate what is being produced by the projects beyond a broad categorization of “Vegetable” and “Chickens”. The vast majority of projects (93%) are producing vegetables (106 out of 114), with a very small number engaged in raising pigs (2), chickens (3), egg laying chickens (1), and producing mushrooms and honey (2). Some gardens receive support from both Province and City.

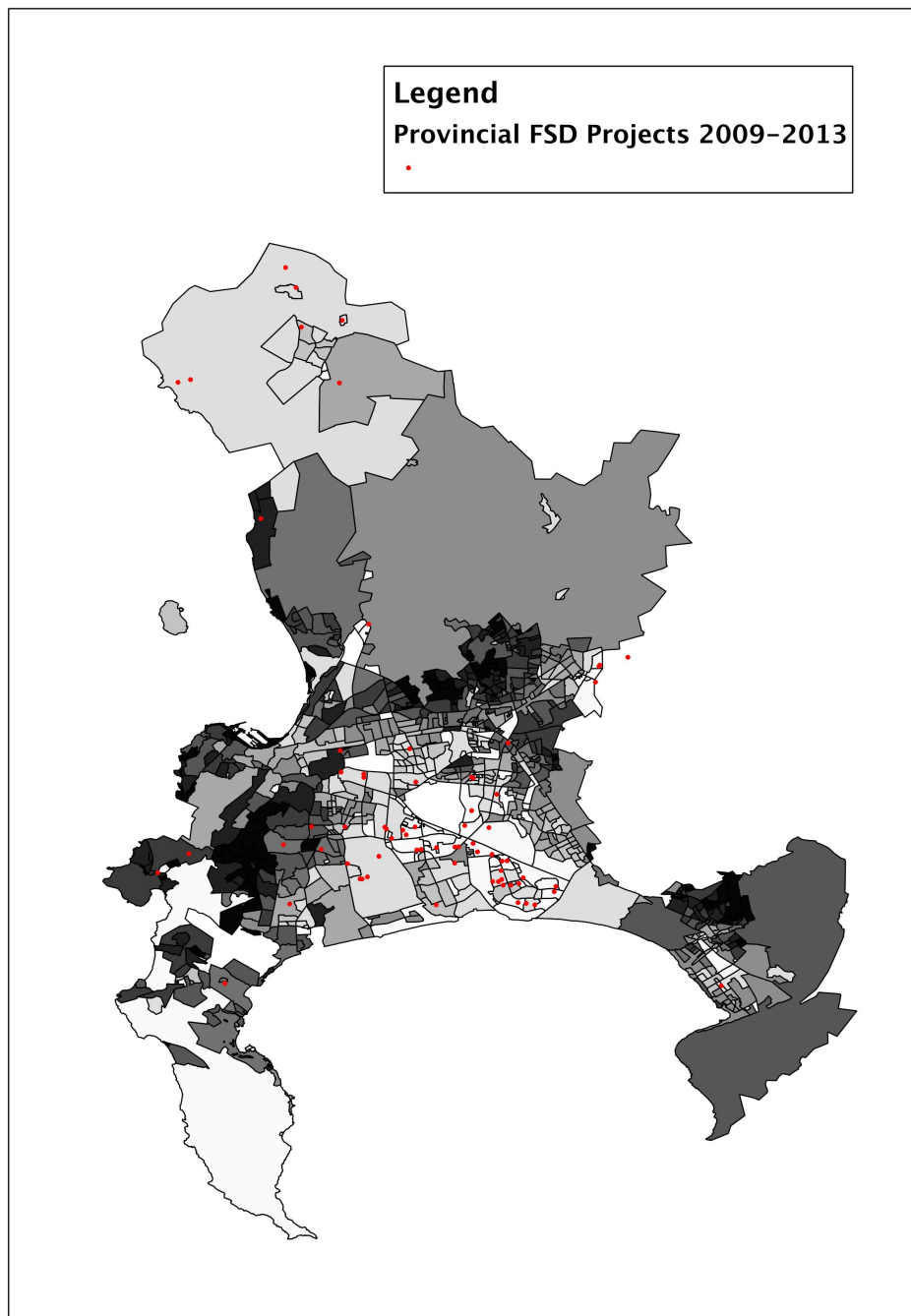


Figure 5.3 Location of community gardens supported by the Provincial Department of Agriculture's FSD programme 2009-present

Six gardens supported by the Provincial Department of Agriculture's Farmer Support and Development Programme were visited for the purposes of this report. An assessment is provided in Box 5.1

Box 5.1 Report - Field assessment visits of urban agriculture sites supported by Department of Agriculture in the Cape Town Metropolitan Area.

To evaluate the urban agriculture support programme of the provincial department of agriculture, 6 project sites were visited: 3 in Khayelitsha, one in Gugulethu and 2 in Philippi. A representative of each project was interviewed using a standardised survey questionnaire. Interviews were conducted with the assistance of a provincial officer, who also acted as interpreter when necessary. The sites were identified by provincial officials and according to the GDARD liaison, these sites were not the most successful ones. Several key themes emerged from site observations, survey interviews and informal conversations with beneficiaries and officials.

What site conditions and setup were observed?

Sites were typically located on marginal lands on or next to government properties such as schools, clinics, courts or markets. Soils were generally poor - very sandy, with little organic matter evident (Fig 1). Most sites had compost heaps or piles of compost which had recently been delivered by NGOs or by departmental officials. The sites were small and typically surrounded by security fences to prevent theft or vandalism. They were mostly located directly within the settlement and location was determined by availability of space on municipal land. Shipping containers were used to securely store tools, seeds and equipment (Fig 2). Boreholes had been established at all sites visited, although in some cases the pumps had not yet been fully installed.



Figure 1: Growing on poor soils



Figure 2: Shipping containers to store resources

All sites had been identified by provincial officials and had been supported as part of the provincial food gardens development programme. They thus all had the same basic set of equipment, which usually consisted of wheelbarrows, forks, spades, hand-forks and -spades, hosepipes, hoes, watering cans and rakes. The observed similarities in project setup are probably a reflection of the consistent application of the province's programme design.

Participants were mainly pensioners or mature adults - the average age of respondents was 50. This may be due to the free time this age cohort has, but also due to their own more positive attitudes towards agriculture. Most reported having grown up helping parents and grandparents farming in the rural areas of the Eastern Cape and almost all therefore had some prior experience of agriculture.

What are food garden projects cultivating?

Respondents reported cultivating a wide variety of vegetables, most commonly cabbage and cruciferous vegetables (100% of respondents) beetroot, spinach and onions (83%), carrots, beans, pumpkins, potato (67%), tomatoes, mielies, fruit and herbs (50%). Most respondents indicated that they produced throughout the year. Although projects were close enough to be exposed to similar microclimates, there was little consistency in terms of which months were most productive and which were less so. All had received training from the province, 83% had received training from Abalimi, and only one project reported having received any kind of training from other more established vegetable farmers. No poultry or other animals were

observed at any of the sites visited.

What environmental challenges do urban food gardens in Cape Town face?

Urban farming is not easy and entails various challenges and risks, many of them climatic or ecological. Urban farming in the Cape Town Metro is faced with very particular challenges as a result of the specific ecological and climatic conditions. This was most clearly reflected by reported crop losses by 80% of respondents. Among the different causes were strong winds causing sand blasting to crops (mentioned by 80% of respondents), pests (snails, rats, birds and caterpillars) (60%), flooding (40%) and theft (40%). Lack of water and extreme heat were mentioned in 20% of cases. The marginal nature of the land and poor soils mean that these projects require intensive agricultural inputs to enable production (Fig 3).



Figure 3: Significant environmental challenges



Figure 4: Use of shade cloth and mulch to save soil

Are Urban Farmers able to access viable land and are they secure in their usage rights?

The space available for cultivation was limited in most cases. As a result, quantities produced limited the financial viability of projects. In most cases the number of people per hectare was very high - over 160 in one case where approximately 10 active members worked on an extremely small section of land. In a comparable commercial organic farming venture, this figure would probably be around 3 or 4. This means that any profits would be shared among a large number of people, making for almost negligible financial benefits to participants. This was mentioned as a major discouragement for participants.

Approximately half of the respondents indicated that they felt insecure in terms of their land use. They expressed concern that land use rights would be withdrawn to give preference for other land use such as the construction of additional classrooms at schools. The issue of insecure tenure makes extensive investment into infrastructure unviable - investors and government agencies are unwilling to invest substantial funds into land that may be re-claimed. Insecure tenure also means that more valuable perennial crops as well as fruit and nut trees would be risky to plant.

Are food garden projects able to access resources?

The survey explored access to various productive resources including water and water management infrastructure, seed, fertiliser, pesticides, finance and advice.

Water access was a recurrent issue - 50% of respondents indicated difficult or inconsistent access. Projects were often located on school or other government land and facility managers were unwilling to cover costs of watering garden projects from their own budgets. This had compromised productivity on several sites visited. Boreholes had been installed in several projects, but access to electricity to run these boreholes was a further limiting factor.

Some water 5000l tanks were observed, but in several cases, these were neither connected to gutters nor functioning to hold borehole water. Institutions on whose land the projects are located were in some cases unwilling to have tanks attached to their buildings, and most projects have no roof surfaces to attach tanks to. If fed only by rain, tanks generally have far too little storage capacity to be useful as a primary source of irrigation water for anything larger than a

small household garden. Projects reflected effective irrigation technology including sprinklers and drip irrigation (67%), watering cans (67%).

Almost all respondents also mentioned access to tools as a problem, which is probably a reflection of transport limitations that constrains economic participation and access to resources and income opportunities in these former township areas.

Thirty percent of respondents indicated that advice was difficult to access, the remainder indicated that they relied on the provincial department for advice.

Finance was reported by half of the respondents as being unavailable, a further 30% indicated that it was difficult and inconsistent to access. Some indicated that they invested their own meagre resource from other income sources such as rental to purchase any supplies that they could not otherwise source. Acquisition of further agricultural inputs depended on the availability of funds from project budgets.

Market access is an important issue that underlies the financial viability of urban farming projects. Abalimi was mentioned as the primary market access channel by 83% of respondents, with 60% reporting sales to the local community and 33% to informal traders. A third of the respondents reported selling to government institutions like schools or clinics. However, some respondents mentioned that some of the host institutions expected to receive produce for free. Sales to opportunistic bakkie traders and formal fresh produce markets (Philippi) were reported by only 17% of respondents.

An informal interview with a provincial official indicated that quantities and reliability of supply were inconsistent due to the small size of the projects and that formal retailers and informal traders alike found this to be a hurdle.

Do Food Gardens Generate Significant Incomes?

Respondents indicated that they were able to generate an average of approximately R1600/month – some projects mentioned as much as R4 000 while others as little as R600. Savings accruing from not needing to purchase vegetables amounted to an average of about R190 per month for each project participant. Product sales were mainly to the local NGO Abalimi Bezekhaya. A total of 83% of respondents mentioned Abalimi's Harvest of Hope programme as a customer and indicated that this was their primary market access. Some mentioned a lack of transparency and issues with record keeping. However, the harvest of hope programme appears to be playing a valuable role in allowing projects to aggregate their produce to a scale that permits more reliable supply to a high-end market.

Why dependence on external inputs hampers sustainability

Responses to resource access queries reflected a fundamental dependence on the provincial department and Abalimi for input supplies - most beneficiaries indicated that access to resources such as seedlings and fertilisers would be difficult if these were not supplied by province. Similarly, many of these inputs depended on the availability of project budgets. The projects typically incurred large capital investment costs to set up - quality fencing, containers, boreholes, pumps and tools easily add up in excess of R130 000.

This is a major concern, as the projects are not likely to become economically viable given the large numbers of participants, small areas of land and high input costs to compensate for poor soils, climatic challenges, and need for ongoing maintenance of security investments like fences. The present programme design requires large capital investments to establish small projects that will continue to depend on provincial staff and budgets to continue and generate very small amounts of income for a small number of people.

Are food gardeners food secure?

As these projects are conceived primarily as food security interventions, officials were very interested to include food security assessments in the survey. All respondents indicated that they ate vegetables from their own gardens. Four questions were included in the survey as they also form part of the department's regular household screening process. Responses were

distinguished according to frequency of occurrence over the past month (never 0, rarely 1, sometimes 2, often 3). Aggregate scores of a maximum of 4 are reflected below. Participants were asked:

- How often they were not able to eat preferred foods due to lack of money: 1.83
- How often the household had to eat a limited variety of food due to lack of money: 2.16
- How often household members had to go to bed hungry due to insufficient food: 0
- How often household members go without eating anything all day because there was no food: 0.33

These findings suggest that although most households rarely if ever experience hunger, they are likely to reduce the diversity of their diets to compensate for lack of money. A simplified dietary diversity score questionnaire was also included in the survey. This found that all households had eaten vegetables and grains in the last 24 hours. Only one of the respondents had a household dietary diversity score equal or below 4. However, the responses indicated energy-dense diets that did not include enough pulses and nuts. When nutritionally poor food groups were removed from the score, the resulting diversity of healthy foods was significantly lower. From this perspective, it seems that the participants generally had reasonably diverse diets and that the food gardens at least ensured that all beneficiaries were able to eat vegetables almost daily.

However, none of the respondents mentioned having received nutritional counselling, and the selection of produce promoted should perhaps be more clearly aligned with improved nutritional outcomes by for example promoting more pulses, nuts and dark green leafy vegetables.

Training should explicitly include nutritional counselling and agricultural planning.

What were the issues project members raised?

Participants mentioned several issues that they felt warranted attention of policy-makers and extensions services. They expressed a need for adequate shelter (the containers become baking hot in the sun), lockable storage and toilet facilities. The issue of longer-term lease agreements and secure tenure was raised several times. Some expressed a need for ongoing support, and one mentioned a need for stipends to cover labour costs to employ seasonal labourers.

Recommendations

Although this brief survey was able to visit only a small sample of projects, several key issues emerged, which are summarised below.

Secure tenure of sizeable tracts of land

Fundamental are the problem of the size and quality of land available and the insecurity of tenure. These factors severely limit prospects for sustainability or financial viability. These problems could be addressed by identifying much larger and continuous tracts of more viable land that should be earmarked for agricultural use in binding contracts and should be removed from development pressures through long-term leases of at least 25 years. Production infrastructure in large projects could operate more economically and the investment per beneficiary could become lower. This would also make the investment into perennial cropping systems incorporating fruits, nuts and productive windbreaks more viable, which in turn could ameliorate some of the environmental challenges faced. Allotment systems have been successfully implemented in many countries and can serve important additional purposes such as improving microclimates, improving stormwater management and retention, and making open spaces more secure and aesthetically pleasing. Such land use recommendations should be incorporated within IDPs and Spatial Development Frameworks.

Develop greater independence from external inputs and budgets

The great dependency on external inputs to sustain production is a major hurdle for sustainability, and the fact that these projects rely on province and NGOs like Abalimi for inputs

makes them doubly vulnerable to dynamics they have little control over. This could be addressed by establishing projects following a low-external-input approach that may incorporate greater collection, storage and use of ambient resources through water harvesting and photovoltaic technology (these might only be viable in the context of much larger projects and secure tenure). The reliance on other government institutions to provide inputs like water or electricity for boreholes is a similar problem which makes projects vulnerable to local politicking and budget cuts in unrelated sectors.

Develop local resources, networks and capacity

The dependency issue could be further addressed by adopting asset-based community development approaches and by developing local networks between projects to pool resources like land, seedlings, knowledge and capital, providing more reliable supplies to formal and informal retail and developing greater purchasing power. This could be combined with approaches based around local farmer field schools like those implemented with apparent success by Helen Keller International in Bangladesh. Such systems emphasize peer-based learning, the development of local expertise and capacity, and the sharing of productive resources, especially seeds.

Important Caveat:

Despite the official view of urban agriculture as a food security intervention, it is hard to substantiate the role of urban agriculture in the wider food system of the City or in food security for low-income residents due to the nature of the monitoring and evaluation of Municipal and Provincial projects. No data was available on what is actually being produced and where the food actually goes. There is an urgent need for monitoring and evaluation of projects to be adapted to address these questions.

5.3 Non-Governmental Actors in Urban Agriculture

In addition to support for urban agriculture by the City and Province, there are a large number of NGOs and CBOs engaged in urban agriculture support at the community and household garden scales. Some of these organizations have direct working relationships with the state: for example, Soil for Life has an official MOU with the City of Cape Town. This MOU commits Soil for Life to training and managing 200 trainees in partnership with the City over a period of one year. The trainees will be “taught how to grow their own food, assisted to gain skills with which to generate income from the garden. They will be equipped with life skills and basic business skills to enable them to manage the garden as a small-business venture” (CoCT 2012, 5). In addition to organizations working on household and community-scale gardens, there is a small number of organizations working to support small-scale commercial farmers, through agricultural support and business training.

The most prominent urban agriculture support organizations are Abalimi Bezekhaya, SEED and Soil for Life. A student at Stellenbosch University has identified over 100 registered Not for Profit Organisation (NPOs) working on urban agriculture related projects. This list is far from exhaustive. The following section provides information the three largest organizations in order to give a sense of the extent of their contribution to urban agriculture in the City, but also to demonstrate the range of approaches to urban agriculture. The diversity of approaches and rationales highlights the multiple understandings of the actual and potential role of urban agriculture in the local food system. It also identifies a potential challenge to further collaboration between urban agriculture stakeholders who may have very different perspectives.

5.3.1 Abalimi Bezekhaya

Abalimi have been operating since 1983 as an urban agriculture and environmental action programme, which aims to improve sustainable food production and environmental greening amongst the poor in Cape Town. Since 2008, Abalimi has run their Harvest of Hope Programme, which seeks to provide a market for their farmers through sale of vegetables in an organic vegetable box scheme. Harvest of Hope sells between R250 000 and R500 000 worth of fresh produce from the 30 or so Harvest of Hope gardens per annum in the form of 400 vegetable boxes per week (Small 2013).

Abalimi currently supports over 200 gardens. Figure 5.4 below provides an indication of the location of current Abalimi gardens contributing to Harvest of Hope and other Abalimi supported gardens. Abalimi also has over 5 000 micro-farmers on its Farmer Register, and in 2013 supplied and supported approximately 2 000 micro-farmers. The gardens are clustered in low-income areas.



Figure 5.4 Abalimi-supported gardens (Abalimi data - source: Lyons 2013)

5.3.1 SEED

SEED is an urban agriculture project based on the principles of permaculture. There is a particular focus on creating gardens in schools in low-income areas that serve as food and educational resources through their Organic Classroom Programme. SEED currently supports 100 home gardeners in Mitchell's Plain and is facilitating the Mitchell's Plain Food Freedom Initiative aimed at educating and supporting home gardeners based again on permaculture principles (Brown 2013). The NGO has grown food in 40 schools in the City. The programme has also trained over 80 youth on an accredited permaculture course and fed 75% of them into green jobs:

SEED takes a long-term view on food security. We know that early ecological education is key to unlocking the self-sufficiency of whole communities but we are at a point where food security is so threatened and our communities so despondent that there is an urgent need to escalate food systems into home gardens. We are answering to this need by creating human ecosystems; gardeners who can share with and assist a new group of food garden growers. The Food Freedom programme also sees the launch of an alternative currency system (aptly named seeds). Rocklands committee members are paid in seed currency to support other homes with food gardens and to build the Rocklands Urban Abundance Centre nursery and compost capacity. Seeds are redeemed for cash as well as garden inputs. The program also mentors the gardeners with start-up workshops and ongoing training.” (<http://www.sprig.co.za/2013/08/press-release-food-security-boost-for-mitchells-plain-community/>)

5.3.3 Soil for Life

Soil for Life has been operating since 2003 and focuses on “teaching people how to build the soil and grow healthy plants so that families can sit down to plates of safe, fresh nutritious food all year round” (Soil for Life 2012). The programme views urban agriculture not just as production of food but also as a means of social upliftment, cohesion and community development. The programme also focuses on sustainable use of resources and therefore also has a skills programme that teaches preserve making, compost making, the making and use of a hotbox to save electricity, preparation of economical and healthy vegetarian food, plant propagation and the use of recycled materials to produce crafts.

The home garden project has been running for the past five years and has fully trained 1 598 people. The training focuses on building soil fertility, conserving water, utilizing all available resources and ensuring that there is no damage to human or environmental health, thereby seeking to ensure environmental and economic sustainability. In recognition that a number of gardens have not been sustained, Soil for Life has recently embarked on a more structured process of monitoring and evaluation in order to better target their activities. Soil for Life operates throughout Cape Town, with clusters in the Retreat/Lavender Hill/SeaWinds area and in Manenberg, Eerste River, Philippi and Nyanga (Soil for Life 2012).

Soil for Life also operates Weekend Workshops which cater to a wealthier demographic, and teaches core gardening principles (Vaughn 2013).

5.4 Middle-Class Urban Agriculture

Urban agriculture in South Africa (and in the global south more broadly) has been framed by policy makers and NGOs more or less exclusively in terms of food security and livelihoods. There is currently an emerging set of urban agriculture engagements that suggest a different set of food system concerns, in upper, middle and low-income areas.

Within middle and upper income communities there is a growing global interest in own food production and in purchase of food that is produced in environmentally and socially sustainable conditions. In terms of own food production, interviews with garden maintenance companies and nurseries indicated that a large number of

gardeners have converted their garden spaces into vegetable growing areas. Starke Ayres noted that they have seen a shift in customer purchases of seeds and seedlings, with an estimated 500% increase in the vegetable aspect of their business over the past ten years. Evidence of this burgeoning interest is supported by the increase in training by Soil for Life. The success of the Oranjezicht City Farm is indicative of this emerging interest, as is the current discussion on Rooftop Gardens within the CBD.

The growing interest in food production and food provenance is evidenced by shifts in purchasing patterns and the rise of the “Organic Box Scheme.” Abalimi’s Harvest of Hope project sells 400 boxes per week. The box schemes generally focus their marketing on the key principles of “organic”, “seasonal” and “ethical”. This signals a shift in the buying sensibilities of consumers and an increasing awareness of the food system.

Two further indicators of increased awareness of the local food system, and the desire for alternative food logics, are the rise of local food blogging (for example, www.foodwithastory.co.za and www.livetoeat.co.za), and the rise of the “Lifestyle Market”. As Figure 5.4 indicates, there are now a number of markets operating within Cape Town that promote local, sustainable and ethical consumption. However, it is worth noting that these markets operate almost exclusively within higher income areas of the city. Although fresh produce is sold at these markets, none are sourcing this produce from the urban agriculture projects in lower income areas. This is a profound disconnect and a potential opportunity for the City to connect urban agriculture projects to markets.

It would be incorrect to suggest that the interest in urban food production beyond a food security and livelihoods approach is only an upper and middle-income area phenomenon. Research has indicated that in low-income areas urban agriculture is also viewed as having significant social benefits. In her thesis work, Dunn found that urban agriculture practitioners began projects to reclaim problematic spaces in the townships (Dunn 2010). Battersby and Marshak (2013) found that urban agriculture provided a means to generate a sense of community and provided a source of positive identity for participants. These benefits indicate the potential of urban agriculture projects to meet a range of City objectives, including public safety and community development.

The re-emerging of the practice of local food production and the desire for short, traceable value chains can be attributed in part to growing concerns following a series of high profile local and international food scandals, such as the mislabelling of food as Halaal, the contamination of meat. This is evident from the highest to the lowest income residents of the city, with low income households expressing a preference for live chicken for taste and cultural reasons, but also because of the massive shrinkage from cheap, heavily brine-injected frozen chicken.

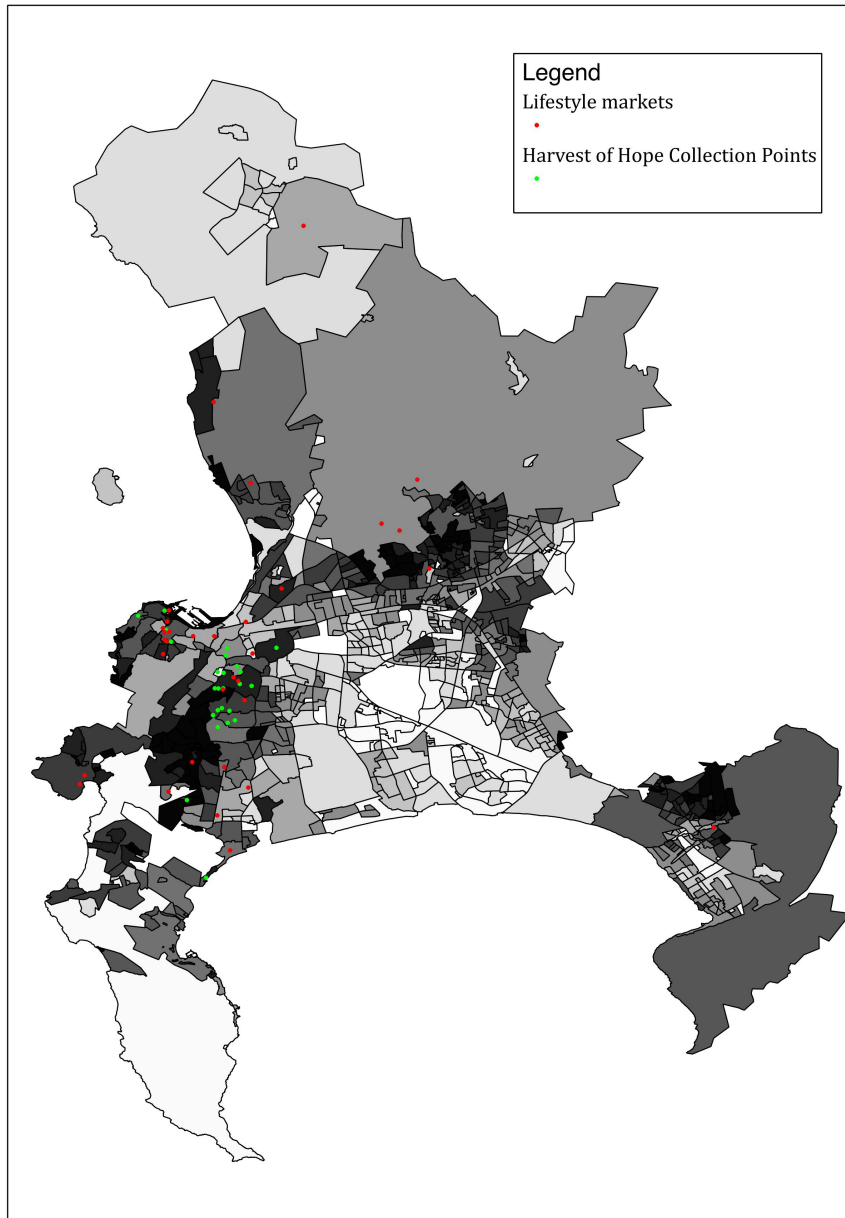


Figure 5.4 Location of Lifestyle Markets and Harvest of Hope collection points (Source of HoH data: Lyons 2013)

5.5 Urban Agriculture in Low Income Communities

Despite current government and NGO efforts, participation in urban agriculture across the city remains low. The 2008 AFSUN survey found that less than five percent of households in low-income areas were consuming any food that they produced (Battersby 2011). The more recent 2013 AFSUN survey found that in sampled low-income areas just 2.3% of households ever sourced food through own production, compared to 7.5% of households in middle-income areas, and 9.6% of households in the high-income areas.

While urban agriculture has been promoted as a strategy for the “poorest of the poor” reference, evidence from Cape Town and elsewhere indicates that participants are generally not from the lowest income groups (May and Rogerson 1995, Dunn 2010, Battersby 2011, Zezza and Tasciotti 2010). Nor are they vulnerable recent migrants (Foeken 2006, Dunn 2010). There is a need to interrogate the assumptions about who the beneficiaries of urban agriculture interventions are.

There are a number of barriers to the uptake of urban agriculture. Box 5.1 provides an overview of some of the barriers experienced by people involved in urban agriculture. In addition to these practical challenges, a number of studies have identified other barriers, including the widespread perception of food production as traditionalist and retrogressive rather than progressive (Møller 2005, Dunn 2010, Szewczyk 2012, Battersby & Marshak 2013).

Given the limited uptake and the significant barriers to the viability of urban agriculture, it is necessary to interrogate why this remains the central focus on the City’s food security interventions. David Maxwell, writing about the rise of urban agriculture advocacy by NGOs and governments in Africa, has argued that the rapid growth of urban agriculture advocacy is the outcome of the “shifting of responsibility for bearing the costs of economic adjustment from the state or other employers to the poor themselves” (Maxwell 1998, p. 46 in Battersby 2013, 455). Given the systemic nature of the food security problem in the City, this report suggests that there is a need to look beyond urban agriculture as the City’s only or main entry point to engage food insecurity.

5.6 Conclusion and recommendations

There is considerable political and NGO support for urban agriculture in Cape Town. The City’s resources may be best used in supporting the NGO sector in its urban agriculture work. The section above has highlighted a number of concerns about the ongoing over-dominance of urban agriculture as the policy response to food insecurity. That noted, this section concludes by identifying opportunities to enhance urban agriculture’s potential within the city.

The findings of this section fully support the focus areas suggested in the new Strategic Development Plan for the Promotion of Urban Agriculture in the City of Cape Town. The three specific points below have been identified as areas of particular need.

1. Youth participation: The City’s Urban Agriculture Unit has identified urban agriculture as a potential livelihood and employment opportunity for young people, given high levels of youth unemployment in Cape Town. However, there is low participation of youth within government and NGO projects. Research by Szewczyk (2012) on urban agriculture projects in du Noon and Joe Slovo identified a number of barriers to youth participation: a) Negative perceptions of urban agriculture as rural and as something for old people. Additionally, youth perceptions of urban agriculture were further negatively shaped by the use of gardening as punishment in schools that had urban agriculture projects, b) Older farmers on existing projects had negative perceptions of young people and therefore acted as gatekeepers barring them from inclusion in projects, c) Lack of desirability as a livelihood strategy. The youth saw no clear markets for agricultural products and therefore were not motivated to participate. The attitudinal challenges can be addressed through working directly with youth, schools and older gardeners. The challenge of market access is addressed below. There are opportunities to connect youth participation throughout the food value chain.

Level of Importance: Medium

Responsibility: Urban Agriculture Unit, Social Development.

2. *Access to markets:* The challenge of market access is a significant barrier to the viability of urban agriculture. The model used by Abalimi through its Harvest of Hope scheme has been very successful at providing a consistent market for small producers. The Provincial Department of Agriculture has however raised concerns that this model does not fully benefit the gardeners and the wider community. It argues that it does not address the food security problems of low-income areas because it moves the locally produced food out of the areas of production and sells them to an elite market. The question is then how to ensure that locally produced food is effectively and competitively marketed in low-income areas. Given the paucity of data on what is actually being produced and at what financial cost, it is not clear whether there is a viable market for produce from government-supported projects. The Abalimi model is viable because it can charge high prices for its organic produce. Were efforts to be made to market urban agriculture produce in low-income areas it would have to be competitive on price with all other produce. As discussed in Chapter 7, there are large volumes of fresh produce being traded in lower income areas through the informal trade sector. This produce mainly comes directly or indirectly from the Cape Town Fresh Produce Market and is usually second grade and therefore cheaper than the produce sold in supermarkets. It is not clear that the urban agriculture sector could compete with this. However, should there be an interest in increasing the market viability of such produce, the City could consider preferential trading positions and conditions as a mechanism to improve market access. This approach has been used in places as diverse as New York City and Belo Horizonte (See Section 7). It is not feasible for these projects to sell individually into the supermarket sector because of problems of lack of cold storage, lack of quality and safety guarantee and lack of guarantee of volume. There may be possibilities for co-operative selling strategies. A final issue to be considered is that of "value add". Support for rudimentary processing, such as jamming and canning, would increase the value of the agricultural products, provide additional transferable skills to participants and lengthen the shelf life of the product thereby making urban agriculture a less seasonal livelihood. Soil for Life currently has such value-add projects and there may be partnership opportunities.

Level of Importance: Medium

Responsibility: Urban Agriculture Unit, Economic Development, Food Control Programme

3. *Access to land:* At the Food Security Summit in Khayelitsha in May 2013, there was a call for an audit of open land to be conducted in Khayelitsha and Mitchell's Plain. This would identify land potentially available for urban agriculture. Abalimi has identified access to land as a limiting factor on the expansion of their Harvest of Hope project. It is therefore recommended that a land audit be completed and new mechanisms for ensuring release of land and security of tenure be considered.

Level of importance: Medium

Responsibility: Urban Agriculture Unit, Spatial Planning and Urban Design, Planning & Business Development Management

4. *Better data collection:* There is an urgent need to generate data on the impact and effectiveness of existing City and Provincial agricultural projects, as well as those supported the NGO sector. At present there is no data on what impact these projects have on household food security, or livelihood opportunities. There is therefore no way to assess their impacts as food security interventions.

Level of Importance: High

Responsibility: Urban Agriculture Unit, Provincial Department of Agriculture

6 Food Flows

Key Summary Points

- There is a fundamental lack of coherent data on flows of food to and within the city due to the complexities of the food system and the control of data by private sector actors.
- This section therefore articulates flows through discussion of national and local import and export trends, flows of food through the Cape Town Fresh Produce Market (CTFPM), and case study material on flows of food within the city through informal trader networks.
- Post-apartheid trade liberalization replaced direct control over imports and exports with tariffs, which have altered trade patterns. Concerns have been raised about the impact of increased import of processed foods on national consumption habits. There have recently been a number of high profile sectoral discussions about the negative impact of low tariffs on South African agro-processing, which is weighed up against the impact on bringing down food prices.
- Although beyond the City's sphere of influence, there are important questions about the benefits and challenges of current trade policy for the food system and food security.
- Cape Town is a major export and import point. The Western Cape produces 21% of national agricultural production, but 45% of all agricultural exports. The vast majority of flow through Cape Town.
- The CTFPM is one of the two main sources of fresh produce sold in Cape Town – the other being the major retailers – and is the main source of fresh produce for the informal trade sector.
- The CTFPM has experienced a decline in tonnage traded in the last ten years, as the retailers have increased their direct purchase from farmers. It remains important as the source of produce for informal traders and plays a role in moderating food price fluctuations. Finally, the location of the CTFPM in Epping is argued to support/justify the location of 20 or so other food businesses.
- The case studies of the informal trade sector and the connections between formal and informal food sectors indicate the complexity of flows within the city. Informal traders acquire food from multiple sources, often on a daily basis.
- Traders sourcing strategies are driven by their cash flow, storage and refrigeration capacity and transportation constraints.
- Traders have flexible purchasing patterns to ensure the best price and quality. It is therefore argued that ensuring a diverse food system is of benefit to traders and therefore to low-income consumers.
- Trade networks are dense and interconnected and are therefore responsive to both price pressures from above and below. The flexibility of being able to access food from multiple sources provides traders with some resilience to price shifts and the dynamics of customer demands.
- The following recommendations are therefore made:
 - *Data:* The paucity of data hinders strategic food system planning. Systems to collect and synthesise data must be brokered between City and the private sector
 - *Traders:* The informal traders are an important component of the local food system and generator of flows. An enabling environment that extends support beyond interventions at point of sale should be created in order to facilitate their sourcing of food.

Reliability

The material presented in this chapter suggests that the current configuration of flows into the City are providing more consistent pricing of fresh produce than is experienced elsewhere in the country. There are, however, concerns about the increased flow of highly processed food into the country and into the local diet. The section further contends that the presence of the CTFPM and the dense informal trader network provides Cape Town's poor with a range of mechanisms to access fresh produce (and other foods) at consistent prices.

Sustainability

There is little to note about the sustainability of this component of the food system, except the possible environmental sustainability of local production as evidenced in the retail mix of the supermarkets in Table 6.9

Transparency

The lack of transparency in the flows data is a major challenge in understanding the food system. City's decision-making capacity is therefore compromised by the lack of available data. There is an urgent need for such data to be made available.

Role of the City

The City plays multiple roles in the flows of food. Although privatised, the City still plays a role in ensuring the viability of the CTFPM, which has been demonstrated to be an important source of fresh produce for informal traders. Additionally, the City plays a role in the viability of the informal food retail sector, which is an important source of flows of food within the City. There is an urgent need for the City to engage the private sector and StatsSA and the SAHRC to attempt to access data on food flows.

A drive along the N1 or N2 or a visit to the harbour reveal that there are substantial flows of food into, out of and within Cape Town. However, these flows are poorly documented and understood even less. Central to the challenge of understanding flows is that the question has not previously been asked at the city scale in South Africa.

In recent years there have been a number of attempts in other contexts to quantify different kinds of flows using a range of techniques including material flows analysis (Barles, 2009) and sustainability reporting (in the form of 'footprinting', trade flows and consumption patterns.) (Gasson, 2002) None of the existing approaches adequately address the question of flows of food into, out of and within an individual city, for reasons that are discussed below. The key challenges are (a) the problem of the scale and kind of data that has been gathered, and the highly privatized nature of the food system, which makes accessing available data a very difficult task.

Key to the processes of collection and assimilation of flows data is to understand the purpose for which this information is needed. This utility question informs the grain of the detail collected and the temporal nature of these flows. Take, for example, the case of grain in 2012. A great deal of maize is shipped through Cape Town for export, while at the same time, a great deal of maize is imported, some of it through Cape Town and some through Durban, via Croatia. This dynamic was related to the 2012 grain harvest year and may change in 2014. While this flow of food into, out of and through Cape Town is of interest, and has implications for port and excise functions, what is the net impact on food security and how and in what ways does city management engage with such flows information?

6.1 Measuring Food Flows

A review of the international flows literature and data sets for this study examined how flows data is collected and used and how gaps in data are accounted for. This exercise identified four key uses of flows data, each with difference scales of enquiry, different grains of detail and with different utility. These include (a) material flow analysis, (b) sustainability reporting (footprinting), (c) trade flows (imports and exports) and (d) consumption patterns. These approaches are all designed to address different questions.

Material Flow Analysis: Material Flow Analysis (MFA) is a tool that provides indicators for sustainability. MFA is generally used at the national scale (see for example Weisz et al 2006), although it is not extensively used in developing countries. Generally MFA is based on secondary data calculated from national figures. The analysis is based on the determination of the main inputs and outputs for the system under consideration and does not require a description of the material circulation within the system. MFA seeks to determine how resources in the form of water, nutrients, materials and energy pass through the system, and in what manner. The only MFA study that has included Cape Town was a 2010 study carried out as part of an MSc thesis at MIT. The MIT study only deals with flows through the urban system and not with net addition to stocks (NAS). A similar comparative study for NAS does not exist. The MIT study used the analysis to develop a city typology. Fifteen city types were identified and Cape Town was identified as a Type 12 city, “A city that has an energy intensive economy with high carbon emission, but although total energy consumption is high, electricity consumption is relatively low because significant populations are earning low personal income” (UNEP 2013, 42).

Sustainability Reporting: Measurements of flows have been attempted through the assessment of ecological footprints, an approach developed in the early 1990s by Wackernagel and Rees (1995). The approach uses yields from primary products to calculate the area necessary to support a given activity. An area’s consumption is measured by adding imports to and subtracting exports from its natural production. This approach has been used to highlight sustainability challenges faced by areas. In the case of Cape Town, ecological footprinting has been used to reflect on the relationship between consumption and resource utilisation. Barry Gasson carried out the key work in this context. Gasson’s work showed Cape Town’s per capita footprint as being “4.28 ha which is virtually the same as South Africa’s per capita ecological footprint of 4.02 ha” (Gasson, 2002: 5). At the time, this was seen as an alarming figure as the global per capita carrying capacity was deemed to be 1.9 ha per person. Gasson’s work measured the land area required in order to sustain Cape Town and found this to be 128 264 km², an area some 52 times larger than the City’s jurisdictional area.

Within this footprint calculation, food flows were measured. The food flows for Cape Town, extrapolated from national consumption data, showed that it was one of the largest net consumers of land and accounted for 112 349 km² of the total footprint land required (or 87%). Water was one of the key footprint drivers and was disproportionately large due to the use of water in the cooling process of the Koeberg power station. When water calculations were removed from the footprint calculations, food and energy were the other key inputs with food making up 41% of the city’s ecological footprint. However, using this data to inform decisions on food flows is challenging as the food figures used by Gasson were “based either on national average per capita consumption figures multiplied by the metropolitan population, or on a pro rata metropolitan share of national consumption” (Gasson, 2002: 7).

This approach arguably has utility in terms of broader sustainability targeting and associated strategic management approaches: the data assists cities in understanding

the broader impact on the environment and facilitates approaches that can reduce, redirect and reallocate flows. However, it is unclear how this data could guide local government responses.

While the findings on the contribution of food flows to the overall ecological footprint may point to a need to re-assess the current food system's sustainability and call for more intensive local food production, it is essential to consider the nature of the current agricultural landscape. While the productive areas within Cape Town do produce food-based crops for local consumption, the focus of much of the agricultural sector in the Western Cape is export-oriented. The City of Cape Town is therefore dependent on food flows from beyond the provincial borders.

Both the flows and ecological footprinting approaches may have utility in terms of understanding sustainability questions, but offer little viable information on the nature of and changes in flows into and out of the region.

Imports and Exports: This measure is most evident in food security reporting. For example, the NDP uses an import/export trade balance to make general statements such as one on food security: "South Africa is food-secure and has been for a number of decades. This means that it earns a trade surplus from agricultural exports and is able to cover the cost of food imports from those exports"(NDP 2012, 230). Understanding the nature of trade, what is being traded and specifically imports and exports at a regional scale does offer critical insights into the functioning of the food system, and the strengths and associated weaknesses of such a system. But this statement from the NDP also serves to highlight the limitations of such measurements. While food trade balances may be a useful tool, its utility in food security policy formulation is questionable.

Consumption Patterns: Measuring per capita consumption is the method currently practiced in South Africa. While these figures may be indicative of a general diet, they are not generally sensitive to trends at a particular locality. Cape Town is a specific case in point. Data on food consumption and dietary choices track general economic and cultural preferences. Using this as a metric to inform policy might be viable if the particular locality reflects the national demographic. Cape Town does not and national consumption figures do not reflect the food consumption patterns of Cape Town. This issue is made even more complex when aggregate figures are used. This means that the consumption figures of the high consumers are being amalgamated with those consuming the least, offering an averaged figure that are not representative of a specific locality.

The final challenge with such consumption based reporting is that different agencies collect different data to arrive at consumption data. This is demonstrated by the fact that the FAO figures for South African show a 1% consumption of vegetables (with a separate section for starchy roots – for SA only 2%) while the DAFF 2013 figure reflects a 10,2% consumption of vegetables and potatoes making up 3,4% of the general South African diet.

Regardless of the deficiencies in this measurement, using consumption by weight figures derived from the national consumption figures does enable the generation of aggregate consumption figures for a particular locality. If this process is applied, informed by the DAFF 2013 consumption figures, Cape Town consumed 1 850 825 tonnes of food in 2012⁵ and the fresh produce through the CTFPM made up 16,1% of that. When divided by the Cape Town population, a per capita figure can be calculated. These calculations may arguably be of interest but this is of little utility in

⁵ This figure differs from the StatsSA figure of 1 607 097 due to different methodological approaches. The DAFF figure includes alcoholic beverage consumption within its tonnage calculation.

understanding the food system and even less in the development of strategies to respond to food security and nutrition challenges at the city scale.

Work carried out by Saul Roux at the City of Cape Town offered a finer grained analysis of consumption data, considering data at the household scale. Roux argued that the most commonly consumed foods are cereal based, roots and tubers (eaten by 67% of households), vegetables (62%) and fruits (34%). The vegetables in greatest demand were cabbage, spinach, potatoes, carrots, onions, butternut, green peppers, tomatoes, and cauliflower (Roux 2011).

The challenge with the above flows approaches is that they rely, in the main on aggregate and modelled data that obscures the specific challenges within the food system and creates a false sense that the issues are perhaps not as severe as they may be in reality. Within the context of these challenges, the following is an attempt to provide concrete data specific to areas where reliable and direct data could be collected.

6.2 Flows Analysis

6.2.1 International Trade

The available data on South Africa's international trade in agricultural products do not provide Cape Town specific information. Cape Town is one of the major national import and export points; however, it is not possible to connect these flows to the Cape Town food system as no inference can be made about how much of the exported food has its origins in the city or how much of the imported food is consumed in the city. These figures are still important as they provide insights into the nature of the national food system and determine the kinds of foods available and the price of food at the national scale.

In 2012, South Africa exported R709 191.2 million and imported R831 402.7 million worth of agricultural products. Agricultural products represented 7.8% of total exports and 6.5% of total imports in 2012 (BFAP 2013, 18). The trade balance was positive in the case of vegetable products (CO2), negative in the case of animal and animal-related products (CO1 and CO3) and very similar in the case of processed foods (CO4) (Table 6.1).

	Exports	Imports	Trade Balance
C01: Live animals, animal products	5 281 311 376	8 370 585 276	-3 089 273 900
C02: Vegetable products	26 970 931 958	16 672 357 230	10 298 574 728
C03: Animal or vegetable fats & oils & their cleavage products; prepared edible fats; animal & vegetable waxes	2 106 085 107	8 815 605 330	-6 709 520 223
C04: Prepared foodstuffs; beverages, spirits & vinegar; tobacco & manufactured tobacco	21 727 468 557	21 126 038 171	601 430 386
	56 085 796 998	54 984 586 007	1 101 210 991

Source DTI, 2013

Figures 6.1 and 6.2 shows the top 10 agricultural food and beverage export and import categories according to 2012 value. As can be seen, the major exports are fruits, which are predominantly grown in the Western Cape. Import figures indicate a high demand for staple grains, as well as a number of oil-based products. Igumbor et al (2012, 4) have expressed concern about the marked rise in the import of processed foods and what this might mean for the consumer food environment.

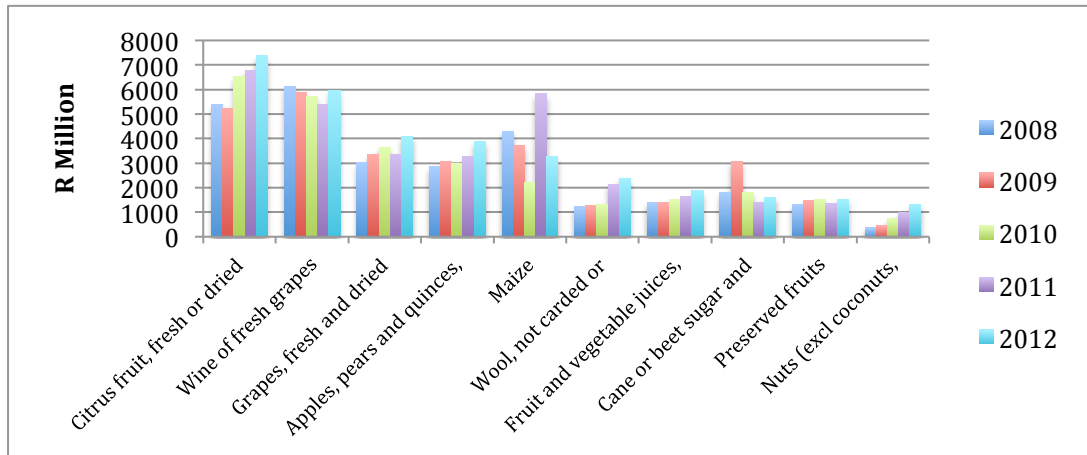


Figure.6.1 Top 10 export categories according to 2012 export value (Source: BFAP 2013)

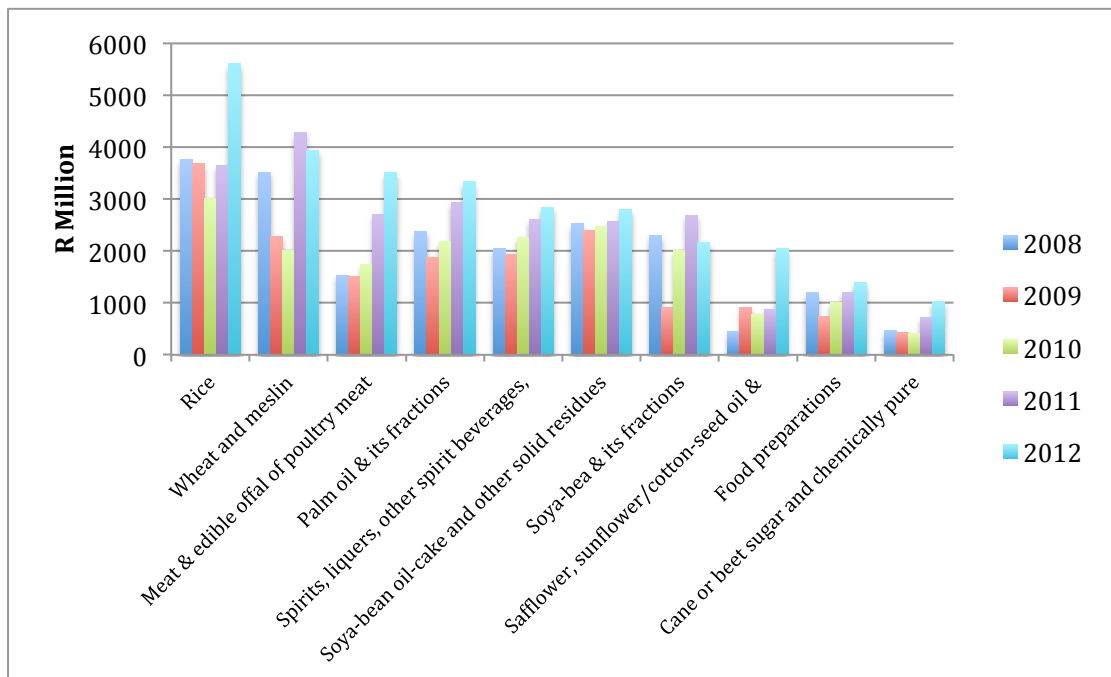


Figure 6.2 Top ten agricultural imports to 2012 import value (Source: BFAP 2013)

Figures 6.3 and 6.4 show South Africa's trade of food and beverages (HS2) for 2011. Beverages, spirits and vinegar were the largest exported food and beverage product, accounting for 48% of all food and beverage products followed by vegetable, fruit, nut (21%) and miscellaneous edible preparations (13%) accounting for 21% and 13% respectively. Beverages, spirits and vinegar were also the largest imported food and beverage products in 2011, accounting for 30% followed by miscellaneous edible preparations accounting for 17%.

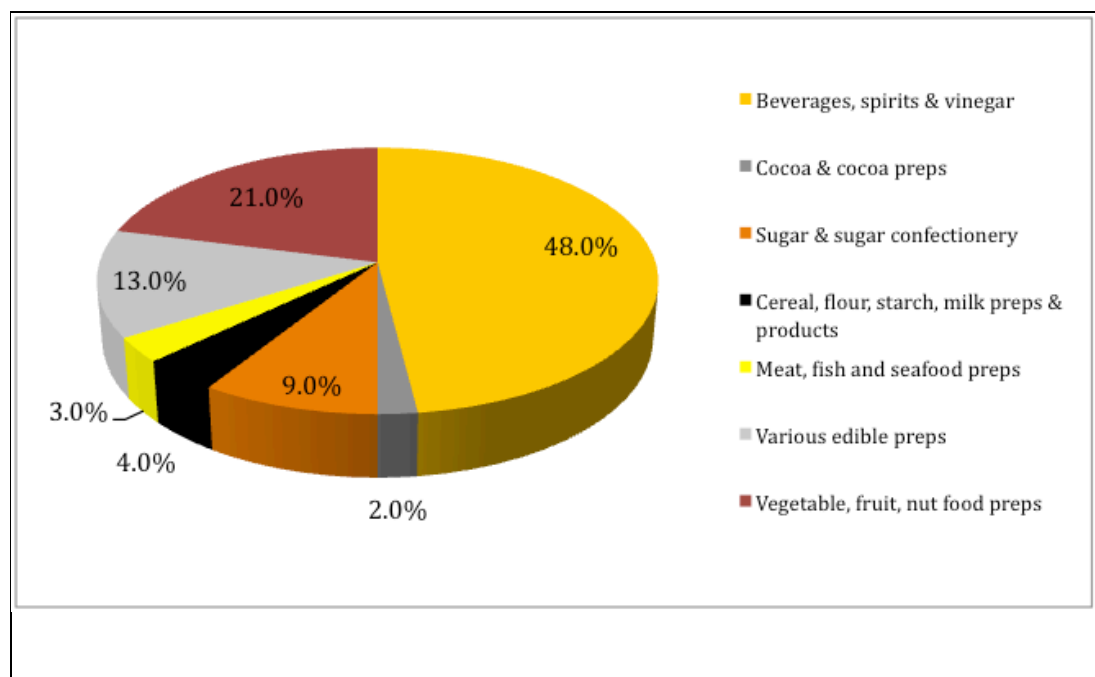


Figure 6.3 South African export of food and beverage products 2011 (Source WESGRO, 2013b: 7)

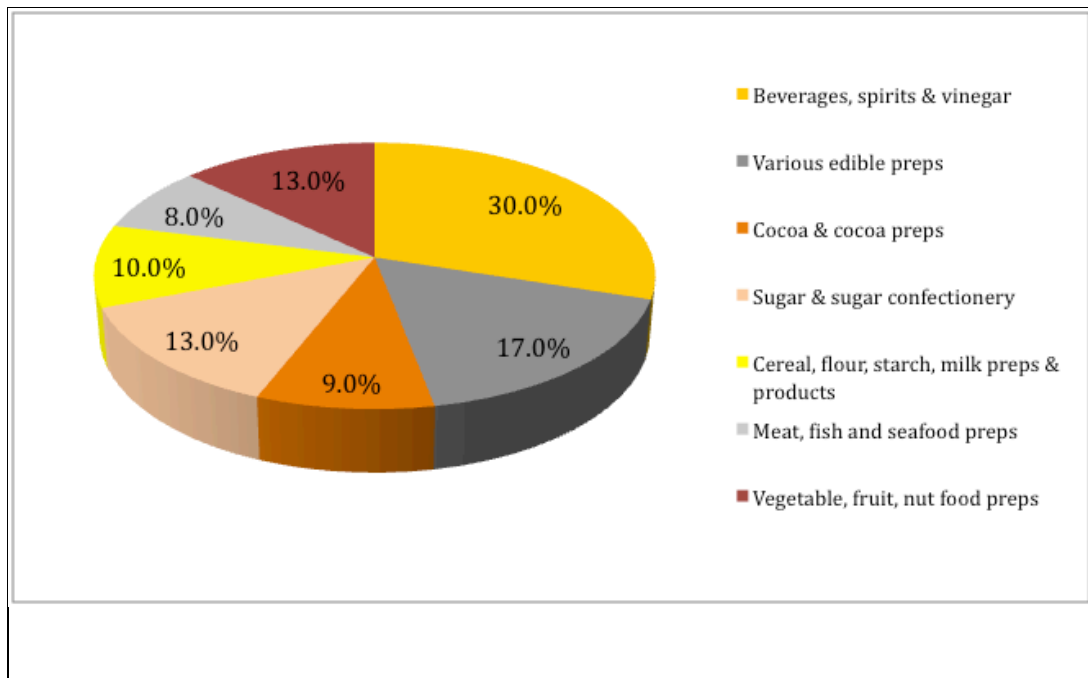


Figure 6.4 South African imports of food and beverage products 2011 (Source WESGRO, 2013b: 7)

Table 6.2: Western Cape export markets (2011)

Western Cape Global Export Markets of Prepared Food Products (2011)					Western Cape Global Export Markets of Beverages(2011)				
Rank	Imported	Value 2011 (ZARm)	% Share 2011	% Growth 2010-2011	Rank	Imported	Value 2011 (ZARm)	% Share 2011	% Growth 2010-2011
1	Japan	310	8.89	13.53	1	United Kingdom	1 032	16.16	-26.24
2	Germany	265	7.58	-1.15	2	Germany	838	13.14	5.66
3	Australia	225	6.44	26.95	3	Sweden	622	9.74	-4.15
4	Zimbabwe	221	6.33	127.41	4	Angola	544	8.52	22.22
5	Hong Kong	204	5.83	39.47	5	Netherlands	521	8.17	8.8
6	United Kingdom	190	5.45	-2.2	6	Canada	350	5.49	-5.41
7	Zambia	154	4.4	13.78	7	Denmark	300	4.71	-1.85
8	Netherlands	140	4.02	-8.16	8	United States	300	4.7	-3.54
9	Mozambique	130	3.74	24.42	9	Belgium	180	2.82	5.54
10	United States	118	3.39	-3.67	10	China	145	2.27	79.41
		3 490		12.8			6 382		-0.45

Source: WESGRO, 2013c:18

Data for the Western Cape reflects the dominance of the wine industry in exports with a more balanced import structure. The primary export markets and import source markets are detailed in Table 6.2 above. Europe remains the key export market for produce from the Western Cape although austerity measures and associated financial challenges faced in that region are impacting negatively on exports (see Germany, the UK and the Netherlands in Table 6.2). Exports to other African countries are growing with high percentage change factors observed.

Figures 6.5 and 6.6 show the Western Cape’s trade in food and beverages (HS2) for the period 2011. Beverages, spirits and vinegar was the largest exported food and beverage product in 2011 (accounting for 64.7% of the total), followed by vegetable, fruit, nut (24%) and miscellaneous edible preparations (4.5%). Beverages, spirits and vinegar was also the largest imported food and beverage product in 2011, accounting for 41.5% followed by vegetable, fruit, nut accounting for 17%.

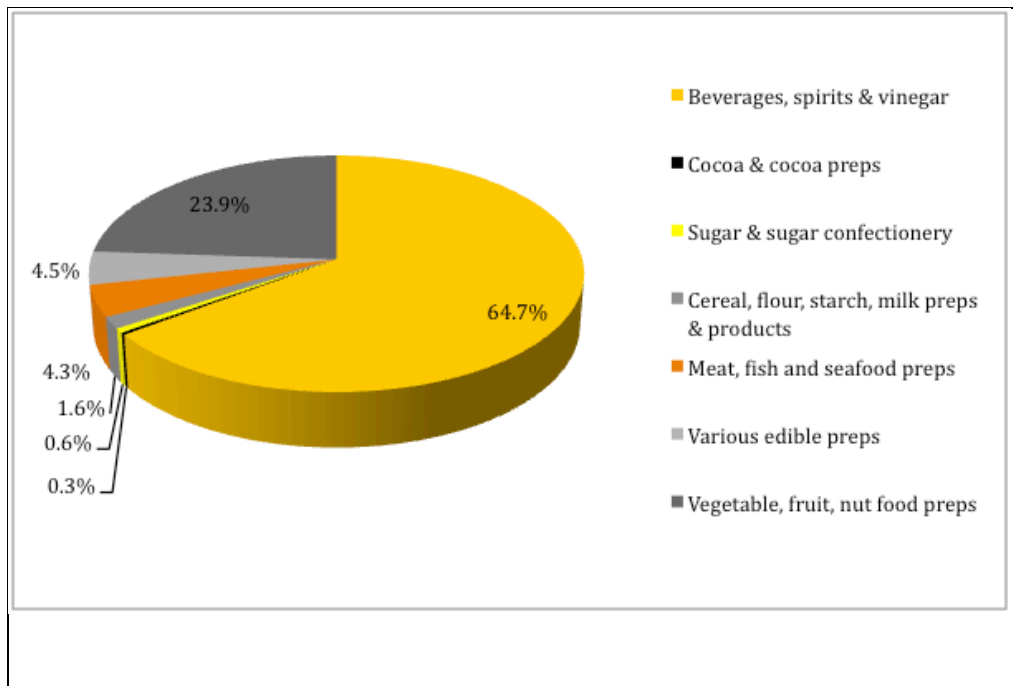


Figure 6.5 Western Cape exports of food and beverage products (HS2 Scale) (Source: WESGRO, 2013b F&B Factsheet)

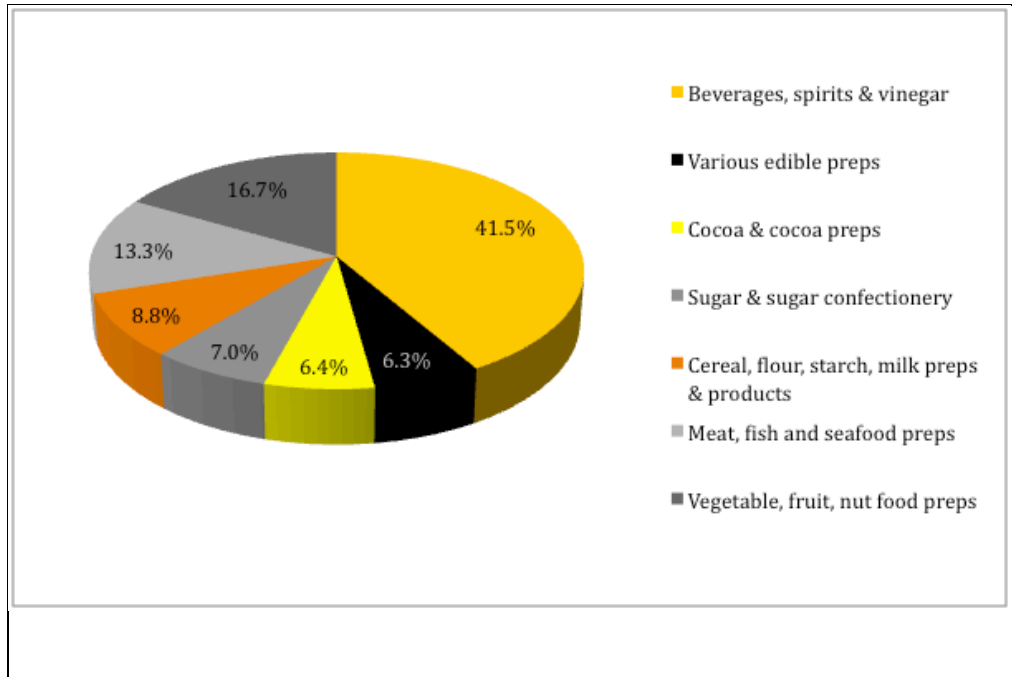


Figure 6.6 Western Cape imports of food and beverage products (HS2 Scale) (Source: WESGRO, 2013b F&B Factsheet)

At a slightly finer scale, specific sectors can be seen in greater detail in the import and export comparisons detailed in Table 6.3 below. The dominance of the wine and fruit industry is reflected in the data followed by fish products driven by the traditional role played by the major fish processing companies in Cape Town. The import and export figures for a similar rated product HS2009: Fruit and Vegetables juices (not fermented) are worth noting as this speaks to their nature s globally traded commodities. Fruit juices sold in South Africa often have ingredients lists that state “Reconstituted apple and/or grape and/or pear juice concentrate” as the major ingredient. This is because companies buy the cheapest juice available at market price, the kind of juice and the location of production of the cheapest juice is fluid and so the core juice might be grape juice from South Africa or apple juice from Argentina.

Western Cape Exports of Food & Beverage 2011				Western Cape Imports of Food & Beverage 2011			
Rank	Products	Value 2011 (ZARm)	% Growth 2010-2011	Rank	Products	Value 2011 (ZARm)	% Growth 2010-2011
1	H2204: Grape Wines	5 330	-3.88	1	H2208: Liqueur, spirits etc.	1 915	14.31
2	H2008: Fruit, nuts, edible plant parts - prepared & preserved	1 213	-12.09	2	H1604: Prepared or preserved fish	606	-18.07
3	H2009: Fruit & vegetable juices (not fermented)	999	19.89	3	H2009: Fruit & vegetable juices (not fermented)	569	80.55
4	H2208: Liqueur, spirits etc.	720	24.08	4	H1701: Solid cane or beet sugar	265	63.24

5	H2206: Fermented beverages	274	21.45	5	H18.6: Chocolate and other foods	264	1.04
6	H1604: Prepared or preserved fish	240	40.39	6	H2106: Food preparations	234	48.21
7	H2106: Food preparations	208	120.65	7	H2202: Waters, non alcoholic & flavoured beverages	186	-5.10
8	H2103: Sauce, condiments, mixed seasonings	206	51.84	8	H1905: Baked bread, pastry, biscuits	178	44.43
9	H1605: Crustaceans, molluscs prepared or preserved	97	54.48	9	H2203: Beer made from malt	163	37.14
10	H2007: Jams, jellies, marmalades, etc	86	63.86	10	H1902: Pasta, couscous, etc	157	35.45
		9 888	3.98			5 647	20.89

Source WESGRO, 2013b

The Western Cape accounts for 21% of South Africa's agricultural production, but 45% of the country's agricultural exports (PGWC 2010, 68). Cape Town is the major export and import point in the province. In recent sectoral value chain analysis reports produced by DAFF, Cape Town was identified as being the Western Cape export point of 98.4% of all broilers and 99.7% of all tomatoes (DAFF 2012, DAFF 2012). In 2012 agri-business products dominated Cape Town exports at product level. However in terms of value, agricultural products still remained highly traded.

In more general terms, total Cape Town exports (including non food and beverage) increased by 18.25% from R38.41bn in 2011 to R45.42bn in 2012, while imports increased by 28.26% from R133.68bn to R171.46bn. The City of Cape Town's trade deficit has been increasing consistently from 2010 and in 2012 the trade deficit increased by 32%. The City of Cape Town has been experiencing a deepening trade deficit due to the sharp increase in imports. This is largely due to the R110.2bn imports of petroleum products and the susceptibility of the product to price fluctuations and exchange rate fluctuations (Wesgro, 2013a: 6).

When viewed at the product scale, other examples reflect similar trends. "South Africa is a net importer of various agricultural products and foods. In the past fifteen years, there has been a marked rise in imports of processed products. For example, the value of imported "Bread, Pastry, Cakes, Biscuits and Other Baker's Wares" increased from approximately R5 million (US\$ 714,000; all conversions are based on the exchange rate at the relevant time) in 1992 to almost R250 million (US\$ 36 million) in 2006. In addition, the import of ingredients used in processed foods has increased. For example, imports of whey, a by-product of cheese production that is used in baked products and sweet snacks, increased from R15 million in 1993 to R80 million in 2007 (Igumbor et al 2012, 4)."

The high level of fish imports to the city reflects challenges in the fish stocks of the region and does have implications for poor consumers who have traditionally used much of the fish products, particularly tinned fish, as a key component of their diets. This scarcity is arguably reflected in price increases in such items (see below). It is estimated that only 60% of South Africa's fish consumption is locally produced in South Africa and Namibia. Examination of different tins of fish on any supermarket shelf will reveal the range of countries producing fish for companies.

The trade balance figures highlight two additional concerns. First, the decreased exports and increased imports of sugar and associated products illustrate the increased presence of processed food in the South African food environment (Figure 6.7). Second, the openness of the South African economy may be undermining local agriculture. There has already been considerable debate about chicken tariffs, but now there is increasing discussion of sugar tariffs (Shabalala 2013).

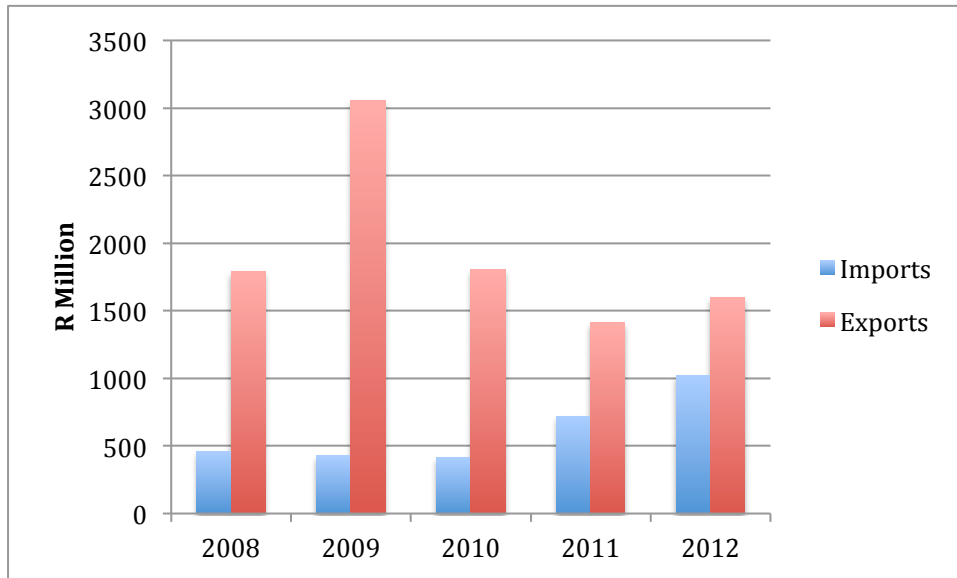


Figure 6.7 Trade balance of sugar and chemically pure sucrose imports and exports 2008-2012 (Source: BFAP 2013)

The relationship between food security and import/export trade is important as the Cape Town food system is extremely open and subject to flows and cycles within international markets. This imposes a high level of vulnerability on the entire food system that is subject to the volatility and trends of the market. The most vulnerable within the food system, the poor consumers, arguably experience the problems associated with these trade fluctuations in a manner that is disproportionately negative.

The data presented in this section confirm that food system activities reflect an active food service sector and an active food production sector. These activities all contribute to the overall economy of the region. What is also evident is the extent of the food flows through the system. The key challenge is to find ways to use the data from these flows in a strategic manner to assist the city in understanding the workings of the food system. Understanding import and export processes offers some understanding of the food system but this misses a great deal of the detail specific to the functioning of the food system at the specific urban scale. This called for an understanding of the food flows within Cape Town.

6.2.2 Cape Town Food Flows

Data Acquisition Problems

Moving from import and export data to direct flows of food into the Cape Town Food System is a far more complex exercise. The fact that there is no single institution

monitoring the food system and that the system delivering food to the population is largely within the private sector means that data is neither uniformly recorded nor available. Supermarkets control 97% of formal food retail in the country, and around 68% of all food retail (Planting 2010). They are major stakeholders in the local food system and determine local food flows. Most were, however, unwilling to provide any data for this study. The control of substantial components of the food system by large private sector players is thus a fundamental challenge to evidence-based food system governance. This reality introduces many unknowns into the system and hinders proactive planning for food security.

The team's efforts to engage with the major distributors of the primary sources of food into the Cape Town region, the retailers and processors, presented data collection challenges. These actors were concerned that the provision of information could result in confidential strategic information entering the public domain. An effort to engage with the retailer forum on sustainability was also unsuccessful as there were concerns that engagement could be construed as a contravention of competition rulings. Meetings with some retailers were only possible following the signing of lengthy confidentiality agreements.

While retailers would not provide hard data, it became clear that they cannot be viewed as an amorphous group and each group engages the food system differently. Some retailers may focus predominantly on groceries while others may have a higher proportion of fresh produce. Others make use of central purchasing processes through distribution centres while others, such as the Spar group, enable greater levels of autonomy at the store level, allowing store owners or managers far greater authority in the procurement process.

While no specific data could be obtained to this effect, estimates from various industry commentators place the fresh produce component of retailers at less than 10% with grocery items being as much as 60% and other fresh products such as meat, dairy and related fresh items at about 15%. The remainder is made up of items such as deli items, snack goods, sweets, etc. Certain food retailers provided some data, some of which is aged to a point where its use would not adversely impact on the retailers. Other retailers provided data but these were at a high level but did enable a level of analysis. This analysis should be read as indicative as opposed to highly detailed. The data offers insights into the nature of the food flows but is informed by a number of assumptions. For the reasons discussed, the viability and integrity of the data provided from the retailers, while understood to be reliable, could not be tested. Identifying the flows of food through the retailers was informed by a set of assumptions and models that offer insights into the nature of the Cape Town food flows but could be subject to challenge as they are informed by the data that was accessible to the research team. There is therefore a fundamental need for the City to engage the major stakeholders to access data to help to model points of vulnerability and resilience within the sectors of the food system that they control.

A further strategy was to assess various food related data sets from the various industry bodies representing sectors within the wider food industry and to see which data would be applicable to Cape Town. Appendix C provides a detailed review of the data sets reviewed and offers comment on the scale, relevance and measurement of the data. These data spanned different scales of measurement, different reporting cycles and periods of analysis, different measurement protocols and different measurement weightings. These data also had significant gaps. Providing any form of analysis from this data that had relevance to Cape Town was deemed to be both inappropriate and of little material value. For this reason, these data were deemed inappropriate for use in

this report and while providing a contextual understanding of certain elements of the food system, were not used.

CTFMP Data

The main data set available to the research team was that of the Cape Town Fresh Produce Market (CTFPM). Fresh Produce markets are a major component of the food system, with about 18% of overall fruit production being channelled through these markets in 2005 (NAMC 2006). The Department of Agriculture introduced the system of National Fresh Produce Markets (NFPMs) in 1967. Unlike the other NFPMs, the CTFPM is a privatized market. It is one of the two main sources of the fruit and vegetables trade in Cape Town, the other being the formal retail system. In 2005, about 18% of overall national fruit production was delivered to the FPMs, the remainder going to export and alternative local market channels (NAMC, 2006). While the contribution of the CTFPM is declining, it is estimated that the 297 957 metric tonnes of produce sold constitutes about 40% of fresh produce sales in Cape Town (CTFPM, 2013).

The Cape Town Fresh Produce Market is a commission market and the commission is set at a maximum of 5% to the market and a maximum of 7% to the sales agent. Wholesalers and processors are the main groupings buying from the market (Louw et al, 2006). The fresh produce supply chain is detailed in Figure 6.8.

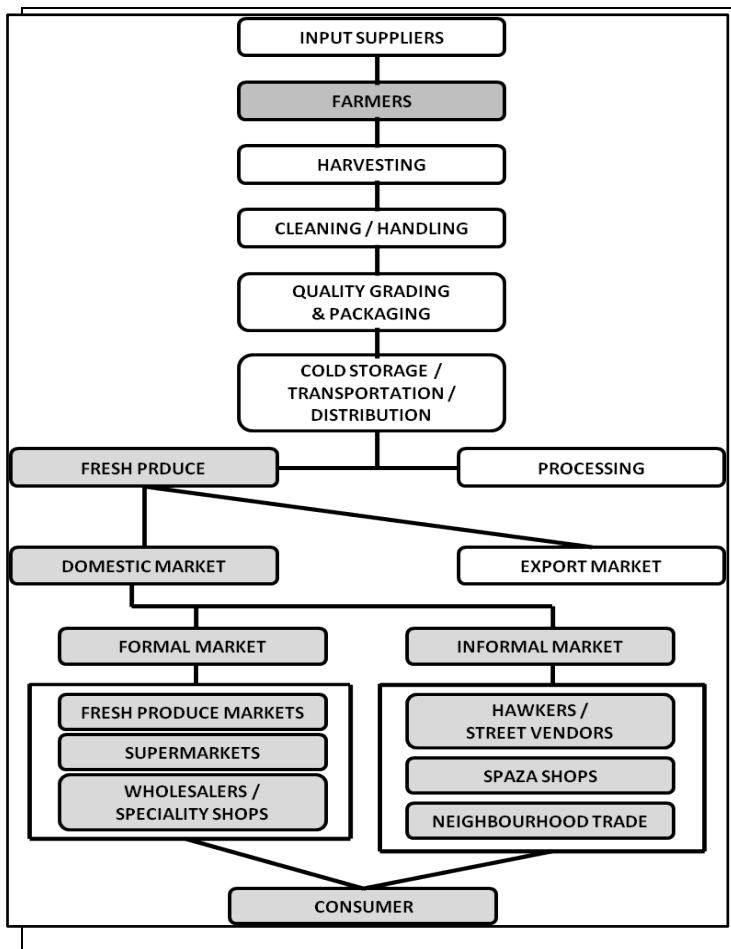


Figure 6.8 Fresh produce supply chain. (Source: Troosters, 2013)

Figure 6.8 is used to offer an insight into the nature and extent of one supply chain. Processed food supply chains are far more variable with individual supply chains having quite different links and intermediaries.

The flows through the CTFPM are detailed in Table 6.4 below. While over 100 fresh produce items were traded through the CTFPM in 2012, 53% of all items traded are made up of the top three items: potatoes, onions and tomatoes. The top 30 items account for 98% of all trade.

Table 6.4: Yearly Statistics for Cape Town Market: Period March 2012 to February 2013

Product	Turnover	Metric Tonnes	Rand per tonne
Potatoes	R 294 757 242.12	108 947	R 2 705.51
Onions	R 86 422 703.45	30 780	R 2 807.76
Tomatoes	R 156 325 945.45	31 702	R 4 931.11
All other veg	R 224 304 837.47	57 182	R 3 922.65
Bananas	R 100 050 337.86	19 908	R 5 025.63
All other fruit	R 224 070 130.23	49 438	R 4 532.35
Total	R 1 085 931 196.58	297 957	R 3 644.59

Source: Cape Town Fresh Produce Market, 2013

Sales at the CTFPM are dominated four key products (potatoes, onions, tomatoes and bananas), which account for 64% of all trade (Figure 6.9).

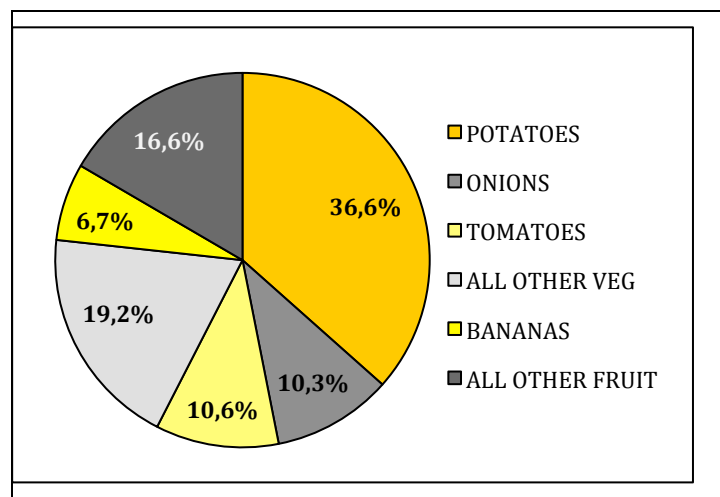


Figure 6.9 Sales Mix CTFPM

The average sales prices of CTFPM were compared to national sales figures. As Table 6.5 indicates, the sales prices are generally lower than the national average with the 8-year average being 3.9% lower than national figures. While this figure may seem negligible, for poor communities this means a more affordable product.

Table 6.5 Eight year Rand per tonne sales trend of CTFPM and national data.

All 3 products	2005	2006	2007	2008	2009	2010	2011	2012	8 Yr trend
CTFPM	4 995	6 176	6 237	9 081	9 756	10 366	8 939	9 054	8 075
National Data	5 575	6 079	8 549	7 805	10 793	9 416	9 144	9 733	8 387
Variation	-580	97	-2 312	1 276	-1 037	950	-205	-679	-311
Percentage	-11.6%	1.6%	-37.1%	14.1%	-10.6%	9.2%	-2.3%	-7.5%	-3.9%

Inflationary trends are clearly evident from the data (Table 6.6). When all produce sold through the CTFPM is considered, the net inflationary trend reflects increases higher than the South African CPI inflationary index with prices increasing by just under 100% in the period from 2006 to 2013. This is not a symptom of the functioning of the CTFPM but the broader food system. This fact was reflected in the data from the Agricultural Abstract (2013) where most meat prices, excepting beef more recently increased at below inflation while vegetable and fruit prices increase at higher than inflationary rates. The vegetable trend is evident in Table 6.6 below.

Table 6.6: Inflationary increases in produce through CTFPM compared to CPI inflation

	2006	2007	2008	2009	2010	2011	2012	2013
All Produce (ZAR/metric ton)	13 786	14 875	18 971	20 839	21 400	20 337	21 850	23 925
Percentage Change	12.0%	7.9%	27.5%	9.8%	2.7%	-5.0%	7.4%	9.5%
SA Inflation	2.02%	4.82%	7.57%	9.35%	6.04%	3.37%	6.41%	5.71%
Change to 2005	12.0%	20.8%	54.1%	69.3%	73.8%	65.2%	77.5%	94.3%

Source: CTFPM and own calculations⁶

Seasonality

Due to the diverse climate and production areas in South Africa, fresh produce markets are able to mediate seasonal price increases to a certain extent. Where items have a very distinct season the ability to mediate price shifts is less evident. A trend confirmed by operators at the CTFPM is that the further from the market the produce is sourced, the greater the extent of seasonal price fluctuations. While this does not translate specifically into a call for localisation strategies, it points to the fact the greater the distance between the key product source and the Cape Town market, the more volatile the price will be and the more susceptible that product will be to other shifts such as transport, energy and storage costs. This is reflected in Figure 6.10 reflecting vegetable price changes over the 2012 reporting year.

⁶ The -5% listed in the table was due to the change in the CTFPM recording system. CTFPM changed their financial year. 2011 was therefore only a 7-month year. As a result, the figure for 2011 was worked out on only 7 months and not 12 resulting in a reduction in the year on year price of goods (by 5%)

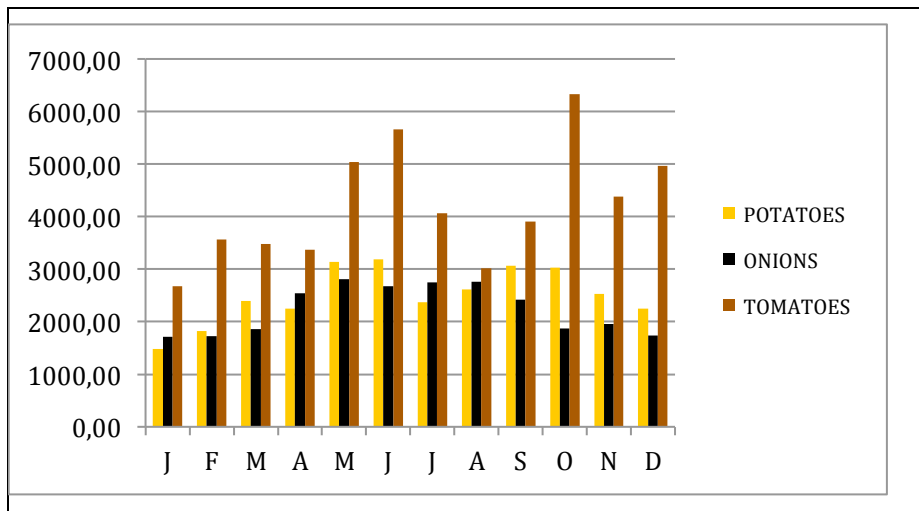


Figure 6.10 Monthly price shifts – key veg (2012) CTFPM (Source: CTFPM)

Monthly changes in the price of the the key fruits indicate the greatest fluctuations for oranges, which are both seasonal and come from further afield (Eastern Cape and Mpumalanga) (Figure 6.11). International demand for fruit, such as apples, plays a role in the price structures and is a further reason for some of the fruit price fluctuations. However, the CTFPM has refrigeration and cold storage facilities that enable the consistent flow of items into the market. Most effective is the banana storage and ripening process where a steady flow of bananas into the market, at a fairly regular price is maintained.

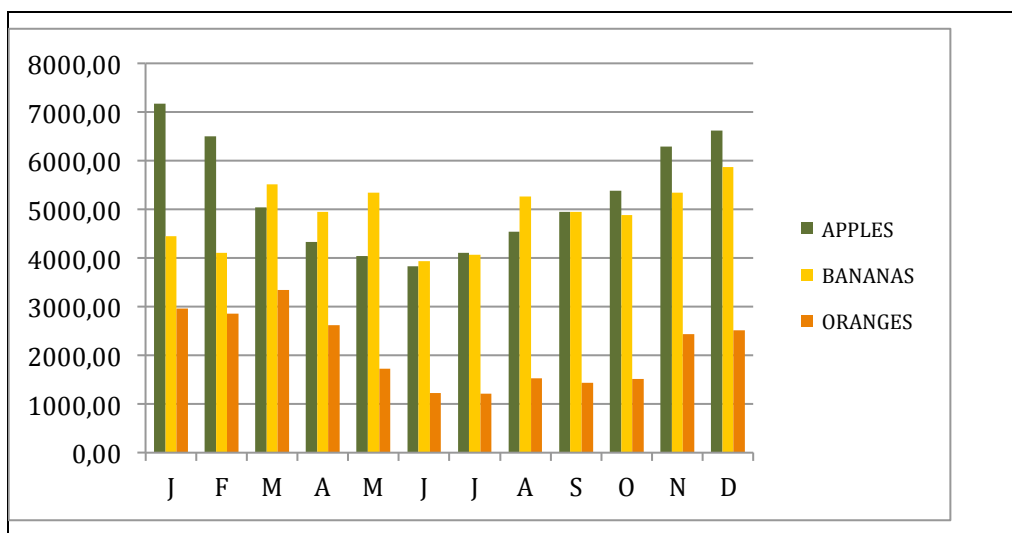


Figure 6.11 Monthly price shifts – key fruit (2012) CTFPM (Source: CTFPM)

While there is a clear decline in the tonnage passing through the CTFPM, it remains a key site for traders in the informal markets (Figure 6.11). Potatoes South Africa estimate that informal traders accounted for 53% of all fresh potatoes sold at fresh produce markets (DAFF 2012). Some retailers purchase through the CTFPM either directly or through buying agents, but in general, the retailers approach fresh produce in a different manner. In addition to the food supply role played by the CTFPM, a number of so-called

“parasite businesses” are established in an around the CTFPM offering economies of scale to a number of key food system functions. The decline in trade through the fresh produce market is linked primarily to the increasing share of the market held by retailers.

In order to ensure price and delivery, the retailers have opted to contract directly with growers, effectively transferring the risk to the farmers. This produce is generally custom-packaged and generally sent to centralized distribution centres for sale on to the various retailers. The resulting declines in food flows through the CTFPM thus represent real changes within the food system and do not necessarily reflect faults at either the production or CTFPM end of the food supply chain. Misinterpreting the reasons for this change can have negative consequences. For example, the decline in fresh produce from the PHA being traded at the CTFPM was once incorrectly thought to be driven by a reduction in farming in the PHA. The CTFPM remains a key asset within the city food system, particularly for the lower end of the market.

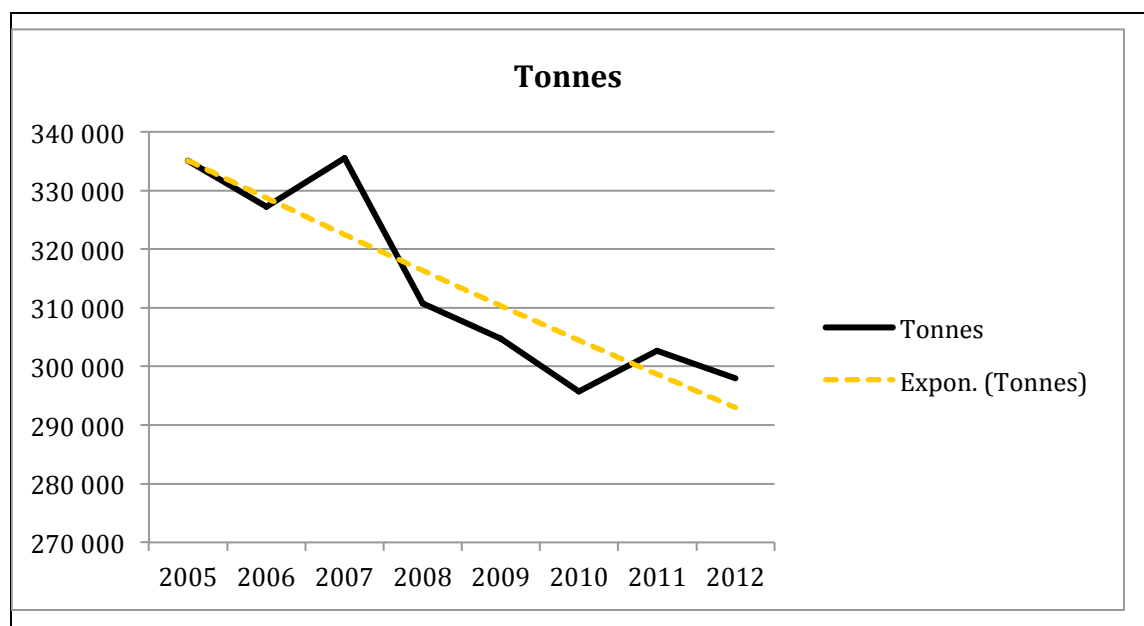


Figure 6.11 Decline in tonnes of produce sold through the CTFPM (Source: CTFPM, 2013)

What is evident from the Cape Town Fresh Produce Market data is that when information is collected and stored on a regular basis, in a consistent manner and is easily accessible, it has great utility and can be used in a variety of ways to reflect on trends, shifts and other aspects of the food system. However, interpretation of this data needs to be considered within the context of wider food system changes.

6.2.3 Cape Town Food Flows Analysis

This component of the report is divided into two separate sections. This differentiation is due to the fact that different data have been used to inform the findings of the different sections.

Food flows are an emerging yet challenging means with which to understand the food system of a particular locality. Food flows measurement seeks to gain insight into the

net flows of food into and out of a particular locality. The challenge in measuring this arises from the fact that flows of food are measured in very different ways. These measurement methods range from measuring the net weight of items or the net weight of a broad collection of items. For example, in material flows analysis, food is often measured as a component of biomass. Other measurement metrics are also used such as economic value or ecological impact (as in the ecological footprint process).

Internationally, the measurement of material flows is an emerging trend in sustainability governance and a trend that is particularly prevalent in urban governance. Here the work of the Sustainable Resource Panel (UNEP, 2013) and in particular Sabine Barles (See Barles, 2009; 2010) is seen as the leading methodological approach for such measurement. This methodology measures food flows in a somewhat more abstract manner, calculating food as a component of either biomass flows or nutrient flows (or at times, both). Measuring food itself is not a key concern. This does raise questions as to the utility of such highly abstract data when food governance approaches are considered. For the Cape Town food system study, this approach was too abstract with little material value to the objectives of the study. For this reason this approach was discarded and an alternative approach was applied.

The approach taken for this report has been to identify specific South African trends and to measure these via existing data sources. The reason for this is to allow for on-going monitoring and comparison over time. It is hoped that this monitoring process would allow for the later refinement of the data enabling the development of interventions that could support strategic food system governance processes.

The first approach measures the food consumed in Cape Town. This approach offers little insight as to the sources of the food consumed in Cape Town, besides possible assumptions aligned to known production areas of specific food types (such as maize). The second approach has sought to provide a measure of understanding of the sources of food consumed. These data relied on the data that was provided by the various retailers in Cape Town for information specific to where their food is sourced. These data are considered reliable but is averaged over an entire year. As the supply of a number of food products is seasonal, the sources change. Certain sources of food may even shift from being regional to Cape Town to international. An example of one such food item is strawberries where at certain times of the year these are grown in the Western Cape region, while at other times, these products are imported from a number of different countries.

Certain processed items have highly diffuse supply chains with recipes that require products from a variety of regions. Table 6.7 details one such example of a processed sauce item or condiment sold in three of the larger retail outlets in Cape Town⁷. As can be seen, the ingredients are sourced from a wide variety of sources, both local and international. As a result of recipe intellectual property concerns, the breakdown of specific items cannot be ascertained. The example is used to reflect the multiple trips that such an item may travel in the production process.

⁷ Requests for confidentiality mean that the sauce cannot be named but is popular with South Africans and a South African original.

<i>Table 6.7: Single item sauce/condiment supply process</i>			
Sauce/condiment item value chain			
<i>1. Dry spice mix component of recipe - prepared in Montague Gardens, Cape Town</i>			
<i>Ingredient</i>	<i>Source (majority)</i>	<i>Route</i>	<i>Comment</i>
Key fruit ingredient (dried)	South Eastern Africa (not SA)	Via road or ship to CoCT	Multiple supply options used due to global price competition
Other Spices	Unknown	General suppliers	Suppliers source from variety of markets informed by price and availability
Salt	Namibia	Via Road to CoCT	Contract supply
Extracts	Unknown	General suppliers	Highly processed goods purchased from key suppliers but due to range, source of most ingredients unknown
Dry spice then packaged in bulk and transported to another processor (different company) as input into wet mix			
<i>2. Wet spice component of recipe (to final product) – Midrand, Gauteng</i>			
Dry spice mix	Cape Town	Road to Gauteng	Different recipes held and strict confidentiality clauses applied to recipe
Key fruit ingredient (wet)	Western Cape	Road to Gauteng	Processed and juiced in Western Cape – processed product used.
Other wet ingredients	Unknown	General suppliers	Contracted supply sources
Extracts, stabilisers, etc	Unknown (often international)	General suppliers	Contracted supply sources
Packaging	National suppliers	Road to Gauteng	Contracted supply sources. Source differ per to availability
Labels	Gauteng	Road	Contracted suppliers (subject to contract changes)
Local product shipped via road (estimated 20% sold in Cape Town)			
International product shipped via road to Durban for export internationally by sea			

Other products enable a better sense of source and origin particularly single items such as meat and vegetables. While some information specific to sources of food can be ascertained, different retailers make use of different procurement strategies. Certain retailers have their base of operations in the Western Cape, sourcing food items within the region, at times distributing from the Western Cape to the rest of South Africa. Other retailers are located elsewhere distributing *to* the Western Cape. Other retailers enable a greater level of store manager autonomy in terms of the procurement of certain items – although this does not necessarily make up a large component of the total sales. Such diverse strategies, confidentiality and competition ruling concerns have meant that the data used may be somewhat dated. Due to these concerns the data are also highly generalised.

This section of the report will first detail the food consumption flows into Cape Town, followed by an assessment of the sources of food consumed. Due to the different methodological approaches applied in the two different components of the report, the methods will be described according to the detail of each of the different components of this section of the report. First the flows of food and food consumed will be described, followed by the sources of food.

There is no specific measurement or record kept of specific food consumed in Cape Town. As a result a number of different data sources were consulted in an effort to ascertain the net food consumed in Cape Town. National food consumption patterns were used to generate an understanding of the potential Cape Town consumption patterns.

From these data, informed by a set of assumptions, an indication of the dietary mix and net food consumed was determined. As this relied on a set of assumptions and the use and integration of a number of different data sources, it is necessary to detail the methods applied. What follows is a description of this process.

Firstly, recorded food consumption data was identified. Three sources of food consumption data were located, the first being the Statistics South Africa Food Consumption data contained within a number of different reports but extracted for this report from the Statistics South Africa General Household Survey (StatsSA, 2012). A second source, one that supports the Statistics SA data is the Food and Agricultural Organisation Country data report (FAO, 2012). These data align with the StatsSA data but offers slightly more detail, breaking down certain food groups to provide finer grain detail of food consumption patterns. The third source of data were the Department of Agriculture, Forestry and Fisheries (DAFF) Agricultural Abstract data for 2013. All reports used data dated 2012 and as such, this data was taken as comparable.

The StatsSA data is reported as a percentage. The same applied to the FAO data. The Agricultural Abstract reports food consumed per capita in South African rand terms for all the food groups measured in the StatsSA reports excluding alcohol. The 2013 Agricultural Abstract data provides per capita consumption data for all vegetable based food crops in kilograms per person. This data does not include meat and alcohol. As such, different data needed to be compared in order to arrive at a general food consumed figure. For ease of reference, the data from the FAO and StatsSA are reflected in Figure 6.12 and Table 6.8 to reflect the different reporting methods of food consumed

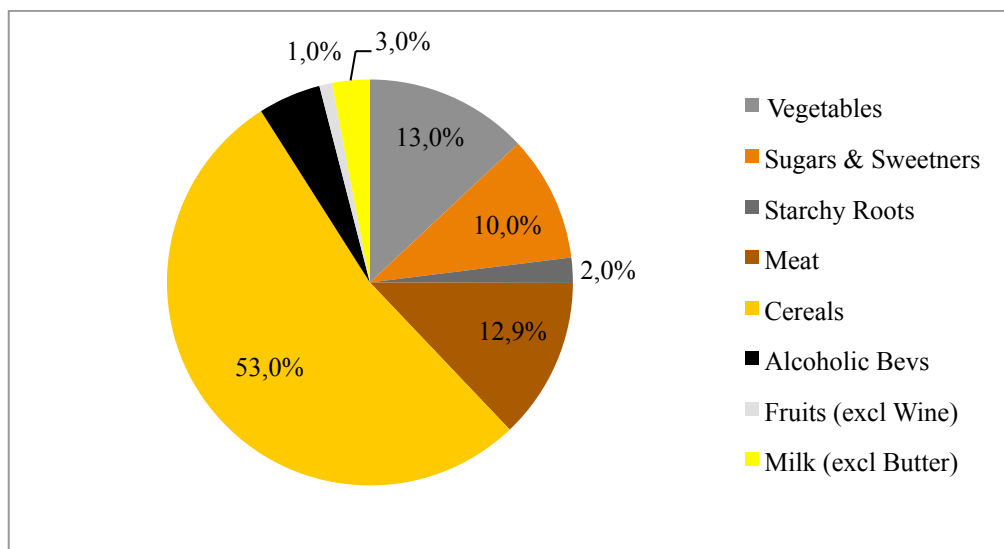


Figure 6.12: Statistics South Africa food consumption 2012 (Source: StatsSA, 2012)

Table 6.8: Comparison StatsSA 2012 consumption to FAO

FAO Items	FAO Diet %	StatsSA Item	StatsSA %
Vegetables	1.00%	Vegetables	13.00%
Vegetables Oils	10.00%	Vegetables	
Spices	0.15%	Vegetables	
Pulses	1.00%	Vegetables	
Oilcrops	1.00%	Vegetables	
Sugars & Sweeteners	10.00%	Sugar	10.00%
Starchy Roots	2.00%	Starchy Root	2.00%
Meat	10.00%	Meat	12.90%
Offal	1.00%	Meat	
Fish & Seafood	0.60%	Meat	
Animal Fats	0.25%	Meat	
Eggs	1.00%	Meat	
Cereals	53.00%	Cereals	53.00%
Alcoholic Bevs	5.00%	Alcohol	5.00%
Fruits (excl Wine)	1.00%	Fruits (excl Wine)	1.00%
Milk (excl Butter)	3.00%	Milk (excl Butter)	3.00%

Source FAO, 2012; StatsSA, 2012

The next set of data reviewed were the DAFF Agricultural Abstract South African Rand (ZAR) consumption figures calculated in total consumer spend in ZAR millions. Two calculations were carried out using these figures. Firstly, these figures reported on the agricultural basket differently to the StatsSA data. As such, the StatsSA percentages were then used to disaggregate the figures (milk and eggs were reported together in these data whereas in the StatsSA data eggs are calculated under meat). In the DAFF ZAR report fruit and vegetables are calculated together. Once the consumption items measured in ZAR were aligned to the StatsSA data, the per capita consumption was calculated by dividing the total consumption per item by an estimated 2012 population figure drawn from StatsSA. From this data a per capita spend per StatsSA item was derived.

The StatsSA ZAR per capita spend per item and total food spend per annum was then multiplied by the estimated City of Cape Town 2012 population to arrive at a total food spend in Cape Town. The spend per StatsSA measurement category was then calculated. These data are contained in Table 6.9.

Table 6.9: South African Rand food spend (ZAR) for Cape Town (unadjusted)

	CT Total Cons. ZAR	Per Capita Cons. ZAR	Adj Per Capita CT ZAR
Vegetables	2 930 034 151.53	783.43	1 041.96
Sugars & Sweeteners	470 557 655.81	125.82	167.34
Starchy Roots	1 062 735 278.08	284.15	377.92
Meat	10 785 415 391.85	2883.78	3 835.43
Cereals	8 468 022 243.52	2264.16	3 011.33
Fruits (excl Wine)	222 816 285.29	59.58	79.24
Milk (excl Butter)	2 701 989 652.91	722.45	960.86
	26 641 570 658.99	7123.37	9 474.08

A second set of calculations were necessary to enable an understanding of the overall volumes of food consumed. While the DAFF ZAR consumption figures provided data pertinent to all the food groups represented in the StatsSA breakdown, the net food consumed when measured in kg did not provide data on the full basket. Missing were reported data on meat and milk consumption. In order to calculate these items, the net South African spend data in ZAR for these items were used. General retail selling price figures per unit of measurement (kg for meat and litre for milk) were calculated averaging various meat and milk prices supplied by the various bodies representing these sectors of the food chain. These data were then compared to DAFF and BFAP data to test that the average prices were within the range detailed. Meat prices reflect a significant range, from chicken (with its own range) through to beef. For each item an average price was determined. The DAFF sales mix figures for the different animal stocks were then used to arrive at an average meat price for all meat sold in South Africa. This figure was then divided into the gross ZAR sales figures for meat to determine a kilogram sold figure. This figure was then divided by the 2012 population figure and then multiplied by the Cape Town population figure to arrive at the net Cape Town meat consumption figure. The same process was applied to milk.

This set of calculations enabled a determination of the Cape Town food consumption in kg per specific items (as per the StatsSA breakdown) for the entire city as well as per capita figure (when the gross City of Cape Town figure was divided by the population figure for 2012). This figure reflected possible consumption data for Cape Town based on national consumption figures. This required further processing as Cape Town consumption figures should not be assumed to be similar to the rest of South Africa. As the AFSUN data reflects, context is a critical informant in food system dynamics and as such further analysis was deemed necessary.

In order to arrive at a somewhat less generalised food consumption figure further analysis was required. The national food consumption figures could have been used but when various data specific to the food system are compared, different regions reflect very different food patterns. This was clearly evident in the 2012 General Household Survey data on food consumption as a percent of total spend. The national percentage figure was 12.8% of total household spend but in Limpopo, the percentage spend was 21.3% and the Western Cape 14.1%. Informed by this there was a concern that simply transferring the national consumption figures to Cape Town would result in a significant under calculation in food spend. Through interviews and consultation with food system specialists, it was suggested that Cape Town's food spend would be about one third higher than the average South African spend. As such, the food consumption figure was then adjusted upward to reflect a figure relevant to the Cape Town dynamic. This

adjustment required further testing in order to ascertain if this in fact compared to other similar calculations.

One of the few calculations of this sort that have been subjected to a measure of testing is the work carried out in Stellenbosch by Kelly and Schulschenk (2011). This work used a similar process and has been through a peer review and other such testing processes. Following the adjustment the Cape Town consumption data was then tested against the Stellenbosch data and subjected to the necessary adjustments as the years of reporting were different (Stellenbosch used 2010 data and Cape Town 2012). This was found to align.

From the various data used, additional data could be ascertained. These data included a comparison to general (national) per capita food-spend and a calculation of this as a percentage of social grant value. Further, the general household survey decile differences were also computed to get a sense of how the averaged food consumption may be spread around Cape Town using Census 2011 data. What follows is a detail of the results from the analysis.

When the national per capita consumption figure of 323.08kg per capita was then adjusted to reflect the different proportion of income spent on food in Cape Town, a figure of 429.70 kg food consumed per capita for the year 2012. When calculated out further and multiplied by the estimated City of Cape Town population using Census 2011 population data of 3 740 026 residents of Cape Town, the net food flows into Cape Town reflects an total of 1 607 097 metric tonnes of food consumed in 2012.

The Cape Town flows data was further tested against a known level of consumption within the Cape Town food system. It is a generally accepted assertion that the Cape Town Fresh Produce Market accounts for 40% of the vegetables consumed in Cape Town (CTFPM, 2013). While this assertion requires further testing and longer term review for validation, these figures were used to test the findings of the flows survey. Accordingly, using the metric tonne figure for vegetables traded through the CTFPM for the period March 2012 to February 2013 (the CTFPM reporting cycle), the CTFPM vegetable trade was measured to be 43% of net calculated Cape Town vegetable consumption of 275 423.37 tonnes. This was seen as a further confirmation of the calculated Cape Town consumption figures.

The national per capita spend on food data derived from the DAFF Agricultural Abstract of 2013 using 2012 data highlights a key tension in the food acquisition or food access processes. According to DAFF, the average per capita spend per annum is R 7 123. 37. This reflects a monthly spend of R 593.61 spent on food. This figure is well below the BFAP optimal nutritional plate estimate (BFAP, 2013). When considering the challenges associated with using aggregate figures to inform trends, the reality is that different provinces reflect different spend patterns but also, the inequalities in society mean that when the potential food spend of the highest earners in society are considered, the potential spend is far lower than the R 7 123. 37 per annum figure.

When considering the R 7 123. 37 figure within the context of annual social grant values and when the social grant of R 1270.00 per month is considered, the DAFF food spend figure is 47% of the annual funds available. This figure of 47% considers the individual only and does not take into account the others household members who also draw benefit from the grant. This would mean that the grant does not even cover the average annual food-spend for a family if the national average is considered.

As an exercise, identifying the source of food into Cape Town proved to be a considerable challenge for a number of reasons. The primary challenge is due to the fact that the retailers, who account for a large portion of the food consumed, did not wish to divulge information. Not only were the retailers concerned that this information may compromise their competitive advantage, they were also concerned about competition commission rulings expressing concerns that combining such information could result in later legal issues. In addition to this, the food system of the Western Cape means that Cape Town stores are able to ensure a higher net local content in a wide variety of food stuffs sold through supermarket chains located in the Western Cape. While this is deemed a benefit to Cape Town, the same local content is not reflected in stores in other regions. A number of the retailers consulted in this process did not wish for the Cape Town supply profiles to be made public as this could prompt calls similar information in other regions – information that does not read as pro-local as the Cape Town data may do. The brand implications for this resulted in further withholding of information.

As discussed, two of the retailers have head office structures in Cape Town. This means that a large amount of logistical support operations are located in the Western Cape. Other retailers make use of different supply chain strategies to enable supply of food to their stores in the Western Cape. Despite this, it does need to be noted that Gauteng remains the key market for most retailers with significantly higher volumes of food being traded. Despite the location of certain head office structures in the Western Cape all retailers make use of national distribution centres drawing items from that region to a central point and then distributing these items around South Africa.

Measuring food flows from the various retailers is further complicated by the different means of measurement used by the different retailers. Different retailers measure and account for flows of food in different ways. Some measure this in South African Rand terms while other in kilograms. Reporting cycles also differ so ascertaining annual figures requires significant refinement of the data before any specific information could be generated.

Two retailers agreed to discuss their food flows data but insisted on strict confidentiality contracts being signed before any engagement was possible. This means that all data reflected is discussed in very general terms and where any specific reference to a retailer may be inferred from the data, this has been articulated in a manner that would prevent the identification of the retailer.

The South African retail mix requires further consideration. Although this is discussed in the food retail section of this report (Section 7.4), it is necessary to highlight the general trend that in South Africa, formal retail trade comprises an estimated 68% of all food retail. The remainder is made up of smaller independent retailers and informal trade (See section 7.4 for greater detail on the dynamics of the informal trade system in Cape Town).

A number of key data points have been used to inform the assumptions made in this section. Firstly, the mix of different retailers has been used to inform how the data has been interpreted. As per section 7.4 in this report, the same retail mix profile has been used. This draws on the GAIN Report (2012) data citing a mix where Checkers Shoprite account for 38% of the market share, Pick n Pay 31%, Spar 20% and Woolworths 8%. The shortfall of 3 % is attributed to smaller independent retailers such as Thrupps in Johannesburg and similar types of retail stores.

Following this retail profile, the sources of food items were categorised according to the mix used by the retailers. Some retailers go into finer detail, separating out meat and fish, for example, but here broad categories have been used for comparability. The mix of products and the source percentages were then calculated to ascertain possible food

source profiles. It needs to be noted that certain food categories are subject to high seasonal supply changes which contribute to price fluctuations. Other external drivers further influence availability. Due to the global nature of the food system, availability stressors driven by shortages in supply (generally driven by climatic events but also others, such as import bans from certain regions due to health concerns) also influence regional availability and price. As such, the reliability of the data needs to be considered as being as accurate as possible at the time of reporting (period 2013) but this may change as other drivers shift price and availability dynamics.

When calculating the percentage local content and source of the food, other considerations are necessary. For the calculations used here certain food categories are deemed more reliable than others. By way of an example, due to the known sources of vegetables derived from the CTFPM, the vegetable source data can and has been tested. These data are thus deemed to have a far higher level of integrity when compared to other food types where for example processed fresh food items may be deemed local because they were finished in Cape Town but the source of much of the content of the recipe is unknown. As such, the rating of this range of product is deemed to be less reliable. As a result, a reliability rating has been used to moderate specific claims where certain food system factors may mean that the data has a measure of variability. For this exercise a reliability rating from 1 to 5 has been used where 1 denotes high reliability down to 5 which is subject to change and should be deemed subjective and/or variable.

Informed by analysis of data from those retailers who were comfortable to divulge information of product sources, a scenario has been built specific to the entire food chain. This formal retail sector analysis is understood to make up the largest portion of the food flows into Cape Town (68% of all food retail - Planting, 2010: 34). If the expansion described in Figure 7.9 is considered, this mix could be even greater. It is however accepted that certain flows of food to the informal sector may be overlooked in this general calculation but comments and perspectives on this will be provided following the formal food flows break down discussion.

Table 6.10 highlights the distribution of various different food items sold in Cape Town through the four main retailers. The rating of the reliability of the data does require some further explanation. For the protein category, while data from many retailers suggest a far higher local content when meat is concerned, the data generally refers to processing and meat packaging plants and does not necessarily consider the source of the food. Further there are no state abattoirs in Cape Town and as such, a large quantity of the animals are understood as being processed elsewhere before being processed at local facilities. Fish is a further challenge as fish supplies may be landed in Cape Town but may not necessarily have been caught in the Cape Town waters. Additionally, live fish supply variability means that items are procured internationally in accordance with availability.

Dairy is also deemed to carry a general reliability rating. Lacto Data from the dairy industry was consulted to verify the information provided by the retailers. As far as dairy is concerned the level of processing for certain dairy items may mean that products from elsewhere may influence the actual "local content" of an item. The variability in the grains data is informed by two factors, the first being that although certain grains are grown in the region, these are generally milled at centralised points. Secondly, the trading of certain grains on the international trade markets means that price options and other factors may result in the perverse situation where locally produced grains are exported while internationally sourced grains make up a portion of the diet. The low reliability rating for processes items is a direct result of the recipe make-up and assumed (via the retailers consulted) local content.

Table 6.10: Food source distribution as percentage

Food Type	Local % (200km CT)	Regional (WC)	National	International	Data Rating
Protein (including processed frozen)	33	12	37	18	3
Vegetables	56	15	23	6	1
Diary	53	19	19	9	2
Fruit	44	21	23	12	2
Grains	5	29	47	19	3
Processed Fresh (Deli, Baked)	46	14	34	6	4
Processed Longlife (Cans, Bottled)	28	12	39	21	5
Groceries (Snacks, Tea, Coffee)	29	7	37	27	4

What is clear from Table 6.9 is that when local and regional content of two key food items are considered, vegetables, including starchy roots (generally potatoes) and fruit reflect some of the highest levels of local content. Vegetables have a 71% measured local content and fruit 65% local content. Fruit does have a wider regional supply and the fact that most tropical fruit is not grown in this region does make seasonal fruit consumption an important contributor to the regional diets. The local dairy component is also of interest. What is clear is that the growing area for most vegetables is limited to a region close to Cape Town. Potatoes and certain vegetables grown in the Southern Cape notwithstanding, this means that areas of vegetable production within the vicinity of Cape Town need to be protected and secured as a key sources of food to the Cape Town food system. Other sources have highlighted the fact that much of the food grown in very close proximity to Cape Town include low cost but high weight items such as cabbages, broccoli, onions and potatoes. The proximity of the production areas of these items to Cape Town means that they enter the market at affordable prices and that poor consumers are not having to pay excessive prices to subsidise transport costs.

The Western Cape Department of Agriculture and the City of Cape Town need to work to support these productive areas as they provide a vital service to the City and region as a whole. These areas included all the productive spaces within the City of Cape Town jurisdiction as detailed in Section 4.

6.2.4 Flows within the City

Although data pertaining to food flows controlled by the major retailers were not available, it is important to note that an estimated 32% of food retail in South Africa flows through other retail channels (Planting 2010). There is no formal reporting of retail or other flows within the city outside of the supermarket sector. This section therefore uses two case studies to provide descriptive accounts of the flows of food within the city. Both cases focus on informal trade and the intersections between informal and formal food sectors. The first study is Jackson's 2010 study of the Cape

Town Fresh Produce Market, which focused on the flows of food into the market from the PHA and out of the market to the informal trade sector. This study is differentiated from the work presented above in that it focuses primarily on the flows out of the market and operates at a different analytical scale. The second study is a component of the AFSUN formal and informal food retail study.⁸

Case Study One: CTFPM Flows

Figure 6.13 provides a snapshot of the complexity of the food flow into and out of the CTFPM. The six PHA farmers interviewed for the study indicated that their produce went to other farmers on the PHA, the CTFPM, direct to retailers and a range of other places. They also acquired produce from other farmers within the PHA and beyond. The farmers' main distribution channel was to the major retailers. While the farmers recognized that they could command higher prices if they were able to do some of their own packaging, they noted that this required substantial investment that most could not afford. They also noted that the standards imposed by Fresh Mark and Woolworths on pre-packaged vegetables made it hard for them to sell in this format, so were tied into selling unpackaged vegetables.

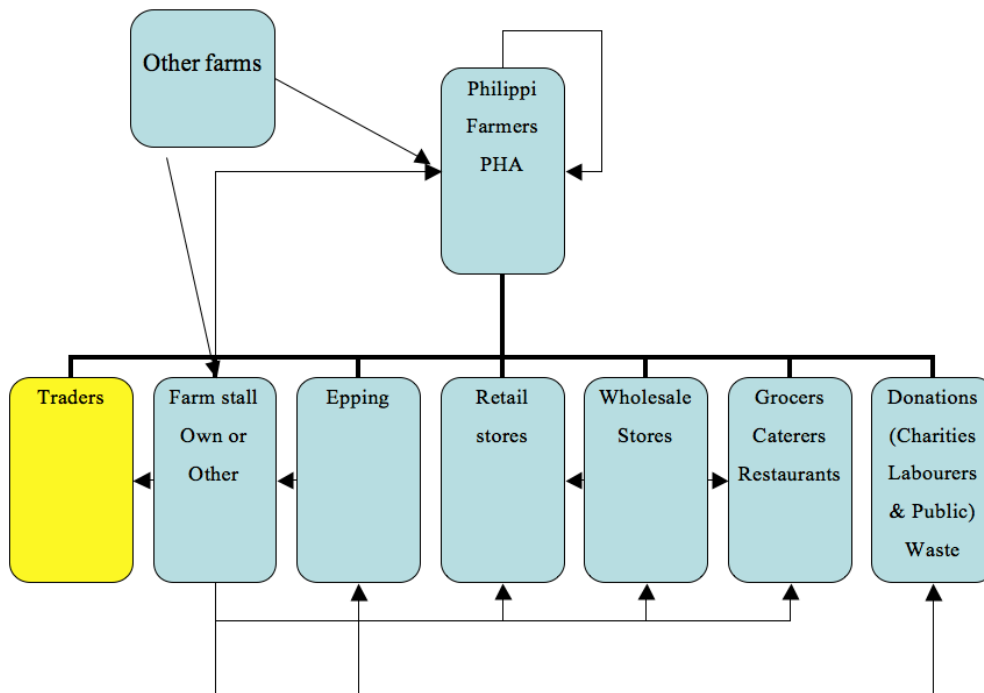


Figure 6.13 Flow diagram demonstrating the flows of food from the PHA farmers (Source: Jackson 2010)

The flows represented in Figure 6.14 reflect the interactions between the formal sector food producers and retailers and the informal sector traders. Subsequent to this project's completion, Food Bank Cape Town moved to the CTFPM site, and therefore needs to be recognized as another recipient of the "Waste" food. At the time of the study there were 58 traders operating at the People's Market on the CTFPM site. These traders often act as intermediaries between the CTFPM agents and the smaller traders. One

⁸ Intellectual property rights for the data and findings presented from this research remain with AFSUN and are used with permission.

interviewee even stated that she had learned Somali so that they would have an advantage in selling to the growing number of Somali traders.

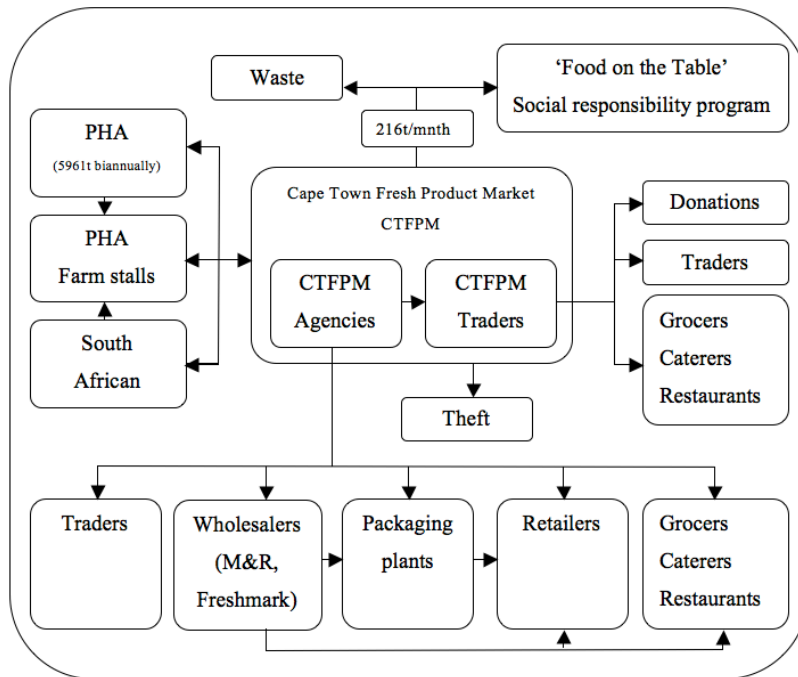


Figure 6.14 Flows of food within the Cape Town food system, from the perspective of the Cape Town Fresh Produce market at the centre (Source: Jackson 2010)

Figure 6.15 indicates the range of sources of produce for the traders operating at the CTFPM. The bulk of the produce came from the CTFPM, but they would also buy direct from farms. The traders who were not based at the CTFPM had more diverse purchasing patterns. They bought preferentially from the CTFPM and its traders but also bought directly from the PHA farm stalls. Larger traders bought directly from the CTFPM, smaller traders from the traders outside the CTFPM. Choices were made according to price, bulk and perceived quality. Several of the traders said that they bought vegetables at the market, but fruit from the traders. The PHA farm stalls were said to be good for “the things you couldn’t get at the market” and known for the high quality of specific items, namely cabbage, spinach, carrots, cauliflower, celery, leeks and soup mix.

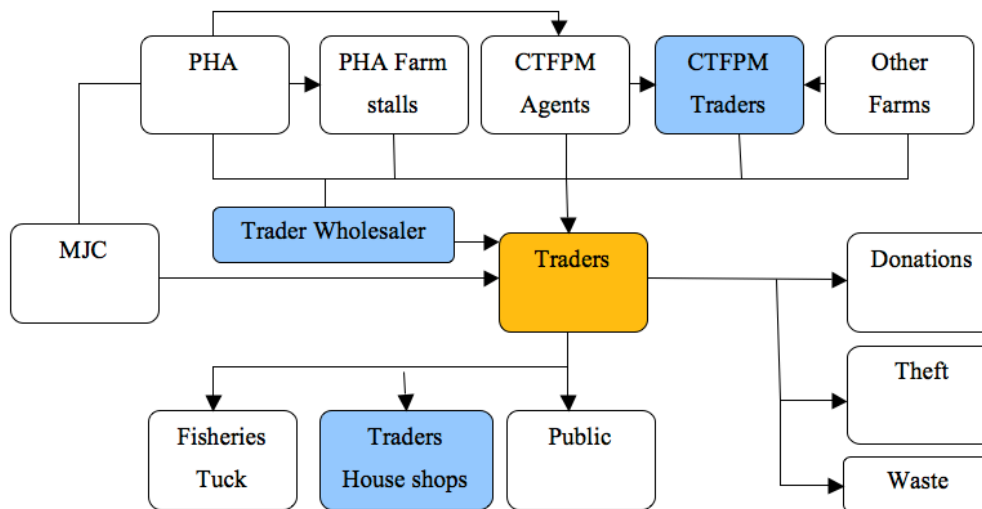


Figure 6.15 Flow of fresh produce from the Cape Town Fresh Produce market through the informal trader network (Source: Jackson 2010)

Of the 38 traders interviewed, 22 had access to their own transport (in the form of cars, bakkies, and horses and carts). The remainder hired transport with an average cost of around R100 per trip. Traders were asked to identify the five most important vegetables for trade (Figure 6.16). It is interesting to note that although cabbage is identified as a must have item it does not appear in the top vegetables sold through the CTFPM. It is however, a major product of the PHA.

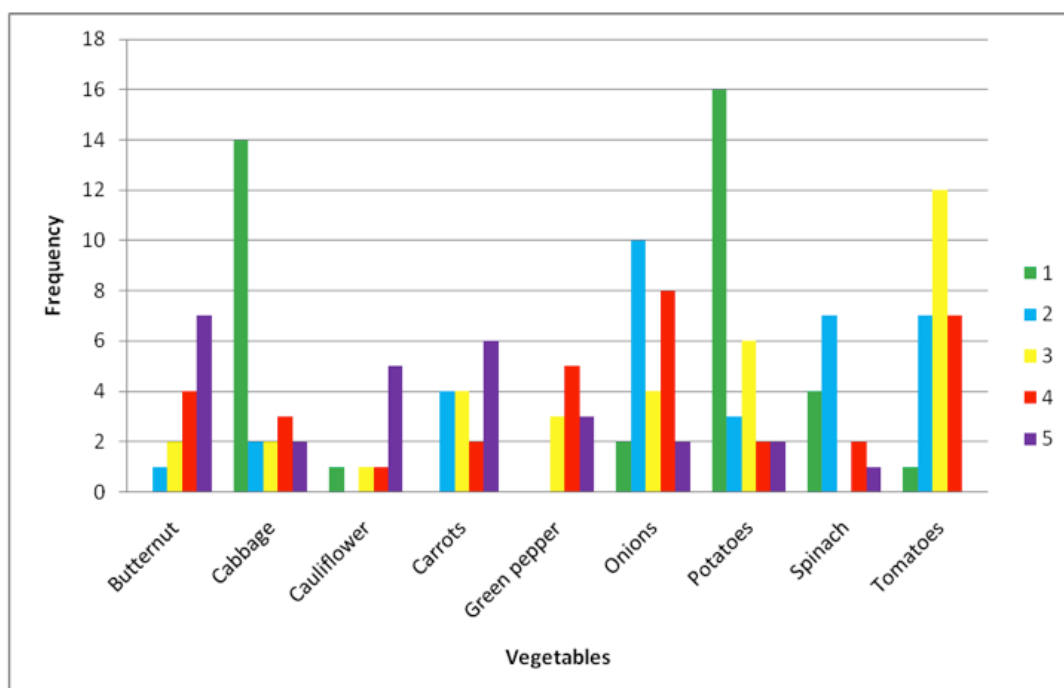


Figure 6.16 Priority vegetables as identified by traders

Traders purchased produce frequently, with just five of the 38 buying less than 3 times a week. Fifteen indicated that they bought produce six or seven times a week. This implies considerable daily flows of food through the city. Traders were responsive to consumption cycles, noting that they bought more for weekends as more people bought particular vegetables as they had more time to cook. They also stocked more in advance for “Big Days” which included the major public holidays that were often accompanied by large meals including vegetable dishes.

This study illustrates the complexity of the flows within the food system and demonstrates the connections between formal and informal trade sectors. Finally, it indicates how traders are able to be responsive to the food needs of their customers through engaging with a range of different market types.

Case Study Two: Informal Food Retail Study

The informal food retail study is part of a larger AFSUN research study conducted in July/August 2013. Almost 500 informal food retailers were mapped in Wards 34 and 95. Follow up surveys were carried out with 100 retailers sampled according to main retail product. A series of qualitative interviews were also conducted with retailers and customers. The main source of produce for informal traders was wholesalers, followed by supermarkets and the fresh produce market (Figure 6.17).⁹ Traders who went to CTFPM stated that they did not consistently buy from the same supplier at the market, but bought according to price and quality on the day.

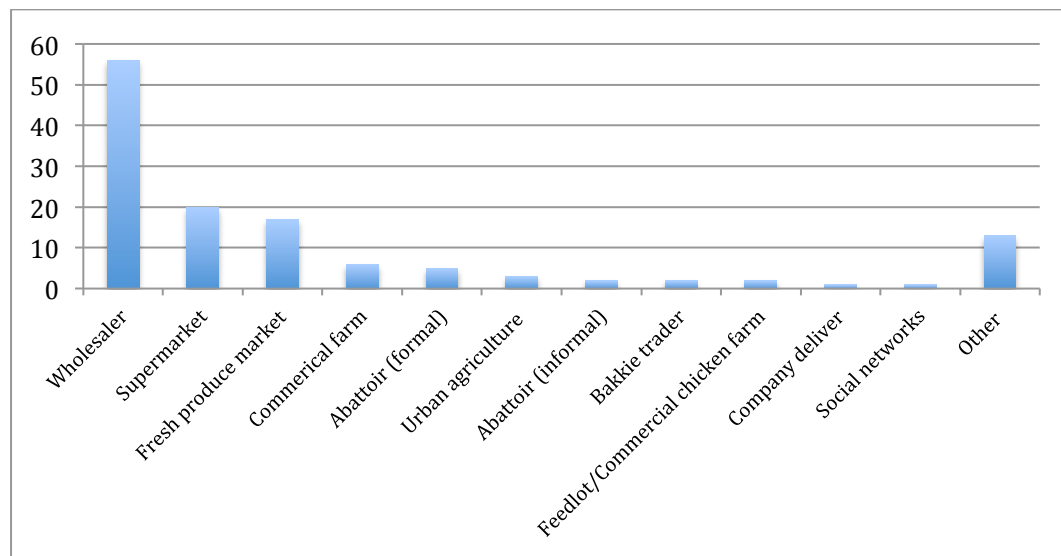


Figure 6.17 Source of traders' food (Source: AFSUN, with permission)¹⁰

Qualitative interviews conducted in Khayelitsha identified Mabhabhela in Site C and Metro Cash and Carry as particularly important sources of food. An interview with Metro indicated that their fresh produce is purchased from CTFPM. It is therefore possible to infer that the majority of the fresh produce sold in low-income areas comes directly or indirectly from CTFPM. The interviewee at Metro said that they bought from

⁹ Note: “Fresh produce market” is not necessarily CTFPM. Some traders use Golden Harvest Fresh Produce Market. CTFPM have said that Golden Harvest is a major buyer from CTFPM

¹⁰ Note: The City of Cape Town does not have any formal abattoirs, but traders identified large butcheries as formal abattoirs in this study

CTFPM as it was the only market in the Western Cape and that it was unethical to buy direct from the farms. He also said that there was relationship of trust within the system. He said that most of his non-perishable stock came from a particular company: “If you come, as an unknown guy, selling me the same stuff. I don’t know if you picked up that stuff falling from a truck, and I am not sure as to how fresh and whether tomorrow you will be able to supply me, and I may be stuck with fake stuff and that jeopardises my reputation. It also jeopardises my relationship with a well tested institution and that’s not a wise business decision.”

An interview with an employee at Golden Harvest provided some sense of the business rationale of the large fresh produce traders. Asked how they determined prices and what the main price triggers were he responded: “It is a combination of many things. One, if we buy from a farm in Philippi, chances are our prices will go down because there is no huge transport cost. If we buy from Johannesburg, the opposite is true.” This certainly supports the argument above about the possible role of local production in moderating food prices.

Golden Harvests sell both to traders and to major retailers. The employee said that the “big guys”, including Shoprite, Pick n Pay and Spar, are guaranteed the best quality, freshest produce. He also pointed the role of the biggest traders in providing cheap fresh produce to the township market: “There are these guys who buy in bulk and sell to the township business... They sell to other businesses. They buy many pallets. Because of that the price significantly decreases such that they end up selling, for instance, a bag of potatoes at the same price as us inside.”

Traders make frequent purchases, as a result of limited transport, storage and refrigeration, and in the case of perishables, to ensure quality (Figure 6.18). This suggests a dynamic and active set of food flows within the city.

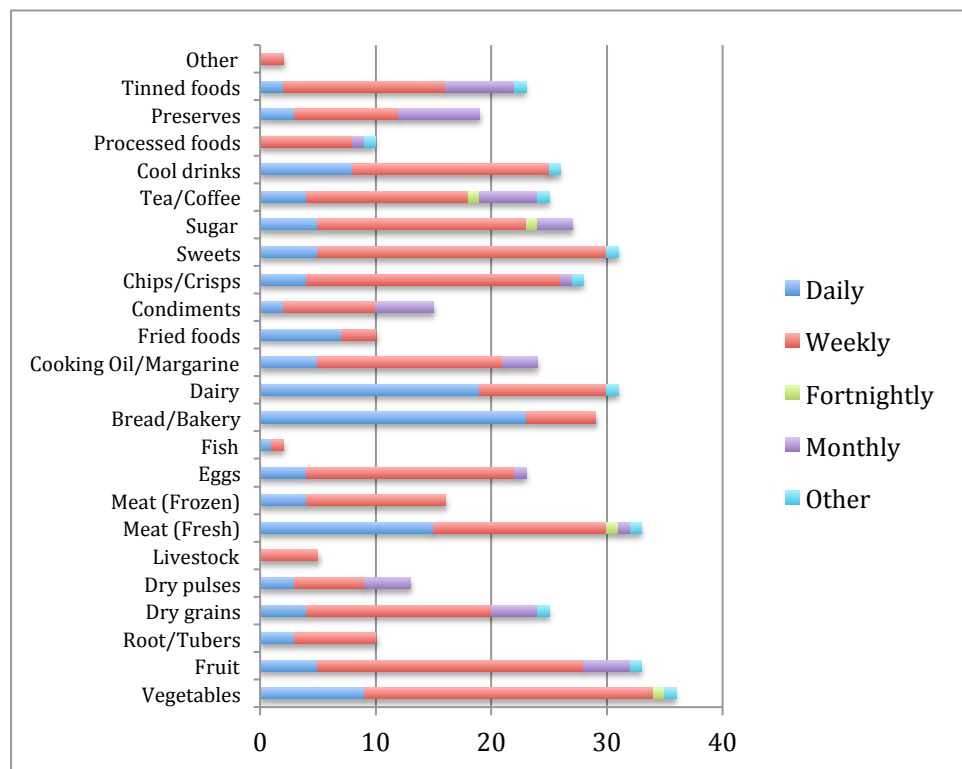


Figure 6.18 Frequency of food purchased by traders (Source: AFSUN, with permission)

Transportation in particular seems to play an important role in trader purchasing patterns (Figure 6.19). When explaining why stock was bought from Mabhabhela, one fresh produce trader explained:

Trader 1 – It's the cheapest and nearest market place, particularly for us without transport. You can't go to other markets because the transport is going to kill you and you may end up paying more than you would at Mabhabhela if one includes the transport fee.

Interviewer – Oh, does Mabhabhela provide you with transport?

Trader 1 – No, there are no deliveries.

Interviewer – So how do you save on transport then?

Trader 1 – I take taxis and pay for a seat or two, so its only R6 per seat because I am only occupying a space for one person. But, if I go to other markets, I will have to hire a car and they costs too much

Another Fruit and Vegetable trader who had his own car also spoke about the role of transport price on his retail prices: “But remember, there is transport money, and people always think only about petrol when thinking about transport money, but also your wheel treads and car maintenance also.” This trader drives himself to the market, and also takes “some of these ladies who don't have transport” and then charges them R20 for petrol, “although that is never enough, but since I was going to the market anyway, I don't mind that much because I am not greedy”.

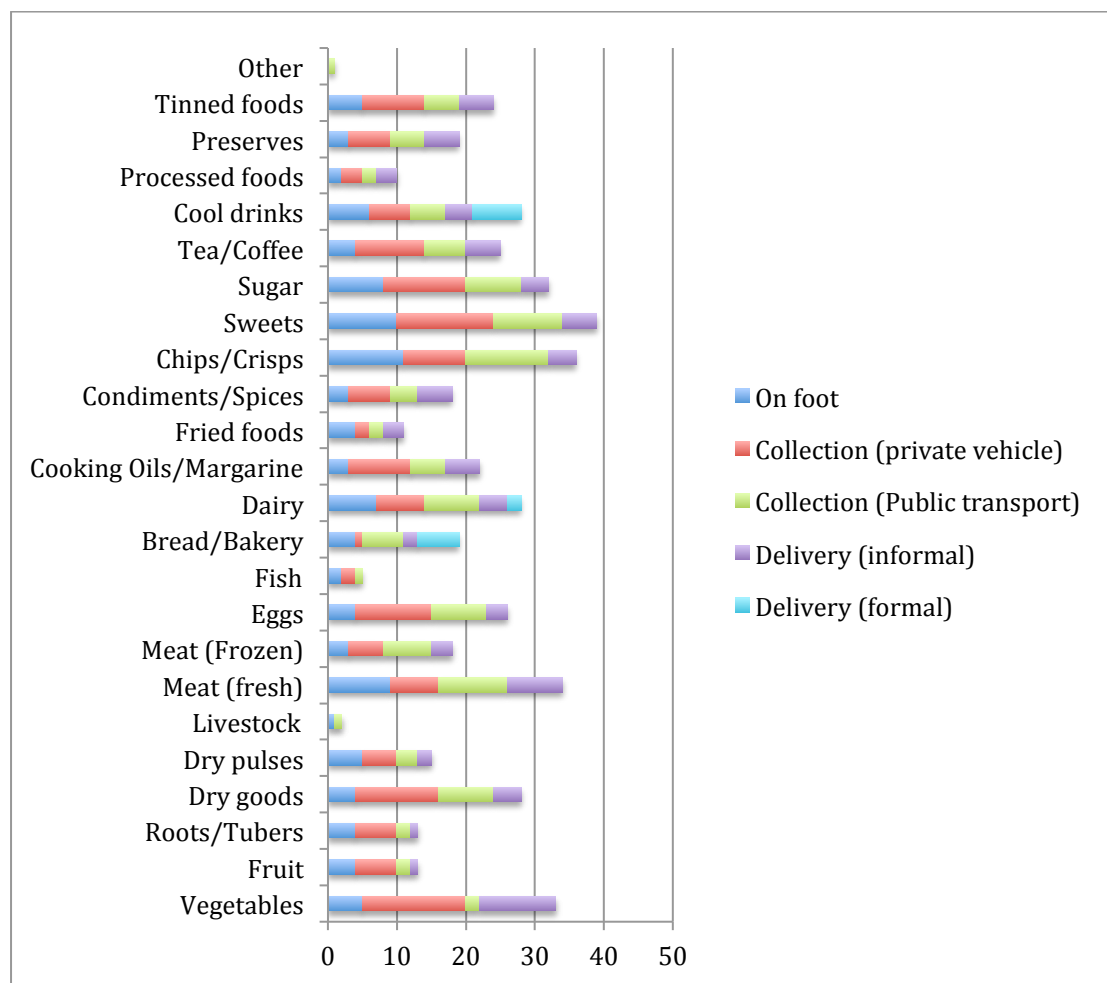


Figure 6.19 Trader food acquisition patterns (Source: AFSUN, with permission)

The flow of meat within the city takes various forms. There is a large trade in cooked meat through braai strands. Damien Schumann's PhotoEssay "Meat Informally" (<http://dspgallery.com/meat-informally>) indicates that meat traders more regularly access meat from local meat companies (Khaya Meat in Site B, Siyoja Meat Place opposite Khayelitsha Station, Mankomo Meat Suppliers in DuNoon, Britos in Mitchell's Plain). Live chickens are sourced direct from farms. One Somali trader said that he purchased red meat from the market in Maitland and sourced chicken from Country Fair at Epping as these were the cheapest, good quality sources.

Two products were delivered to spaza stores directly by companies: bread and cool drinks. Albany bread was preferred as they would take back old bread and provide fresh bread every day. It was noted that customers preferred Blue Ribbon, but Albany treated the spaza owners better and was cheaper.

Transport issues, cash flow, storage, refrigeration and a number of other issues, determine the flows of food within the informal trade sector. A crucial point to understand is that these traders are largely price takers, although in the case of fresh produce they are able to shop around. They cannot add much mark up as the market customer base cannot afford to spend more and there is competition. In explaining business practices one of the Somali traders interviewed said,

Trader 2 - In business you must look out for cheaper places (to source food) so that your customers can benefit.

Interviewer - I thought business was about benefitting the businessman?

Trader 2 - No, you've got it wrong. Business is about customers, for without them you cannot have business. As a business person you must always think of them first, then the profit will come only after the customer has been served.

In a similar vein, one of the fresh produce traders said, "Remember, we are not only competing amongst each other, but also with Shoprite and other big market stores."

The material presented in this section provides a qualitative account of informal flows of food targeting the low-income market. The trade networks are dense and interconnected and are responsive price pressures from above and below. The flexibility afforded by being able to obtain food from multiple sources provides the traders with some resilience to price shifts and the dynamics of customer demands.

There is a final set of flows – food through food redistribution programs. In an earlier research project, a review was conducted on the flows of food through Stellenbosch and who were gaining access to food through food aid processes (Van Der Berg 2011). Food aid included school feeding, municipality supported food gardens and food schemes run by faith based and non-governmental groups. The study found that in Stellenbosch alone, 31 active feeding projects were identified serving an average of 209 meals per day¹¹ per project. This amounted to over 9 000 meals being served daily in Stellenbosch. When the review was expanded to the wider Winelands region just over 27 000 meals were found to be served on a daily basis through 94 active projects participating in these feeding programmes. These projects range in size from large established NGOs to diverse community projects and small micro projects.

This exercise was not repeated for the City study, given the scale of redistribution and the limitations of time and budgets. It is worth noting that Stellenbosch's population is around 100 000, and the City of Cape Town's is 3.7 million. The scale of redistribution in Cape Town is therefore likely to be many times greater than in Stellenbosch. Food Bank Cape Town alone, for example, provides food for 57 690 beneficiaries through 219 agencies (Erispe Pers. Comm)

¹¹ A large number of the projects did not operate on weekends.

6.3 Conclusion and Recommendations

The links between food flows and food security may appear tenuous but understanding the flows of food enables cities to identify areas where interventions specific to food security can be applied. Understanding where flows of food originate at distant and at times volatile food sources enables planning that can instigate processes to reduce vulnerability. An example of this was in Belo Horizonte where new fresh produce supply lines were supported as part of an overall food strategy (Rocha & Lessa 2009). Where food flows are linked to other threats outside the food system, food system planners can initiate programmes that assist in countering these specific threats. An example of this could be anticipating food price increases when increases in fuel prices take place at times when other costs (such as school fees) are adversely impacting on vulnerable communities.

Understanding flows that have a specific relevance to a particular city is an essential part of food system and food security planning. South African and Cape Town consumers are highly dependent on the functioning of the market to ensure flows of food into the city. This represents a significant challenge particularly as food price increases and general food system functions become more consolidated yet more volatile. Understanding national and regional food flows and being able to track aggregate data to work of strategic interventions that could map out sustainability planning or other such interventions, while important, do not necessarily need the detail that is required to engage effectively in food system planning. Food system planning is a key strand in an overarching food security strategy. Understanding the flows of food would enable the necessary attention and protection to be afforded to key food sources, wherever these may be.

The following recommendations are made:

1. *Data*: A lack of data specific to food flows hinders any strategic food system planning. Systems to collect and synthesise all food flows data should be investigated. These systems need to align with the City's mandate while complying with the competition legislation.

Level of importance: High

Responsibility: Economic Development, Economics Cluster, Approaches to be made to StatsSA, South African Human Rights Commission to develop processes to access data from private sector. Dialogue with private sector players to access data.

2. *Traders*: The informal traders are an important component of the local food system and generator of flows. An enabling environment that extends support beyond interventions at the point of sale should be created in order to facilitate their sourcing of food.

Level of importance: High

Responsibility: Economic Development, Transport.

7 Cape Town's Food System: Processing, Retail and Sustainability

Key Summary Points: Processing

- Food processing is an important component of the food system, with 70% of South Africa's agricultural output undergoing some form of processing or packaging.
- Food processing is predominantly an urban activity. Cape Town is a food-processing hub due in part to its port city status.
- Agro-processing is dominated by large companies, with the 10 largest producing 52% of all packaged food sold in South Africa. This concentration is far greater than the global average of 26%. Large agro-processing businesses (annual turnover of more than R51m) account for 91% of all income and 75% of all employment in the sector. Micro-industries (less than R5m per year) account for 1.4% of all income, but 6% of all employment.
- IPAP2 identifies food as a sector with high employment multipliers. In line with concerns raised in the NDP, DAFF's (2012) Agro-Processing Strategy "limited participation of small and medium agro-processing enterprises in agro-food value chains".
- Cape Town has over 600 food processors licensed to sell to retailers. There are around 10 000 retailers and restaurants licensed to sell food. The food sector is therefore an important source of employment in the city.
- The major food companies have factories in the city. There are concerns about the ability of smaller processors, particularly in sectors like bread, to gain entry to the market.
- There are distinct geographic clusters of food processing, usually centred on industrial parks. The CTFPM's presence in the Epping Industrial Estate is argued to support the presence of a range of other processors and logistics firms.
- The following recommendations are therefore made:
 - *The CTFPM should be acknowledged as an important food hub within the city*
 - *The spatial agglomeration of food processing factories provides an opportunity for the City to investigate alternative waste management strategies that would increase food system sustainability and relieve pressure on landfill sites.*
 - *Food processing should be incentivised as a growth sector. New locations for food processing in the SE of the City could be identified (see p. 176).*
 - *The City should seek ways to provide opportunities to connect small producers to small processors, and to markets. This is an element of building Cape Town's reputation as a food hub.*

Key Summary Points: Retail

- There has been massive expansion of the supermarket sector in Cape Town. This has been driven by perceived new markets, broader food system trends of market deregulation and trade liberalization and the retail-led township

development models.

- The impact of this expansion on access to healthy and affordable food is not clear-cut and requires further consideration.
- There is a sizeable informal food retail sector that is internally differentiated.
- The informal food retail sector is responsive to customer needs in terms of opening times, product range and unit size, and the offering of credit.
- Trader location is extremely important for business viability. Key sites of trade are near transport hubs and outside shopping malls.
- The formal and informal food retail environments need to be considered as part of the same food system to ensure food security for the urban poor. The potential impact of future supermarket expansion on food security should be a component of planning decisions.
- The following recommendations are made:
 - *Studies should be conducted on the food retail mix and pricing of supermarkets and malls in townships in order to evaluate their provision of affordable, nutritious food. These should include longitudinal studies in the impact of supermarket expansion on informal food retail.*
 - *Future decisions on shopping mall developments should have a food security impact component.*
 - *There should be a specific focus on increasing the sale of safe, healthy foods by informal traders near transport hubs. There should also be a focus on supporting suppliers of these food items to the informal trade sector, most notably the Cape Town Fresh Produce Market.*
 - *The City should engage designers to design low-cost, low-tech solutions to the food spoilage problem.*
 - *City officials working on formal and informal retail should connect to plan for a diversified retail environment that meets the food security needs of the poor.*

Key Summary Points: Sustainability

- Principles of environmental, social, economic and cultural sustainability are embedded in many of the City's policy and strategic documents. However, food system sustainability is largely absent from these documents,
- The food system is a major user of natural resources and contributor to greenhouse gas emissions. Although sustainability within the food system is generally considered at the agricultural level, there is substantial impact along the food chain.
- The city is location of many food system processes, including: Packaging and processing, Transport and distribution, Retail, Consumption, Waste and Food Safety. It is therefore important for the City to consider its role in food system sustainability.
- Food waste is an area of particular concern – and opportunity. Although organizations like Food Bank do good work in redistributing edible food waste and a number of small companies process food waste into compost or other re-

useable products, there is no wider system or City strategy to collect or manage food waste from retailers or food processors as a separate waste stream.

- The following recommendations are therefore made:
- *Food system sustainability should be integrated into broader City sustainability planning and monitoring.*
- *Food waste from retail and food processors should be identified as a specific waste stream and strategies developed to divert this waste from landfill and to facilitate safe recycling and reuse as compost, fertilizer and biogas.*

Reliability

The major retailers dominate the food retail environment in Cape Town and foods produced by the major processors. Both of these attempt to bring foods to the consumer at the lowest possible price. However, as discussed in the following chapter, this system is increasingly volatile in terms of pricing. Additionally, there are concerns about anti-competitive pricing and collusion in the retail and processing sectors. The ongoing presence of informal food retail provides an alternative source of food with pricing structures that are responsive to the needs of the poor. The presence of formal and informal food retailers provides a means for consumers to navigate changing prices and economic circumstances.

The current system delivers adequate nutritious food, but the relative availability and affordability of healthier foods is a concern (see Chapter 9). There have been several high profile cases of mis-labelled foods in supermarkets and restaurants in Cape Town. Although these foods are not unsafe, it does highlight an underlying concern about the reliability of foods in the system in terms of traceable standards. There are clearly concerns about the safety of food vended through informal retail. However, given the importance of this sector for food security, the City should exercise caution in over-regulating this sector and work towards more direct support for food retailers.

Sustainability

The current food system in Cape Town does not have explicit sustainability principles embedded in it. The current local and national food system operates as a linear rather than closed loop system. There is potential for the City to increase the environmental sustainability of the system through targeted deferment of supermarket and processor food waste away from landfill.

There are concerns about the economic and social sustainability of the existing food system and its current trends. The large retailers and food processors are gaining an increasingly prominent role in the food system nationally and locally. This is making it harder to smaller processors and retailers to establish and remain in business. These smaller businesses have higher employment to profit ratios than larger businesses and provide a large number of livelihoods across the city.

Transparency

The major retailers and large processors are unwilling to release data. The informal traders are also hesitant to reveal information on earnings and trade volumes as they had heard that they may get formalised and be taxed on profits. There are therefore significant data gaps. Additionally, although the City issues Certificates of Compliance for all food processors and retailers, no data is held on what is being produced and sold in what volume, and how many employees there are. Neither City Health, nor the legislation it is mandated to enforce, allows for this type of business information to be

gathered and made available. This is confidential information. This data gap provides a limiting factor in understanding the food system.

Role of City

The City plays a direct role in the local food system primarily through its work in food safety and compliance. However, there is also a significant indirect role in food system planning. This implies an important role for the departments within EESP.

7.1 Introduction

There has been considerable focus on primary production as the determinant of food security in South Africa. Consumers however very rarely access unprocessed primary produce. Even fresh produce has generally been through some kind of packaging process. About 70% of South Africa's agricultural output is used in intermediate products in manufacturing and related sectors (Louw et al 2007, 4). Additionally, the vast majority of food consumed by households is acquired through retail outlets. The structure of the retail environment within the South African food system is undergoing rapid transformation as the major supermarkets extend their reach into lower income markets. The Big Four retailers and the largest food processors increasingly dominate the local food system.

Yet, despite the importance of processing and retail in food security, there has been little attention paid to other aspects of the food supply chain beyond production. The patterns of food distribution provide important information about the nature of Cape Town's food system and the possibilities of connecting the food system to broader City objectives.

7.2 Value Chains

In order to illustrate the complexity of the path of food from point of production to point of consumption, this section provides an example of the value chain of a single product, the potato. The potato has been selected as it is one of the three main traded items at the Cape Town Fresh Produce Market and is an important staple foodstuff for the poor. Potatoes South Africa estimate that informal traders accounted for 53% of all fresh potatoes sold at fresh produce markets (DAFF 2012).

As Figure 7.1 indicates the potato reaches the consumer through wide range of conduits, each with its own pricing structures and challenges and opportunities for the consumer. Table 7.1 provides an overview of the relative importance of each outlet in the value chain.

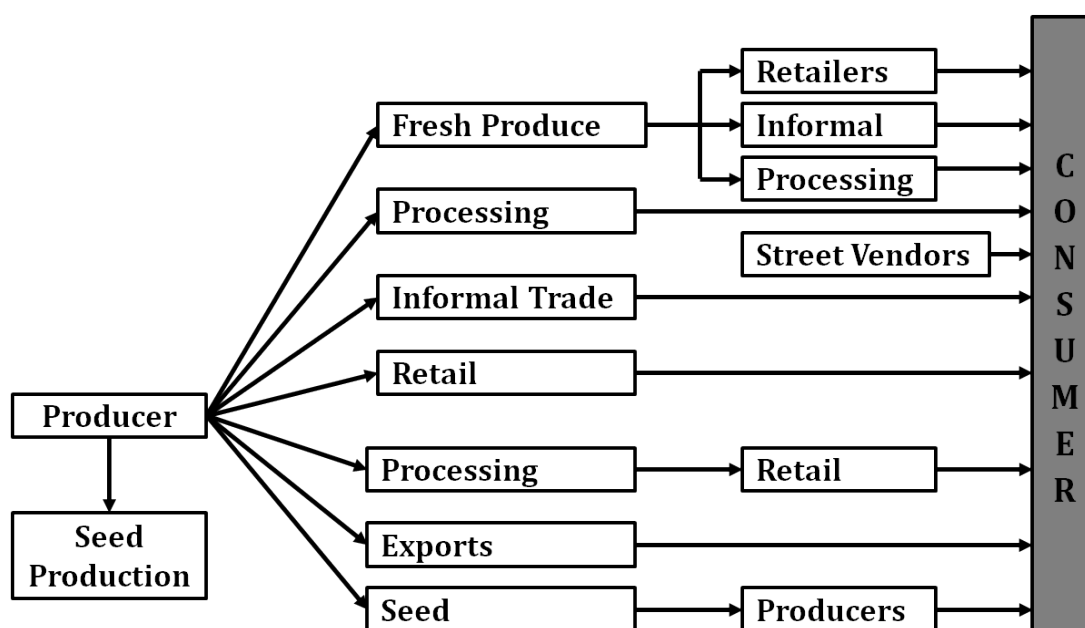


Figure 7.1 Schematic Representation of the South African potato supply chain (Source: DAFF 2012)

Table 7.1 Market breakdown for South African produced table potatoes, 2000-2005

Primary Market Channel	Outlet	2000	2001	2002	2003	2004	2005
		Percentage of total					
Market	Processed	5,6	6,6	4,1	3,1	3,2	2,7
	Export	3,2	3,4	3,0	2,9	2,2	2,2
	Formal sector	36,0	36,2	30,9	22,1	21,3	21,3
	Informal sector	18,4	18,5	21,8	29,2	32,6	32,6
Outside market	Processed	12,8	12,8	18,2	19,3	18,6	17,5
	Export	3,9	4,2	6,5	6,5	4,8	5,1
	City trade	5,7	5,4	5,9	7,7	7,8	8,0
	Farm trade	1,8	1,4	1,3	1,1	0,9	1,0
	Rural trade	12,5	11,5	8,3	8,0	8,6	9,6
	Total	100,0	100,0	100,0	100,0	100,0	100,0

Source: PSA 2005 in DAFF 2012.

7.3 Food Processing

7.3.1 The South African Food Processing Industry

The manufacture of food and beverages accounted for 14% of the total income from manufacturing in South Africa in 2008 (StatsSA 2010 in Harcourt 2011, 14). As with the import/export figures presented in the flows section, the data generated with reference to food processing focus on financial value, rather than volume of product. This again makes it difficult to infer the contribution of these sectors to the food system. Figure 7.2 indicates the sectors that contributed to the R221bn generated by the food and

beverage-processing sector in 2010 (StatsSA 2010 in Harcourt 2011, 14). Although the beverage industry is the largest contributor to income generated, the Bakery and Confectionary sector is the most important in terms of contribution to employment.

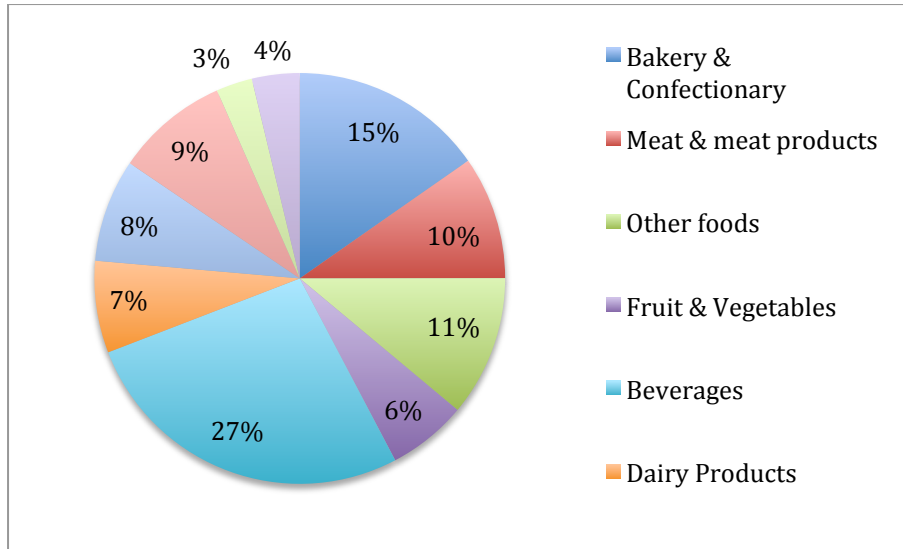


Figure 7.2 Income generated by food sector (Source: StatsSA 2010 in Harcourt 2011)

The food and beverage processing industry is also a major source of employment within South Africa. Figure 7.3 indicates the sectoral breakdown of the 191 600 jobs within the food and beverage processing sector in South Africa (StatsSA 2010 in Harcourt 2011). While the food and beverage processing sector is an important source of employment within the country, there appears to be a long-term decline in levels of formal employment (Figure 7.4). There was a marked increase in informal employment within the food and beverage-processing sector between the 1991-1995 and 1996-2000 counts, which could be related to changing labour regulations over this time period.

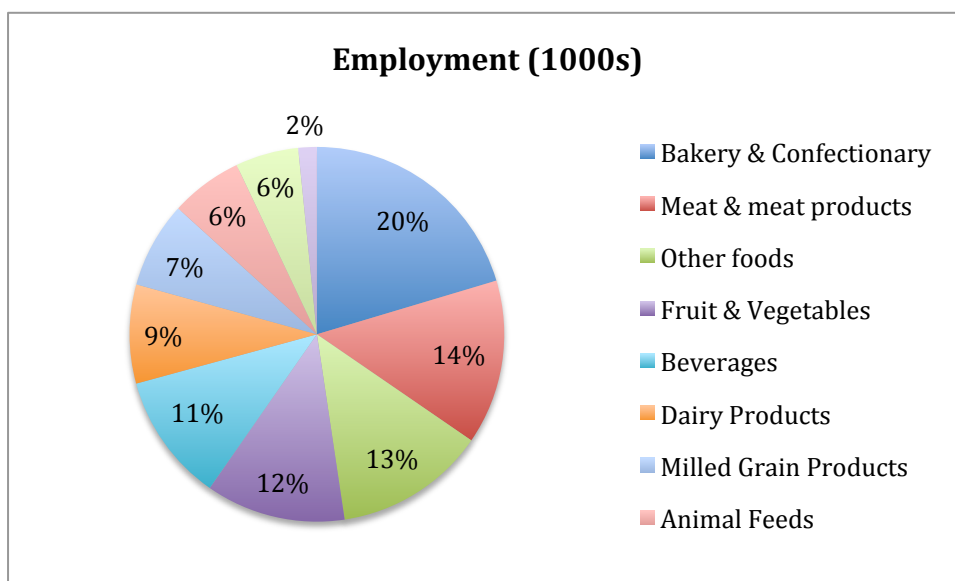


Figure 7.3 Employment by Sector (Source: StatsSA 2010 in Harcourt 2011)

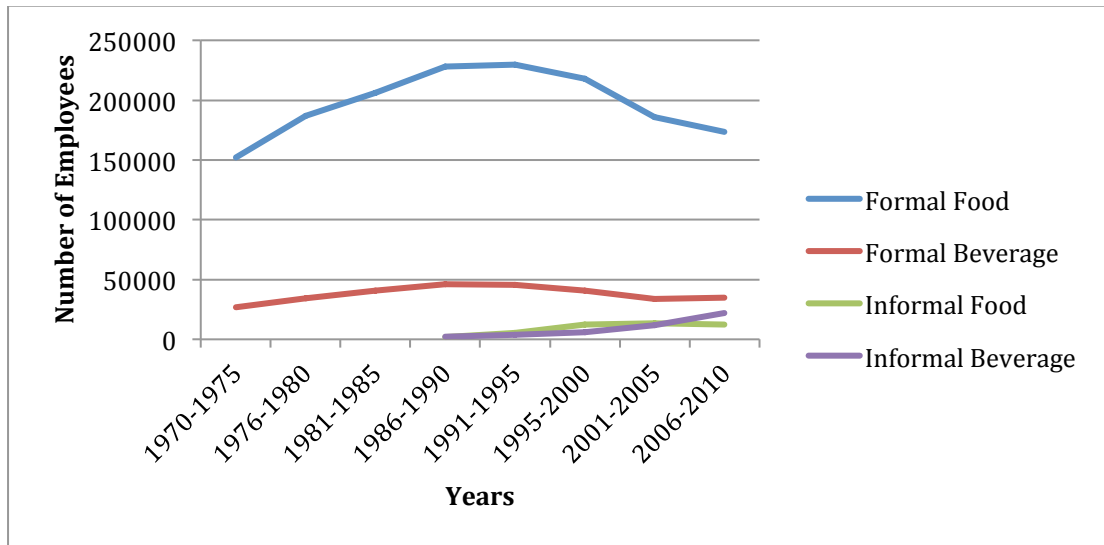


Figure 7.4 Average employment in food and beverage agro-processing sectors, 1970 -2010 (Source: Quantec EasyData 2011 in DAFF 2012)

Food processing is increasingly concentrated with the ten largest packaged food companies now accounting for 52% of total packaged food sales. Artisanal packaged processed foods contribute only 7% of total sales. The packaged food sector in South Africa is far more concentrated than the global average where the top ten companies accounting for around 26% of the processed food market (Igumbor et al 2012, 2). As Figure 7.5 indicates, large enterprises (i.e. a turnover of over R51m p.a.) account for around 91% of all income and 75% of all employment in the sector. Micro-industries (with an annual turnover of R5m or less) account for 1.4% of income and 6% of employment. The micro- and small-enterprises are therefore important generators of employment relative to income generated. These businesses are therefore well placed to be an employment-generating sector within Cape Town. The food sector has been identified within IPAP2 as a sector with high employment multipliers and strong backward linkages and as a source of labour-intensive growth (DTI 2013, 86).

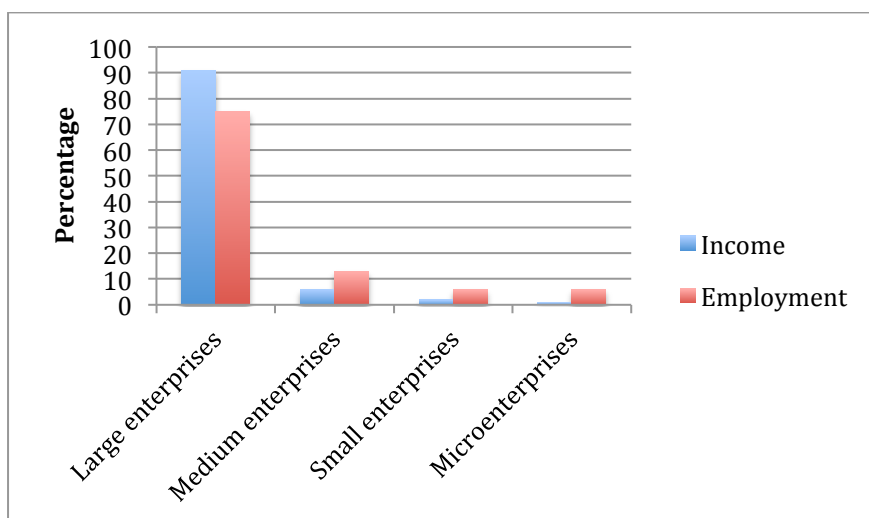


Figure 7.5 Contribution to income and employment (Source: DAFF 2012)

In 2012 the DTI announced that it had invested R736 million in incentives in the agro-processing sector in the previous three years, which retained 14 000 and created 7 000 new jobs (Esterhuizen 2012). Furthermore, DAFF released a new Agro-Processing Strategy in 2012 to address the problem of “limited participation of small and medium agro-processing enterprises in agro-food value chains” (DAFF 2012, 8). These initiatives are in line with the concerns raised in the NDP about concentration within the agro-processing sector. Figure 7.6 provides an illustration of the problems to be addressed by the Strategy. As is evident, market concentration is identified as an ongoing challenge.

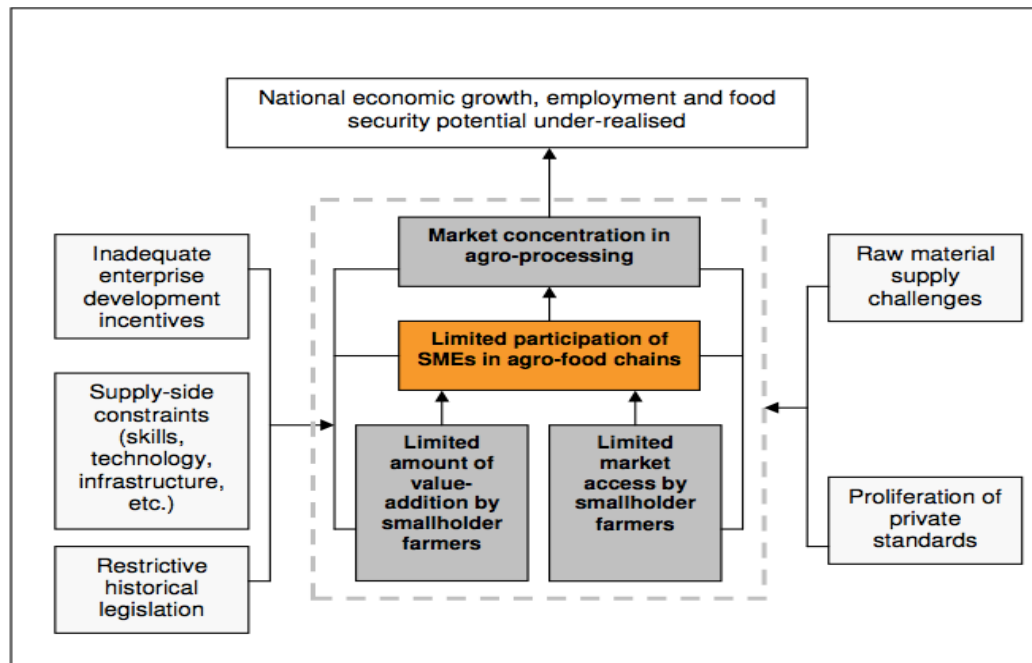


Figure 7.6 Graphic Illustration of Problem Statement of DAFF Agro-Processing Strategy (Source: DAFF 2012, 9)

The Strategy identifies a series of Strategic Interventions

- i. **Strategic Intervention 1:** Contribute towards and to facilitate access to public incentives and support packages to stimulate entrepreneurship by SME agro-processors;
- ii. **Strategic Intervention 2:** Contribute towards and facilitate investment in infrastructure to enable establishment and growth of value adding businesses;
- iii. **Strategic Intervention 3:** Facilitate value-chain linkages to ensure, among other things, that agriculture, forestry and fisheries commodities find a market, while at the same time ensuring reliable supply for SME agro-processors;
- iv. **Strategic Intervention 4:** Support technical and managerial training of SME entrepreneurs;
- v. **Strategic Intervention 5:** Facilitate access to appropriate technologies to enable productive activities by SMEs; and
- vi. **Strategic Intervention 6:** Facilitate access for SME agro-processors to business development services such as legal, accounting and related services. (DAFF 2012, 17-18)

7.3.2 Food Processing Sector in Cape Town

This section considers these national patterns in the context of food processing data provided by the City of Cape Town. Environmental Health holds data on food producers within the City through their registration of Certificates of Acceptability. The City provided a list of 616 processors of food in the city licensed to sell to retailers. There are also some 10 000 retailers and restaurants licensed to sell food throughout the city.

Food processing is highly concentrated in South Africa, and the major companies (See Table 7.2) are present within the Cape Town food system.

Table 7.2: South Africa Packaged Company Shares

Rank	Company	Value (%)
1	Tiger Brands Ltd	17.2
2	Unilever Group	4.9
3	Parmalat Group	4.8
4	Nestle South Africa	4.6
5	Clover Ltd	4.6
6	Dairybelle (Pty) Ltd	4.0
7	Pioneer Food Group	3.7
8	Cadbury Plc	2.8
9	AVI Ltd	2.8
10	PepsiCo Inc	2.4

(Source: Alexander et al 2011, 4)

According to the dataset of licensed food processors in Cape Town, all but three of the major companies have processors in Cape Town:

Tiger Brands is present through Albany, Beacon Sweets and Chocolates, Jungle Oats, Jungle, Tiger Brands Mayonnaise (Cross & Blackwell), Tiger Brands - Jarred Baby Foods (Purity), Tiger Milling, and Tiger Brands - Cereals.

Pioneer Foods is present through factories of its Sasko and Bokomo Brands.

AVI is present through its I&J Brand.

PepsiCo is present through its Simba Chips brand.

Parmalat, Clover and Dairybelle are all present in factories listed under the company name.

Nestle, Unilever and Cadbury appear to be absent from the City's database, Nestlé's website states that they have a pet food factory in Ndabeni and a culinary factory in Bellville (<http://www.nestle.co.za/aboutus/countryoffices>).

Unilever has 14 factories in five areas in South Africa, the nearest to Cape Town being Stellenbosch.

Only Cadbury do not appear to have any presence within the Greater Cape Town Region.

Of the 616 processors listed, it was possible to locate and map 584. There were 14 that were unmappable due to partial addresses (nine of these were farm addresses that had no street address) or because the businesses were untraceable in using the Internet and current phone directories. The remainder were duplications in the data set. Table 7.3 below indicates the main types of food being produced.

Table 7.3: Main food types produced by licensed food processors in Cape Town

Producer type	Number	Percentage
Meat/Biltong	73	12,5
Confectionary/Cookies/Chips	66	11,3
Spice/Condiments	57	9,8
Beverages	44	7,5
Bakery/Milling	43	7,4
Fish/Seafood	41	7,0
Other	35	6,0
Fresh Produce	32	5,5
Logistics/Packaging/Non-Food	29	5,0
General	25	4,3
Unknown	25	4,3
Dairy	23	3,9
Catering	18	3,1
Ice Cream	14	2,4
Cereal/Baby Food	12	2,1
Nuts/Dried Fruit	11	1,9
Frozen Food	11	1,9
Pasta	10	1,7
Pies/Pastries	10	1,7
Oil/Butter	5	0,9

From the data provided it was not possible to identify exactly what was being produced, in what volumes and how much employment these processors were generating. The main types of food were derived from cross-referencing the list with Internet and telephone directory searches. From the online profiles found, the clustering of the businesses and prior knowledge of a number of the companies, it can be seen that there is a strong presence of small food processors in Cape Town (see Figure 7.7). The food processors are clustered in a number of key nodes: Montague Gardens, Killarney, Epping Industrial, Cape Town Harbour, and to a lesser extent Industrial and Business Parks in Westlake, Brackenfell, Athlone and along the Voortrekker Road. These are areas that were created with infrastructure for these kinds of small to medium sized businesses to operate and are well connected to transportation infrastructure.

As noted above, micro- and small-enterprisesThe micro- and small-enterprises are therefore important generators of employment relative to income generated. These businesses are therefore well placed to be an employment-generating sector within Cape Town. The food sector has been identified within IPAP2 as a sector with high employment multipliers and strong backward linkages and as a source of labour-intensive growth (DTI 2013, 86).

The major food producing companies play a large role in providing basic foodstuffs to residents of Cape Town, but the dataset suggests that there is a vibrant food-processing sector that provides a wide variety of foods to retailers within the city and beyond. The high number of licensed food processors, and the additional estimated 10 000 food retailers and restaurants indicate that the food system is a major employer in the city. There are many small, local businesses providing foods for the Cape Town market and beyond. These companies are dependent on primary products being brought into Cape Town from within and beyond the country's borders.

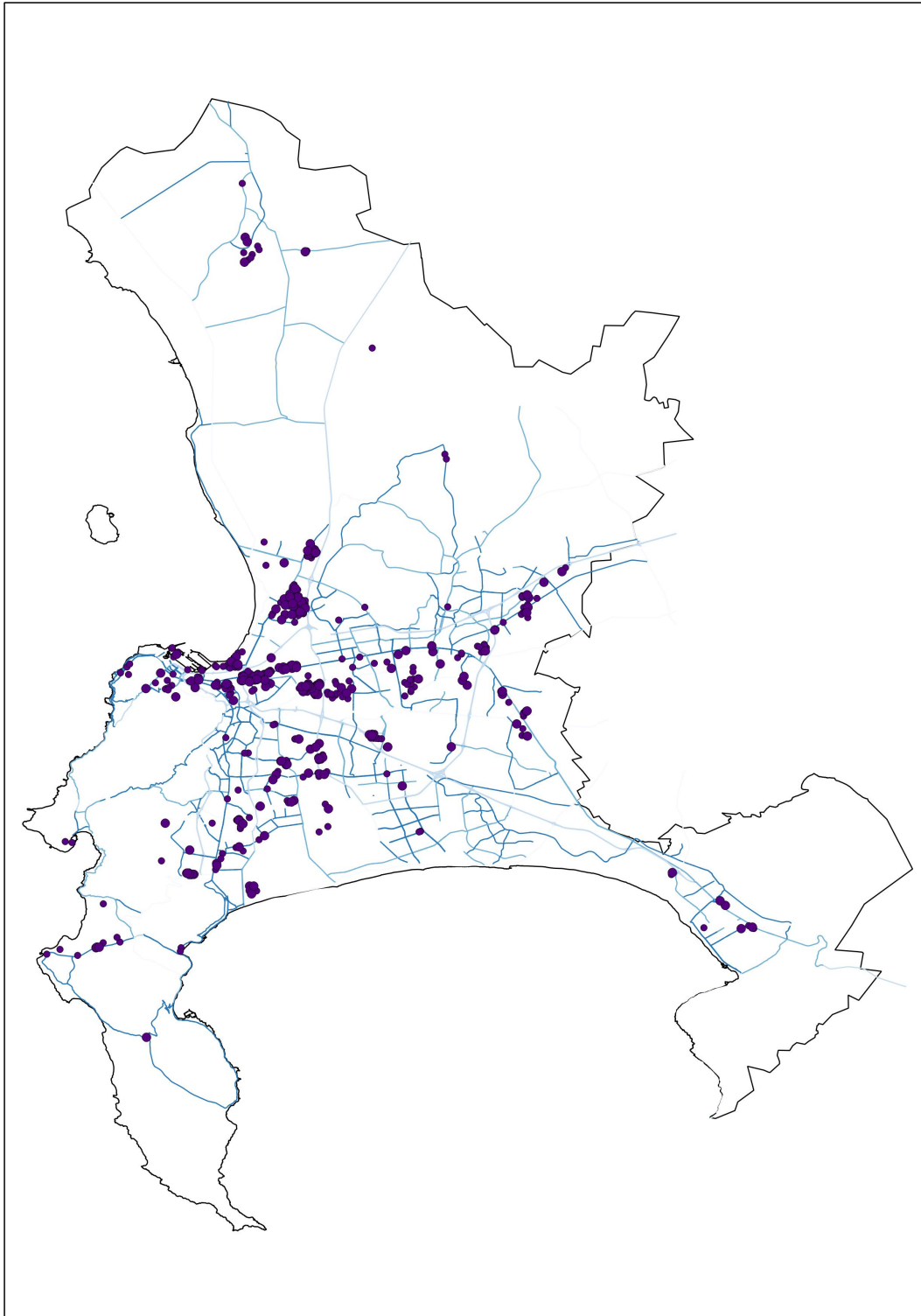


Figure 7.7 Location of food processors (Source: Data provided by CoCT)

A closer examination of the type of food being produced shows that there is a substantial spice and condiment sector, which may be attributed to the City's cultural heritage. It is also attributable to the increased export market for such products. The Western Cape Department of Agriculture notes that the export of spices increased by 705% between 1996 and 2007 (DoA WC 2010, 17).

Many businesses are producing foodstuffs that are not core products of the major processors. For example, there are few bakeries producing bread, perhaps the result of the dominance of Pioneer (Sasko, Duens), Tiger (Albany) and Premier (Blue Ribbon) in the bread market. In the Epping Industrial Estate there is a road that contains Sasko Grains, Duens Bakery, Bokomo Oats and Cadora Crumbs (to pick up the crumbs), all of which are Pioneer food brands. The work on Food Flows in Chapter 6 indicated that one of the only two food categories that informal traders received as direct deliveries from companies was bread (the other being cool drinks). The economies of scale and businesses practices make it hard for smaller companies to compete.

As discussed in Chapter 6, the Cape Town Fresh Produce Market (CTFPM) is a major conduit of fresh produce in the city. The market's location at Epping supports around 20 additional fresh produce and other food processing businesses (James 2013 pers comm) (Figure 7.8). Additionally, the clustering of food-based processors at Epping provides operational logic for a number of logistical and packaging businesses and supports the many informal traders retailing both within and beyond the boundaries of the CTFPM. Finally, Food Bank Cape Town, which distributes food to 57 690 beneficiaries through 219 agencies across the city (Erispe pers. comm. 2013), directly benefits from the agglomeration of food processing businesses near the CTFPM.

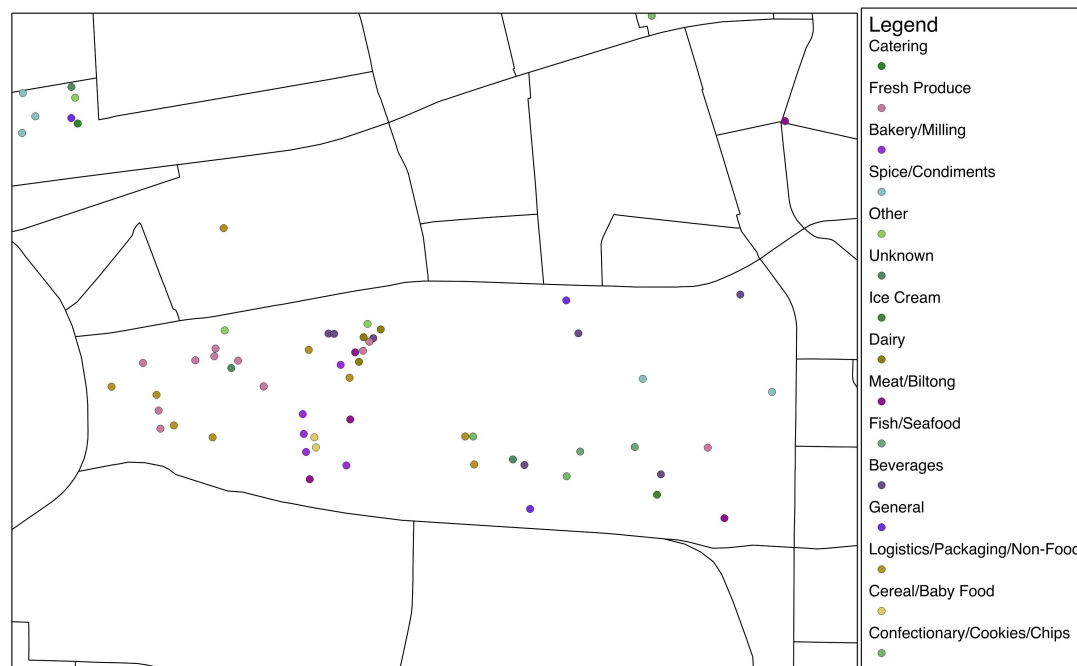


Figure 7.8 Food processing cluster in Epping

From the available data it is apparent that although Cape Town has a large and varied food-processing sector, many of the core foods consumed in the City are produced by large national and multinational companies. While this may have apparently economic efficiencies, concerns have been raised about their power and agency within the food system. The case of bread-price fixing in South Africa is illustrative of the problem of having a highly concentrated food production system. It is therefore pertinent to ask whether the City might have a role to play in supporting smaller processors of key

basket of goods items. In particular, there is scope for the incentivisation of the production of healthier processed foods.

The DTI's IPAP2 and DAFF's 2012 Agro-Processing strategy identify food processing as a predominantly urban activity that has high employment and growth multipliers. Figure 7.7 illustrates that there is significant food processing within the City, and that this processing is often clustered around planned business hubs, such as Montague Gardens. However, Figure 7.7 also illustrates that there are relatively few food processing businesses operating within the South East of the City, which are areas of limited employment opportunities. Small food processing businesses have relatively low start up and input costs and may generate considerable employment opportunities. Given the proximity to the N2 and the presence of the Mitchell's Plain and Khayelitsha Urban Renewal Nodes, the South East may be an area for the City to incentivise agro-processing businesses centred around new business parks.

7.4 Food Retail

Key Summary Points

- There has been massive expansion of the supermarket sector in Cape Town. This has been driven by perceived new markets, broader food system trends of market deregulation and trade liberalization and the retail-led township development models.
- The impact of this expansion on access to healthy and affordable food is not clear-cut and requires further consideration.
- There is a sizeable informal food retail sector that is internally differentiated.
- The informal food retail sector is responsive to customer needs in terms of opening times, product range and unit size, and the offering of credit.
- Trader location is extremely important for business viability. Key sites of trade are near transport hubs and outside shopping malls.
- The formal and informal food retail environments need to be considered as part of the same food system to ensure food security for the urban poor. The potential impact of future supermarket expansion on food security should be a component of planning decisions.
- The following recommendations are made:
 - *Studies should be conducted on the food retail mix and pricing of supermarkets and malls in townships in order to evaluate their provision of affordable, nutritious food.*
 - *Future decisions on shopping mall developments should have a food security impact component.*
 - *There should be a specific focus on increasingly the sale of safe, healthy foods by informal traders near transport hubs.*
 - *The City should engage designers to design low-cost, low-tech solutions to the food spoilage problem.*
 - *City officials working on formal and informal retail discuss the overall retail mix in the interest of food security.*

7.4.1 National and International Trends

Food retail is the point in the food system the urban residents have the most direct contact with. In urban areas the main source of food and the main determinant of food security is access to food from the market, formal and informal. The food retail environment controls what foods are available to households and the price at which those foods are available.

The food system in South Africa and southern Africa is undergoing a rapid transformation. Large supermarket companies increasingly dominate the food system, from production to point of sale. The impact of this transformation on food security and nutrition has been highly contested. Some researchers have expressed concern about the impact of supermarket expansion on food security and food sovereignty (e.g. Holt-Giménez & Shattuck 2011) and nutrition (Igumbor et al 2011). Others have argued that supermarkets may prove an “urban food security boon” because of their capacity to lower food prices (Reardon & Minten 2011).

South Africa’s rapidly expanding supermarket sector is not unique. Researchers have identified various waves of expansion in different regions of the world (Weatherspoon & Reardon 2003, Reardon & Minten 2011, Reardon & Timmer 2012). The first wave in the early- to mid-1990s included much of South America and East Asia outside of China, and South Africa. The Second Wave took place in the early 2000s and included much of Southeast Asia and Central America. The Third Wave is currently underway in East Central Europe, China and Africa outside of South Africa (Traill 2006).

By 2003 the supermarket sector in South Africa accounted for 50-60% of all food retail, but just 2% of all food retail outlets (Weatherspoon & Reardon 2003, 337). These 1 700 supermarkets were equivalent to 350 000 spaza stores in terms of sales (Reardon et al 2003, 1142). The supermarket sector continues to grow, with its share of the food retail market increasing from 62% to 68% from 2008 to 2010 (Planting 2010, 34). Four major companies account for 97% of sales within the South African formal food retail sector. Shoprite Checkers currently controls around 38% of the formal food retail market, followed by Pick n Pay at around 31%, Spar with around 20% and Woolworths with around 8% (GAIN Report 2012).

In South Africa there has been rapid expansion into rural areas and lower-income urban areas previously without supermarkets. The expansion can be attributed both to growing disposable income among African consumers, which has effectively opened new markets to the supermarkets and their subsidiaries (such as Boxer owned by Pick N Pay and Sentra owned by Shoprite) (Ligthelm 2008, van Wyk 2004). Social grants have been also been identified as a draw for supermarkets to lower income areas (Joubert 2012, Steyn).

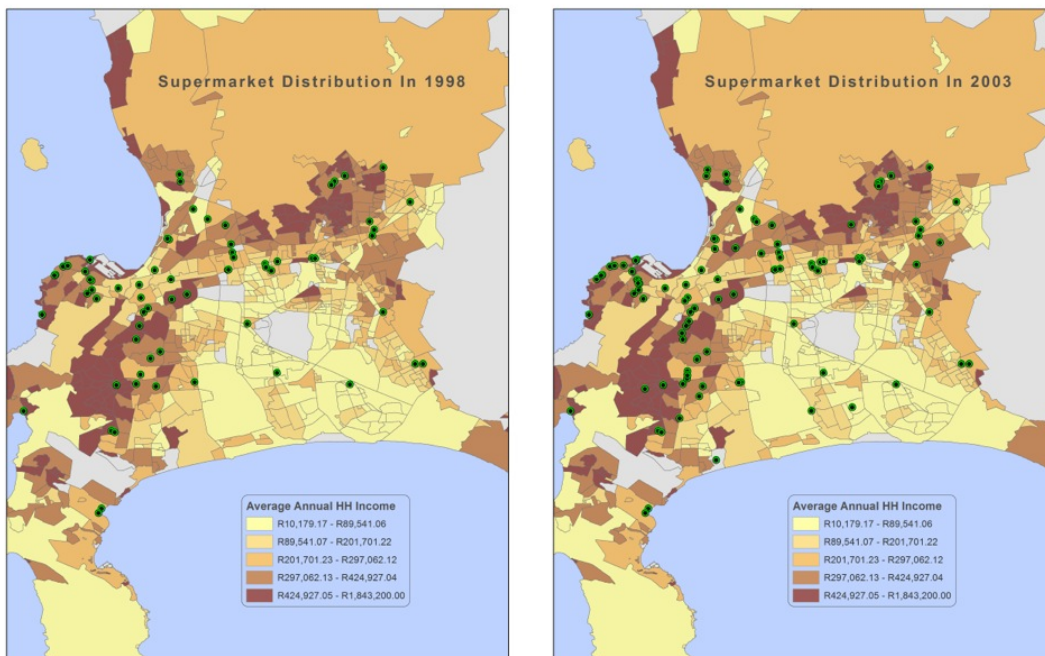
Shoprite intend to open 124 new stores in South Africa between August 2013 and June 2014 (MoneyWeb 2013). Pick n Pay announced plans to open 225 stores in the 18 months from October 2012 onwards. Of these new stores, 119 would be Pick n Pay supermarkets, and the rest would be Boxer Stores, small format and express stores (Magwaza 2013). In addition to entering new markets, the supermarkets are expanding through the opening of new store formats. Pick n Pay, for example, has recently announced a partnership with BP to build 120 new convenience stores at petrol station forecourts. Woolworths currently has 45 such stores in partnership with Engen (Mantshantsha 2013). The major supermarket chains are also expanding into Africa. Shoprite opened its first non-South African store in 1995 and by the end of 2012 had 131 non-South African supermarkets in 16 African countries (Thomas 2012).

While this expansion can be interpreted as a result of demographic shifts such as a rising black middle class, the increased presence of women in the labour force and improved household storage capacity (Reardon et al 2003), it is important to note that the shift is also attributable to supply side changes. Post-apartheid market deregulation and trade liberalization have enabled the rapid expansion of the supermarket sector (Reardon et al 2007, van der Heijden & Vink 2013). Also important is the role of developers in driving the process of mall development, with supermarkets at anchor tenants.

7.4.2 Supermarket Expansion in Cape Town

Figure 7.9 shows the spatial expansion of supermarkets in Cape Town from 1998 to the present. The pattern of expansion into lower income areas reflects the general national expansion trend described above. Figure 7.10 focuses on the expansion of Shoprite alone. Not only has there been a rapid expansion in the number of stores from 38 in 1994 to 82 in 2012, but that this expansion has been increasingly focused on new markets, often through USave chain stores. Shoprite have identified their Usave branded stores as follows: “The Usave’s chain focus is the lower income groups. Customers who are serious about saving and do not need the expensive frills and spills of regular shopping centres, are invited to put USave to the test” (Shoprite holdings undated).

Supermarkets rarely enter low-income areas as standalone stores, but rather through new shopping mall developments. These are seen as a means of neighbourhood regeneration and leading to essential infrastructure development in townships. In 2010, for example, the National Treasury held a Colloquium on Retail-led township development. Proponents of retail-led development argued that the malls could act as stimuli for nodal development, for skills transfer, and local job creation and procurement. This view was challenged by “strong pleas not to settle for mediocrity by uncritically adopting what is essentially an American model” (Clacherty 2011, 3). Additional concerns have been raised that the arrival of shopping malls and supermarkets undermines local businesses (Bissiker 2006, Ligthem 2008), and that they are a conduit for the entry of more highly processed, nutritionally poor foods. Shoprite supermarkets are often the anchor tenants of these new malls, and will have their fast food subsidiary, Hungry Lion, in the mall too. In most of the malls there are two to three fast food outlets.



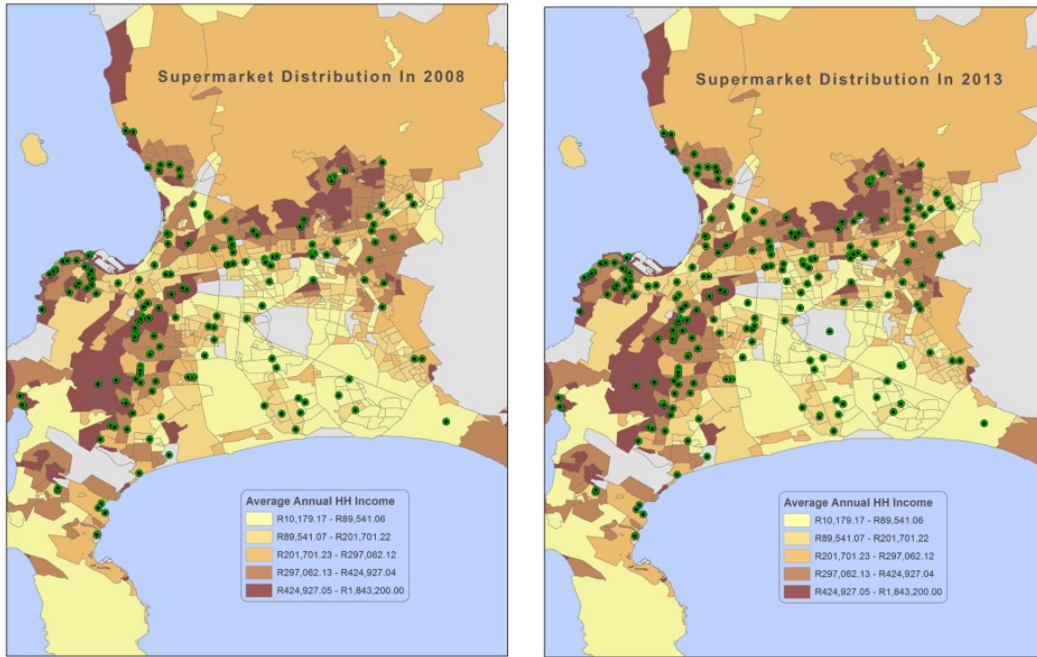


Figure 7.9 Location of supermarkets in Cape Town 1994-2013 (Maps drawn by Peyton & Marshak)

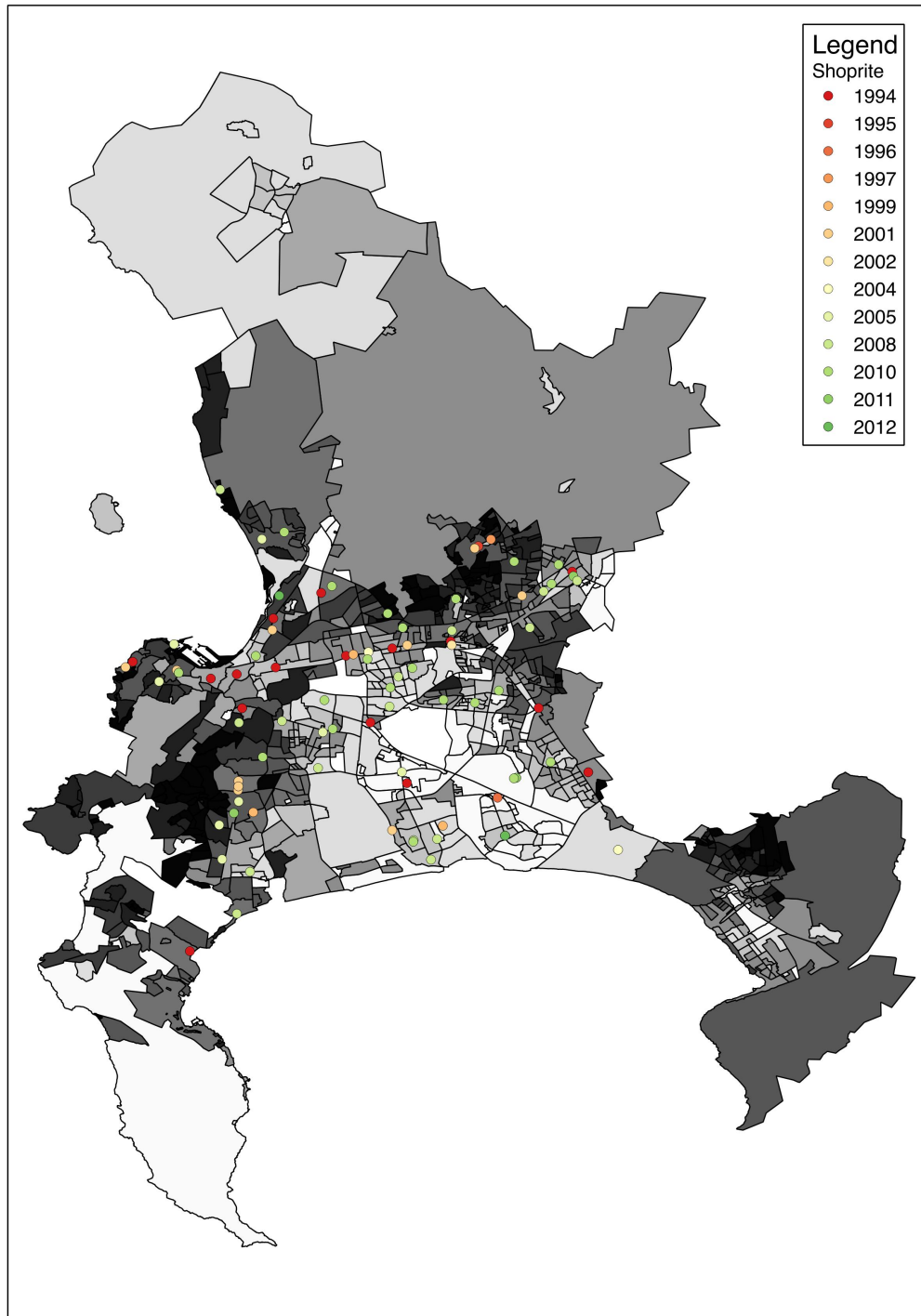


Figure 7.10 Expansion of Shoprite

7.4.3 Supermarkets and the Informal Economy

The supermarket sector is rapidly changing the local food retail environment, with seemingly little consideration of its impact, positive or negative on local food and nutrition security. There is considerable debate about the impacts of supermarket expansion and a need to weigh up the benefits brought by the expansion of supermarkets and shopping malls into low-income areas with the challenges of the

malls and supermarkets providing cheaper access to less healthy foods (Temple et al 2009), and the pressure they exert on local traders who have been identified as crucial to the food security of the poor.

It is too simplistic to argue that the primary determinant of access to food for poor people is price and therefore supermarkets are necessarily a boon for food security. Both the 2008 AFSUN Survey of Philippi, Khayelitsha and Ocean View and Cooke's 2012 study of Manenberg found that poorer households were less likely to shop at supermarkets than wealthier households living in the same area due to affordable unit sizes and the availability of credit (See Figures 9.15 and 9.16 and Table 7.4).

It is important to consider the impact of both supermarkets and informal food retail on the food security and nutritional security of the urban poor. The two should be viewed as part of the same over-arching food system and therefore considered as such with the City's thinking on food security.

Households navigate their food environments to maximise their potential food security (See Figure 9.15 and 9.16). They will shop at large retailers when they have the financial resources to buy in the unit sizes sold by supermarkets, according to their household refrigeration and storage capacity. They will purchase more frequently from the informal food retail sector, which is better adapted to meet their purchasing power and household storage capacity. Table 7.4 summarises the key points made within this report about the relative importance of different forms of food retail for the food security of the urban poor.

This report argues that food security is enhanced when a variety of food access strategies are available to the urban poor. It does not argue that supermarkets are intrinsically positive or negative for food security. What it does argue is that maintaining a diversity of retail forms provides a food environment in which households are better able to maximise their potential food security using their existing financial resources and asset base.

The local food environment is changing rapidly as supermarkets expand into lower income areas. It is essential that attention be paid to the impact of this expansion on existing the informal food retail sector. Given the importance of informal food retail to food security, there is a need to ensure its continued presence in areas of high poverty.

The report therefore recommends that the City should monitor the ongoing expansion of supermarkets in the City as part of its food system and food security strategy development. There is a need for a longitudinal study on the impact of supermarket expansion on informal food retail. However, based on existing evidence, this report argues for proactive preservation of a diversified local food retail environment. While it is understood that the City is unlikely to place restrictions on the development of new shopping malls in low-income areas, there may be opportunities to plan for the integration of informal trading spaces and facilities with these new developments. There is also scope for incentivisation of retail of healthier and safer foods near busy transport intersections (see Map 7.13 and Box 7.1). Two incentivisation programmes from New York City (Green Carts and Shop Healthy) are described in Chapter 10 and provide useful insights on the opportunities and challenges associated with small business incentivisation. Support for the informal food retail sector should not just focus at point of sale, but also at the wider set of structures that enable or hinder these business, such as access to transportation and refrigeration. As noted in Section 3.1 and 7.3 the food system is increasingly consolidated with major retailers and processors. This impacts the whole value chain and therefore support should also be provided for suppliers of informal food retailers. One crucial point in the informal food retail value chain that ensures affordable access to healthy foods is the Cape Town Fresh Produce market, as a

major source of fresh produce for the informal trade sector. The ongoing presence of the CTFPM, its agents and traders is therefore an important component in ensuring the diverse retail mix that serves the interests of the urban poor.

The discussion presented below provides elaboration on the call for a retail mix.

Rationale for a call for retail mix

The consolidation of the power of major food producing companies with that of the supermarkets has made highly-processed foods more spatially and economically accessible (Igumbor et al 2012, 3, Monteiro et al 2013). However, this increased accessibility through supermarket expansion has not been matched with reference to fresh produce, with stores tending to stock a more limited range of fresh produce than those in wealthier areas. This is in part due to stores' understanding of consumer continued preference for the purchase of fresh produce from other sources (Reardon & et al 2007, Humphrey 2007, Armer 2013).

Table 7.4 Strengths and weaknesses of retail types for food security

	Pros	Cons
Supermarkets	<ol style="list-style-type: none"> 1. Lower prices per unit 2. Higher safety standards 3. Large range of foods 	<ol style="list-style-type: none"> 1. Unit sizes unaffordable for poorest 2. Inconvenient locations 3. Limited opening hours 4. No credit offered
Spazas	<ol style="list-style-type: none"> 1. Affordable unit sizes for the poor 2. Sale of food on credit 3. Long opening hours 4. Convenient locations 	<ol style="list-style-type: none"> 1. More expensive than supermarkets per unit weight 2. Perceived low quality of food 3. Limited range of foods
Fresh Produce Traders	<ol style="list-style-type: none"> 1. Convenient location for daily purchase 2. Produce restocked daily 3. Often cheaper than supermarkets 	<ol style="list-style-type: none"> 1. Limited shelf life of produce due to lack of cold chain
Meat Traders and Livestock Traders	<ol style="list-style-type: none"> 1. Cultural preferences 2. Range of cuts of meat, including "fifth quarter" 3. Argued to taste better (live chicken) 	<ol style="list-style-type: none"> 1. Food safety

In South Africa there has been a small body of work focusing on the impact of mall developments (which generally include supermarkets as anchor tenants) on local economic development in township areas. The African Cooperative for Hawkers and Informal Businesses has stated that about 150 informal retail stores in Soweto alone have been forced out of business, partly because of the entry of large retail chains into the township (Bissiker, 2006). Initial findings from a Demacon survey on the impact of

Jabulani Mall in Soweto are less conclusive, with 76% of informal traders and retailers reporting no change, but the weighted percentage spent at local traders went down from 25% to 14% (McGaffin, 2010, 4). Ligthelm found small traders were generally negatively impacted by the presence of a mall development and that those who were able to survive were able to do so by changing their business models (Ligthelm 2008). Battersby (2011) has argued that the loss of these small businesses is potentially damaging for food security of residents in these areas as these traders sell in bulk sizes that are affordable for the poor and will provide food on credit.

As of 2012, social grants have been disbursed at supermarkets. This has provided significantly more business for supermarkets (Figure 7.11). The impact of this shift in disbursement on the informal trade sector has not yet been studied, but concerns have been raised that this shift merely channels government money straight to the big food companies, who will further increase their market share and less capital will circulate within the townships (Ledger 2013).



Figure 7.11 Social grant pay out queues entering Claremont Pick n Pay (Photo credit: B. Muller)

Customers shop at supermarkets and informal traders for different reasons. It is important to note that the expansion of supermarkets prompts shifts in consumer behaviour sector by sector. Reardon et al (2007) have identified diffusion of product type penetration. The first wave of product penetration is characterised by processed foods like rice, noodles, edible oils, canned and dried foods. Following this come the semi-processed foods such as dairy products and meats. The final, and slowest, wave to penetrate the local supermarket sector is fresh produce (Reardon et al. 2007, 408). The limited penetration of fresh produce into supermarkets in lower income areas is in part due to consumers' perceptions of the low relative freshness and quality of the produce sold in the supermarkets compared to traditional vendors (Humphrey 2007, 439). It is also the result of a general lack of refrigeration which means that low income

consumers prefer to buy fresh produce in smaller more frequent purchases from informal traders (Reardon et al 2003, Strydom 2011).

7.5 Informal Food Economy

Municipal governments, including Cape Town, have tended to frame informal trade as a livelihood strategy and a part of economic development. The City's positive position towards informal trade is encouraging, however, the role of the goods and services provided to the poor by the informal sector is not well recognised. Figures 7.12 and 7.13 present the findings of a mapping exercise conducted by AFSUN in July and August 2013. In total basic data was captured on 492 traders. However, it is believed that the numbers of traders operating in the two wards is higher than this. Many traders, particularly those operating braai stands and selling livestock operate only on the weekends, and the research team was advised not to conduct research on the weekends in the interest of safety.

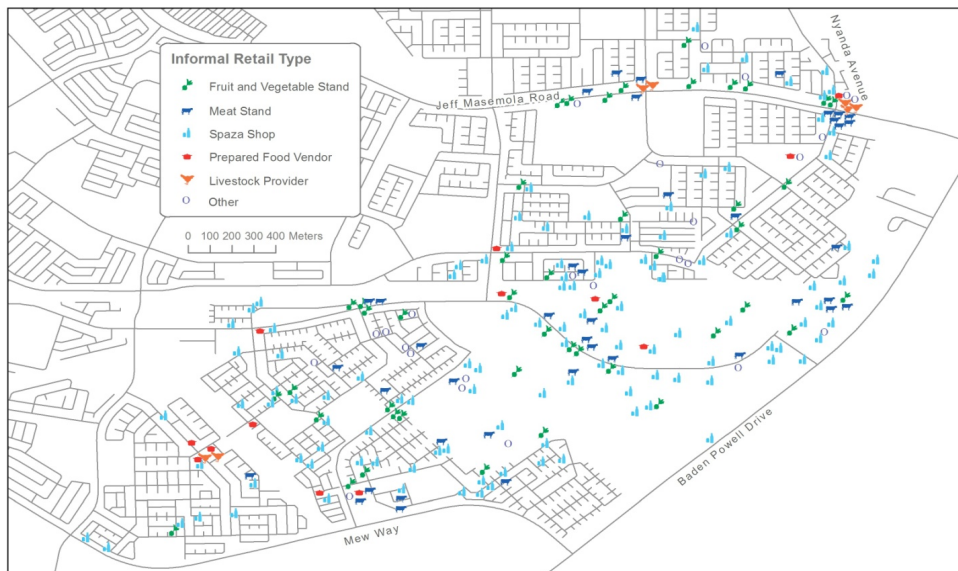


Figure 7.12 Location of Food vendors in Ward 95 (Source: AFSUN, used with permission)

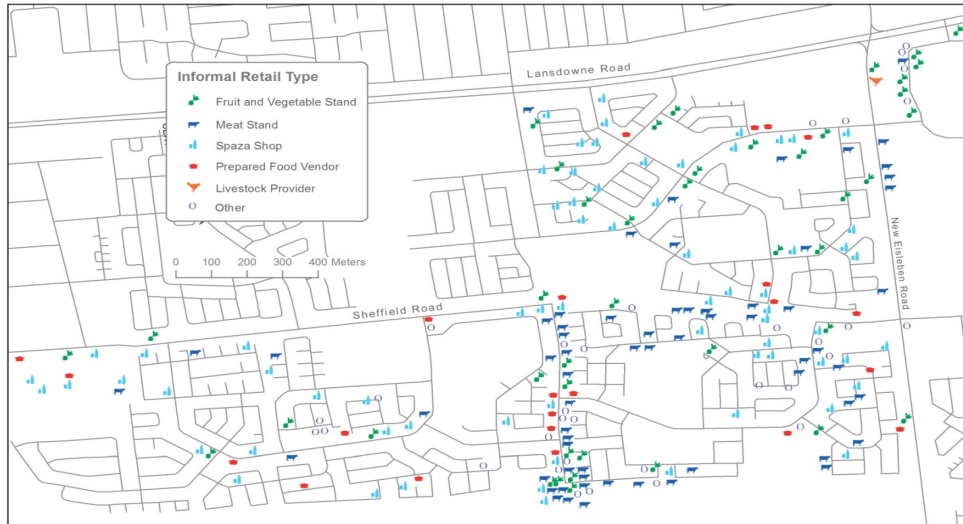


Figure 7.13 Location of food vendors in Ward 34 (Source: AFSUN, used with permission)

Just fewer than 80% of the traders were general dealers/spazas (39%), meat traders (20%) or fruit and veg traders (19%). As is evident from the maps there are distinct geographies of trade. In the case of Ward 34 there is dense food retail around the Philippi Train Station and leading up to Sheffield Road. This trade is dominated by small-scale braai stands and sellers of takeaway foods, such as vetkoek. The road is a major thoroughfare for people using trains and local informal “amaphela” taxis on the way to and from work. Traders identified their busiest times of day as being commuting peaks (Figure 7.14) Likewise in Ward 95, there is dense food retail on the busy intersection of Jeff Masemola and Nyanda Ave.

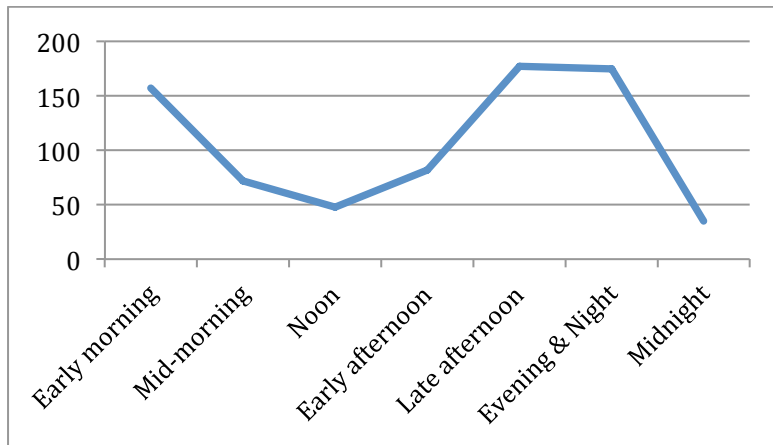


Figure 7.14 Busiest times of the day for sampled traders (Source: AFSUN, used with permission)

There was significant meat trading along New Eisleben Road, but the traders here operated on a different retail relative the traders near the station. Their operations were larger and they were cooking pork steaks, as opposed to the cheaper cuts, offal and chicken feet sold by traders nearer the station.

Spaza stores tended to be scattered throughout the wards, serving very local populations (Cooke 2012). There were also clusters of fruit and vegetable retailers located directly outside the Shopping Malls (on the Corner of New Eisleben in Ward 34 and on Jeff Masemola in Ward 95). These traders were responding to the presence of the

supermarkets and the limitations of the fresh produce being stocked by the supermarkets.

A sub-sample of 100 traders was surveyed by AFSUN. The traders were predominantly South African, except in the spaza business where Somali traders were strongly represented. It is possible to cluster in two broad groups: the informal retailers as survivalists and as entrepreneurs. Charman et al (2012, 51) estimate that up to 50% of new entrants into the spaza business survive for less than five years, but those who do survive have considerable longevity. This general trend is evident in Figure 7.15. One meat trader interviewed had taken of the stand from her father and the business had been running for over 20 years.

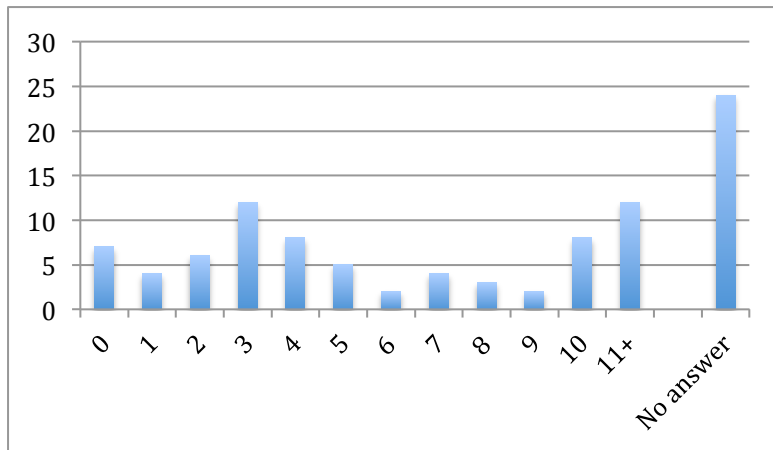


Figure 7.15 Years of Trade (Source: AFSUN, used with permission)

Traders were asked why they traded where they did (Figure 7.16). By far the most important reason identified was proximity to passing trade, hence the clustering near busy intersection with high footfall and near the supermarkets. The planning implications of this are discussed in Box 7.1.

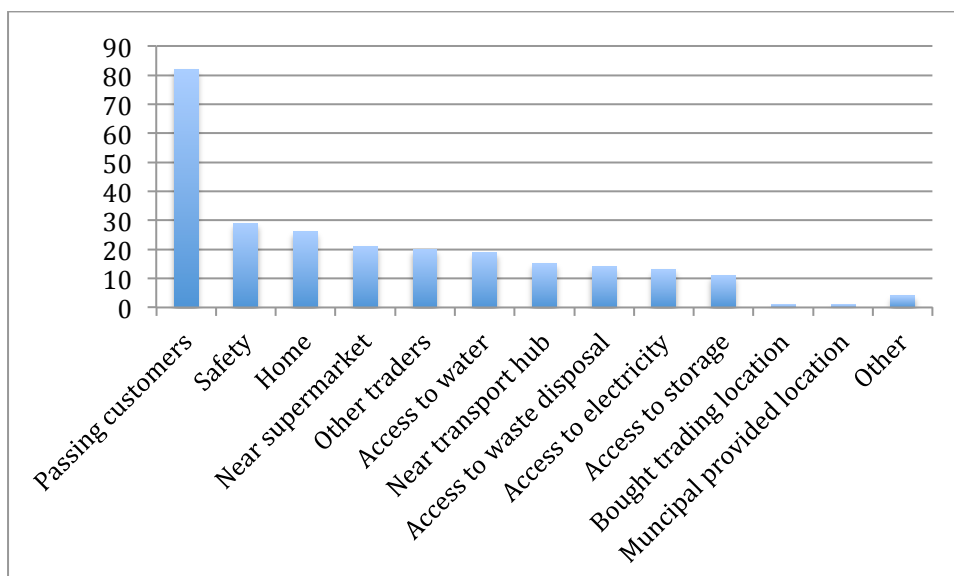


Figure 7.16 Reasons for trading location (Source: AFSUN, used with permission)

An important aspect of the informal food retail section is its need to be responsive to customer circumstances. Many businesses identified their busiest times of day as the

evenings when people return from work. The supermarkets often do not have these long hours of trade. Traders also noted that their busiest days of the week were Friday to Sunday, and a number of businesses only opened on those days. The traders are seen as being responsive to the needs of the customers in the types of products they sell and their practice of bulk breaking. Customers may be able to get cheaper prices per kg at the supermarkets, but are unable to afford the unit sizes the supermarkets sell. The following excerpt of an interview from Cooke's work in Manenberg elaborates on this practice:

Coffee and sugar, R1, R2 packets, I tell you the people around here goes for that I can say. There's a lot of them that cannot really afford to buy that big ones. They buy a smaller version of whatever they can get, even in the butter I do that, R2, R3.50, half or a full one. Ja, that's how the other spaza shops make their money – in smaller packets. I never used to do that but there was such a big demand for it so...Ja and it actually helps, it helps Ja, helps me also (Tuck Shop Owner, 12/08/10 – Cooke 2012, 113).

The final way in which the traders are responsive to customer need is the use of credit as a means of accessing food. Of the 96 traders who responded to the question, 56 offered credit. Credit was not given to everyone, and was determined by social networks. The majority of traders offering credit do not charge interest.. Credit was viewed as an important strategy by businesses to maintain their customer base. Credit was particularly important for customers towards the end of the month. The availability of credit, and the sale of products in small unit sizes, makes the informal trade sector an important component of the local food system that ensures low income residents can access food.

Although the traders occupy an important role in the local food system, they face significant challenges (Figure 7.17) including food spoilage, theft and vandalism, followed by environmental health problems. There are certainly opportunities for the City to address these problems within its existing departmental mandates.

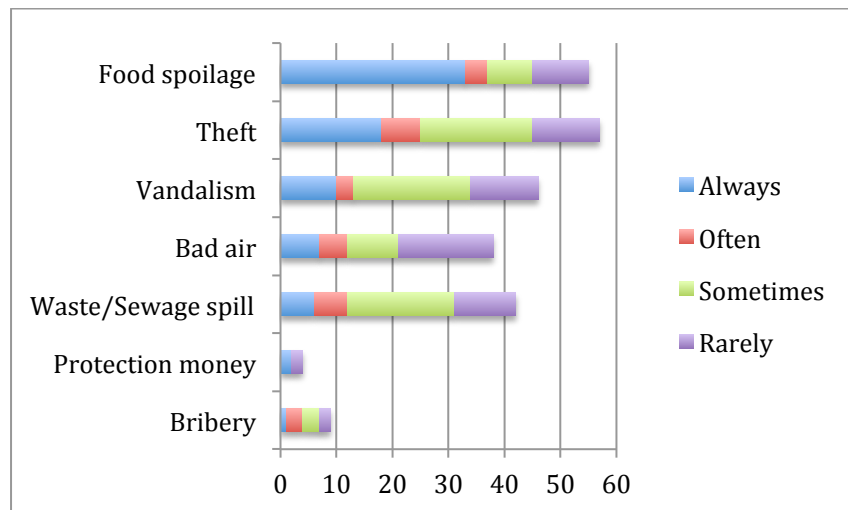


Figure 7.17 Problems experienced by traders

Box 7.1 Informal food trading at public transport interchanges (Jackie James)

Informal street traders are a feature of cities in developing countries. They make a significant contribution to local economies, create employment and are part of vibrant street life. Given access to well-located and well-designed spaces that are geographically accessible, traders are

well placed to make an important contribution to the food security of the urban poor. Typically informal traders position themselves where there is a substantial number of passing feet. As busy pedestrian hubs, public transport interchanges are a good example of the critical mass necessary for successful trading. This section will therefore present an overview of informal food trading at two public transport interchanges - Mitchell's Plain Public Transport Interchange and Khayelitsha Public Transport Interchange. It will present the interchanges as key food retail sites and discuss the role of these food traders in ensuring access to food and to secure livelihoods. It will draw comparisons on how they were developed and how they are managed, and investigate the barriers faced by the traders and suggest key issues to be addressed.

Mitchell's Plain and Khayelitsha railway stations are both served by the Khayelitsha/Kapteinsklop line, the busiest of the Western Cape's eight major rail corridors [Jonker & Barnes, 2007:2 in James, 2013:9]. Mitchell's Plain Railway Station serves nearly 12 000 passengers daily [Bebelele, 2012, in James, 2013:9]. Khayelitsha Railway Station is the third of the stations serving Khayelitsha, transporting in excess of 25 000 passengers every day [Bebelele, 2012, in James, 2013:9]. This excludes the number of people who use the station bridge building as a street to street crossing. Only 52% of the population of Khayelitsha is regarded as economically active and of those 28% are unemployed [QJS, 2006:iv, in James, 2013:9]. Khayelitsha is home to approximately 600 000 people [Ewing] and the population of Mitchell's Plain is approximately 290 000 [Wikipedia, online], 49% of which are defined as economically active and of those 13% are unemployed [QJS, 2006:viii, in James, 2013:9]. In other words, the interchanges serve a significant number of residents who could be regarded as poor. This is specifically relevant in South African cities, which are spatially segregated, often meaning that the poor have to travel longer distances.

The findings are based on a the following studies at each interchange – contextual analysis, mapping exercises of the trading environments, questionnaire interviews with a sample of the traders and interviews with trader association committees and other relevant stake holders. The traders' interviews allowed assessments to be made on how the trading areas were experience by the traders. The mapping took place in August 2012 and the trader interviews took place in October 2012.

Over the past six years Mitchell's Plain Public Transport Interchange has received major investment and undergone significant upgrade, including that of the informal trading facilities. By contract, the western forecourt of Khayelitsha Railway Station is home to a large community of informal traders, but has only received limited public/private investment, allowing comparisons between the two interchanges to be made.

Trading Plans are the mechanism for regulating and managing street trading that have been adopted by the City of Cape Town. The trading plan at Mitchell's Plain was introduced as part of the upgrade process and has been in use for a number of years, while the trading plan at Khayelitsha is now only in the process of being implemented. Again, allowing comparisons to be drawn between the two interchanges.

Mitchell's Plain

The interchange is the centred around the Town Square, the structuring element that links the various components of the interchange – Mitchell's Plain Railway Station that is embedded in the Station Plaza Shopping Mall, three taxi terminuses and a bus terminus.

The Town Square is home to a number of formal shops, supermarkets, row shops with living accommodation above, community facilities and a library. The spaces between the buildings has been pedestrianised and developed into a series of connecting squares accommodating informal trading bays. Informal traders are accommodated in a variety of different ways:

1. The Market Square with a variety of trading options for informal and semi-formal traders.
2. Facilities for fish traders on Market Square.
3. A variety of small formal trading structures.
4. Formal shops trading outside their front doors.
5. Trading from demarcated bays.



1. Bus terminus
2. North taxi terminus
3. West taxi terminus
4. South taxi terminus
5. Market Square

Aerial view of Mitchell's Plain Public Transport Interchange

Source: CoCT

The mapping exercise revealed that food products made up the majority of the goods being traded. Of the 96 traders mapped, 5% sold prepared food, 24% pre-packaged food and 27% fresh fruit and vegetables.

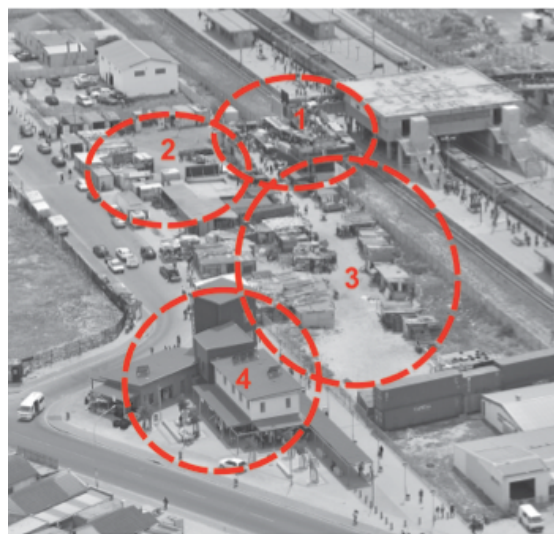
Analysis of Trading at Mitchell's Plain Transport Interchange

	Tax Terminus - north	Tax Terminus - west	Tax Terminus - south	Bus Terminus	Bridge	Station entrance	Total	% of 96 traders
Prepared Food	2	-	-	3	-	-	5	5%
Pre-packaged Food	4	2	6	7	1	3	23	24%
Fruit and vegetables	8	5	7	2	4	-	26	27%
Clothing	1	3	9	3	2	-	18	19%
Jewellery	-	1	-	-	-	-	1	1%
Hairdressing	-	-	2	-	-	-	2	2%
Homeware	-	-	-	-	2	-	2	2%
Hardware	-	-	11	-	-	-	11	12%
Books and newspapers	-	1	-	-	-	1	2	2%
Cigarettes	-	-	-	-	-	1	2	2%
Closed	-	-	-	1	3	-	4	4%
Total	15	12	35	16	12	5	96	

Khayelitsha

The informal traders are accommodated in four different land ownership environments:

1. Privately owned land – these traders generally operate from corrugated iron and timber ‘informal structures’ and from shipping containers.
2. City of Cape Town owned land – informal structures at the base of the station access ramp and on the sidewalks.
3. Violence Prevention through Urban Upgrading (VPUU) Active Box – traders are accommodated in trading units in this formal structure or under the lean-to roofs. The traders have access to exclusive toilet facilities, a refuse collection service and security



1. Station ramp
2. CoCT land
3. Privately owned land
4. VPUU Active Box

Aerial view of Khayelitsha Public Transport Interchange

Source: Bruce Sutherland CoCT

foot patrols. The trading units have their own electricity connections and hot and cold water supply.

4. Ramp to station (Metrorail/PRASA) – most of the temporary covered structures remain on the ramp overnight while trading tables and displays are brought to and removed from the ramp every day. Since the research was undertaken, the traders have been removed from the ramp as they were trading there illegally as they compromised emergency evacuation.

The mapping exercise at Khayelitsha revealed that there was generally a wide range of products and services being traded with food making up less than 13% of the 118 traders mapped. Unlike Mitchell's Plain, like products tended to be clustered, with for example, many of the meet braaiers being situated on the private land, and the hardware merchants clustered at the base of the ramp.

	Privately Owned Land	VPUU Active Box	Ramp to Station	Total	% of 118 traders
Prepared Food	12	1	1	14	12%
Pre-packaged Food	1	2	1	4	0.3%
Fruit and vegetables	3	2	-	5	0.4%
Clothing	7	3	9	19	16%
Jewellery	-	-	2	2	0.2%
Hairdressing	10	2	2	14	12%
Beauty Products	-	-	2	2	0.2%
Household Goods	1	3	2	6	0.5%
Hardware	3	1	1	5	0.4%
CD's	-	-	4	4	0.3%
Herbalist	3	-	-	3	0.25%
Muti Clinic	2	-	-	2	0.2%
Cell phone and computer repairs	4	1	-	5	0.4%
Furniture	3	2	-	5	0.4%
Luggage	-	-	1	1	0.1%
Sewing products	-	-	1	1	0.1%
Store	1	-	-	1	0.1%
Unoccupied / Uncertain / Closed	12	2	11	25	21%
Total	62	19	37	118	

Analysis of trading at Khayelitsha Public Transport Interchange

When drawing comparisons between the two interchanges, one of the key differences is that the Mitchell's Plain Town Square was undergoing a major upgrade when the trading plan was introduced, which is not the case in Khayelitsha. Trading in Mitchell's Plain that had been disorganised from a spatial and management point of view was regenerated with the consolidation of land, realignments of roads, the construction of three new taxi ranks and a bus terminus, and the improvement of the trading and pedestrian environment. Most of the existing traders were therefore simply not able to continue trading where they were. The trading plan was essentially part of the upgrade process and in many ways it became the organising instrument for reallocating space to the existing traders and allocating trading bays to newer traders. On the other hand, although there have been some improvements to the trading environment at Khayelitsha and more are expected with the planned PRASA upgrade, a major upgrade to the precinct has not been planned. Without anything significant to offer the traders makes implementing the trading plan more challenging.

A key element to the success of implementing an integrated approach is the strength of the trader organisation or the 'urban voice'. The majority of the Mitchell's Plain traders belong to one of the six trading committees or associations, which in turn are represented by an umbrella body. The collective strength of the umbrella provided a suitable negotiating partner for the City of Cape Town right from the outset of the project. They were instrumental in the outcome of their trading environment and the drafting of their trading plan. In Khayelitsha on the other hand, there are two associations representing the traders, one of which dates back to when the traders were moved to the station from the corners of Ntlazane and Steve Biko Roads when the railway

line was extended in 2006. The other association was more recently established, apparently at the request of the City wanting a representative organisation. The organisations sometimes combine meetings, especially when the trading plan was being discussed, however they do not form a cohesive umbrella body with the strength to negotiate their requirements with the City.

As previously mentioned, trading plans have been adopted for both trading sites. Unlike Mitchell's Plain, the Harare and Illitha Park Trading Plan for the eastern forecourt of the Khayelitsha interchanges was developed by VPUU on behalf of the City. As such, it is underpinned by VPUU's key principles for comprehensive development to prevent violence and improve safety, increase economic investment and job creation, and to facilitate a bottom-up approach with strong community participation and development. This principle will be crucial in breaking the deadlock between the traders and the implementing officials. The research revealed that trading plans are reasonable successful instruments for regulation and management of trading at public transport interchanges, and for providing suitable urban governance [Battersby, 2011:552, in James, 2013:34]. They make allowance for the generation of income and seek to make facilities economically sustainable. However, they are developed separately from the overall design of transport interchanges as was revealed in discussions with city officials. There seems to be a tendency to perpetuate a 'silo' approach to planning and implementation, one in which each department sets its own implementation strategies and budgets, independent of other departments. While a number of national and local policies make reference to integration with, and the role of other city departments, the approach is not always clear as is evident at Khayelitsha, where one city department has developed a trading plan without the necessary complimentary investment from others. In the case of Warwick Junction in Durban, a more integrated approach to design and implementation was achieved through the creation of a 28 multi-departmental task team was created to "manage a range of urban management challenges" [Dobson, undated:7, in James, 2013:28].

Despite the umbrella body being involved in the design of the Mitchell's Plain Interchange, the overwhelming feedback from the traders was for better protection from the elements. However, this does raise the question about the definition of informal trading. If the traders were in more formal structures they would no longer be informal traders but formal traders. And as mentioned earlier, the Mitchell's Plain Interchange offers a range of different trading options. The location of trading bays was another priority issue raised in the trader interviews. When traders were asked why they had chosen a specific bay, the most overwhelming response had to do with the number of feet passing, and that income could differ significantly if the position of the bay was as little as a couple of meters off the pedestrian desire line.

The 'one-size-fits-all' approach to trading bays was another contentious point raised by some traders. Both trading plans stipulate a 2mx2m bay without consideration for the spatial requirements of goods being traded. For example, a fruit and vegetable traders does not need as much space as a trader preparing cooked meat or a trader selling furniture. However, the solution is not to simply take an extra bay – the products they are selling do not necessarily mean that they make twice as much profit to afford an extra bay. The design of trading environments needs to be context and product specific.

One of the biggest challenges faced by the Mitchell's Plain traders are the 'pirates'. Pirates refer to illegal traders apparently sponsored by bigger operators who can afford to buy in bulk and therefore are able to undercut the legal traders. They operate mostly in season and on special occasion days, such as Mother's Day. According to the traders this matter is not being sufficiently addressed by law enforcement. However, as one city official pointed out, management can only be as good as the resources available.

Both interchanges are embedded within urban centres, offering a range of activities that make them convenient to commuters. Long trading hours not only benefit traders economically but also suit travel times of commuters. Informal food traders are indeed an integral part of the cityscape, not only providing a vibrant dynamic to streets and public spaces, but also playing a meaningful role in the solution of food insecurity in Cape Town. However the importance of an integrated approach to design and the ongoing participation of all stakeholders should not be underestimated but rather prioritised to ensure long-term sustainability of investment.

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7.6 Food System Sustainability

The sustainability of local and global food systems has been the focus of considerable academic and policy debate. The primary focus of the sustainability debate at the global scale has been environmental sustainability. However, in discussions of local food sustainability, there has been increasing recognition of the interconnectedness of environmental, social, economic and cultural sustainability. Sustainability is embedded in this report through the five “A”s of food security identified in the conceptual framework in Chapter 1.

Principles of sustainability are embedded in many of the City’s existing policies, strategies and reporting processes. However, food is largely absent in these position documents. Perhaps one of the only areas where food is discussed is within the climate change debates. However, most climate scientists focus on the relationship between climate change and food production or the greenhouse gas emissions generated by the food industry. This predominantly environmental view of food system sustainability, while critical, directs focus to only one of the sustainability pillars. Far greater attention needs to be paid to the associated social and economic sustainability aspects of the food system.

When considering the food system and the links to sustainability, there are four key sustainability challenges, the first is climate change, the second is increasingly scarce viable water resources and the third is soil. Fourth, there is a broader resource challenge where issues such as peak phosphorous and Africa’s negative nitrogen balance all impact on the viability of production. These broader food system sustainability challenges intersect with a number of structural food system challenges that further undermine the overall sustainability of the food system. These issues include alarmingly high levels of food waste, the non-organic waste associated with the food system, specifically packaging, and disposable items associated with food. A further food system issue is the social sustainability challenges associated with both hunger and obesity and how this impacts on the broader society. When these challenges intersect with issues such as climate change, this makes for a highly vulnerable food system.

7.6.1 Food System Contribution to Greenhouse Gas Emissions

The food system is a major contributor to greenhouse gas (GHG) emissions. There has been extensive modelling of this relationship in both the US and UK, using a range of methodological approaches. These approaches all see the food system holistically in terms of production, food processing and packaging, distribution and storage. In some cases food preparation at home and transport of food post-purchase are also considered. Most do not, however, include food waste, which is a major oversight.

In the UK it is estimated that 19% of all GHG emissions come from the food system (Audsley et al 2009) and 17% of all energy used in the US is used by the food system (Pimental et al 1989). In his open letter to Barack Obama, Michael Pollan stated that that up to 37% of the US’s GHG emissions can be attributed to the food system, when factors such as land clearance for agriculture and tilling of the soil are considered. What is clear is that the current food system is highly energy inefficient. Gussow (1991) estimates that the food production and distribution system expends 10-15 calories for every calorie of energy produced. Fig 7.18 provides a graphic representation of this expenditure using a can of sweetcorn as an example.

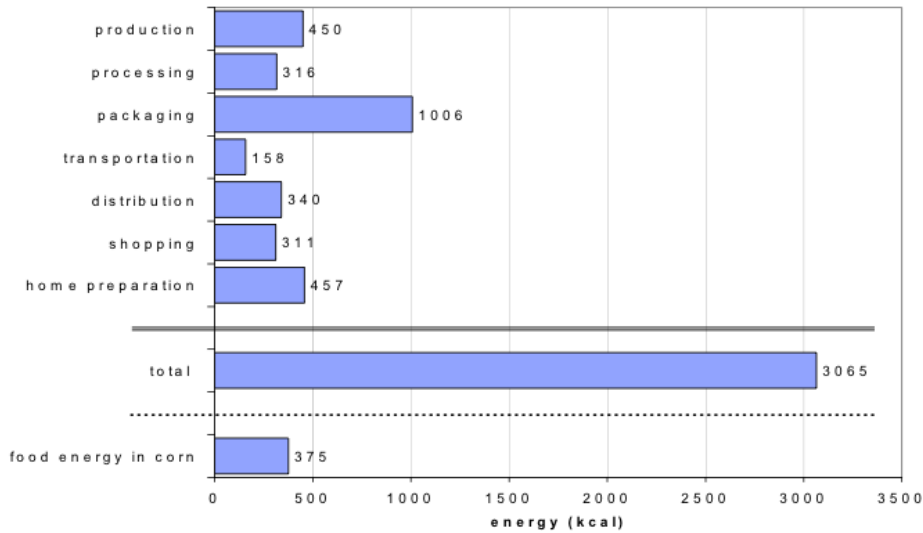


Fig 7.18: Energy inputs for a 455g can of sweet corn (Source: Heller & Keoleian 2000, 30)

In the UK, while 19% of GHG emissions may be attributed to the food system, just 7% of this actually comes directly from agriculture. The rest comes from farm inputs, food processing, distribution, retailing and preparation (see Fig 7.19). It is vitally important to note that these general figures show considerable variation across food types. So, transportation accounts for just 1% of red meat's GHG emissions, but up to 11% for fruit and vegetables (Weber and Matthews 2008).

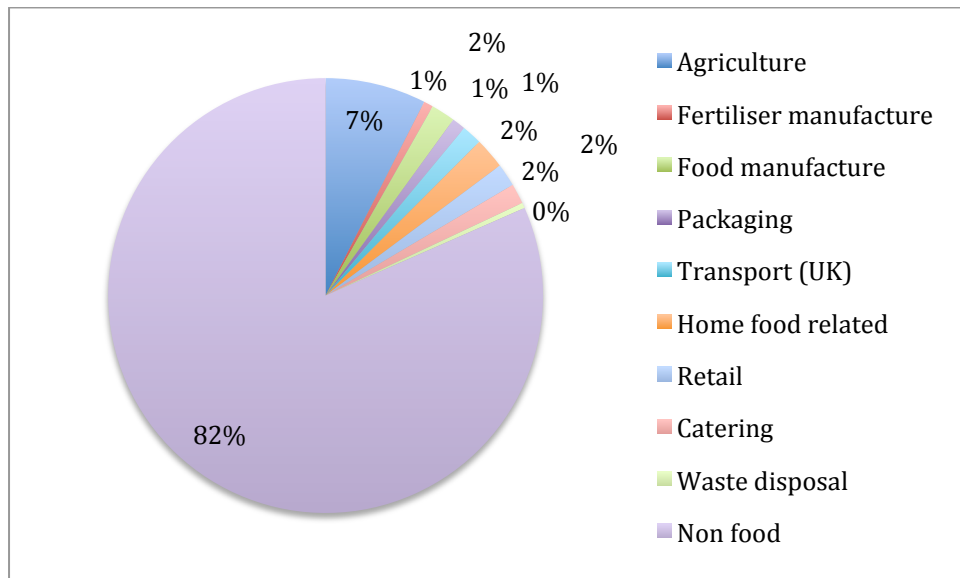


Fig 7.19: Food and its contribution to UK GHG emissions (Source: Garnett 2008, 13)

Although omitted from many of the models of GHG emissions attributable to the food system, food waste is increasingly identified as a critical sustainability challenge. It has been argued that this waste provides an opportunity for the generation of a more sustainable food system.

A number of high profile reports have claimed that in order to feed the world's growing population it is necessary to greatly increase food production. The most commonly cited figures are an increase of 50% by 2030 (UN undated) and a doubling of food production by 2050 (Monsanto 2010). The growing demand for food has led to calls for more resource-intensive agriculture, increasing the amount of land under continuous cultivation and the development of new crop types. Groups such as the Soil Association have argued that the call to produce more food to meet growing population demands is flawed and based on a number of problematic assumptions and weak data (Soil Association 2010). They argue that there is more than enough food, and that it is consumption trends in wealthier areas, and distributional challenges that are the real problems. They argue that the "grow more" response is environmentally, socially and economically unsustainable.

7.6.2 Food Waste

One entry point for addressing food system sustainability is through an engagement with waste, both through reduction in waste generated and better use of waste that cannot be deferred. Figure 7.20 provides an overview of the per capita food losses and waste in different regions of the world. In developed economies there is a higher proportion of waste at the point of consumption, but in all regions there is substantial waste along the food chain as a whole. This varies from sector to sector. The fruit and vegetable sector is presented in Figure 7.21 below as an example of the points of waste across the food system.

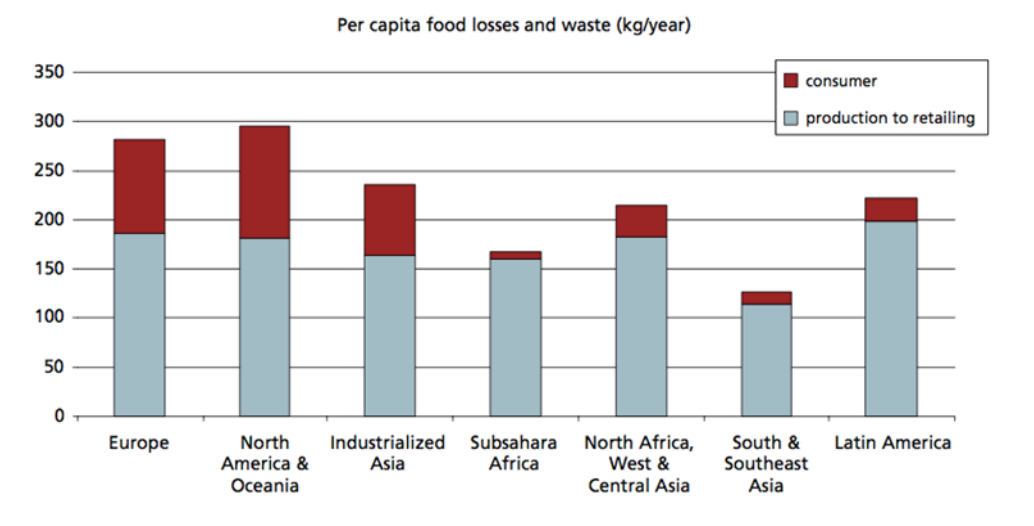


Figure 7.20: Per capita food losses and waste (kg/yr) (Source: Gustavsson et al 2011, 5).

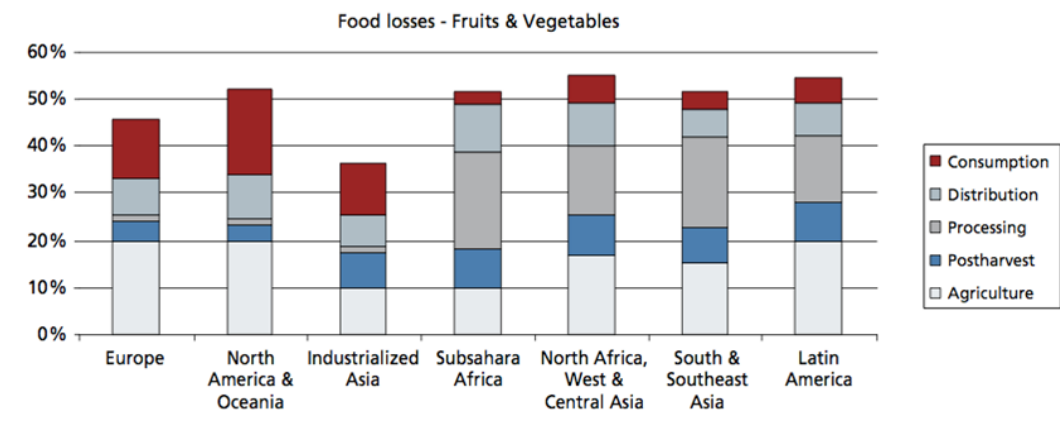


Figure 7.21 Proportion of initial production lost or wasted at different stages of the Food system for fruits and vegetables (Source: Gustavsson et al 2011, 7)

The South African food waste profile can be seen in Figure 7.22

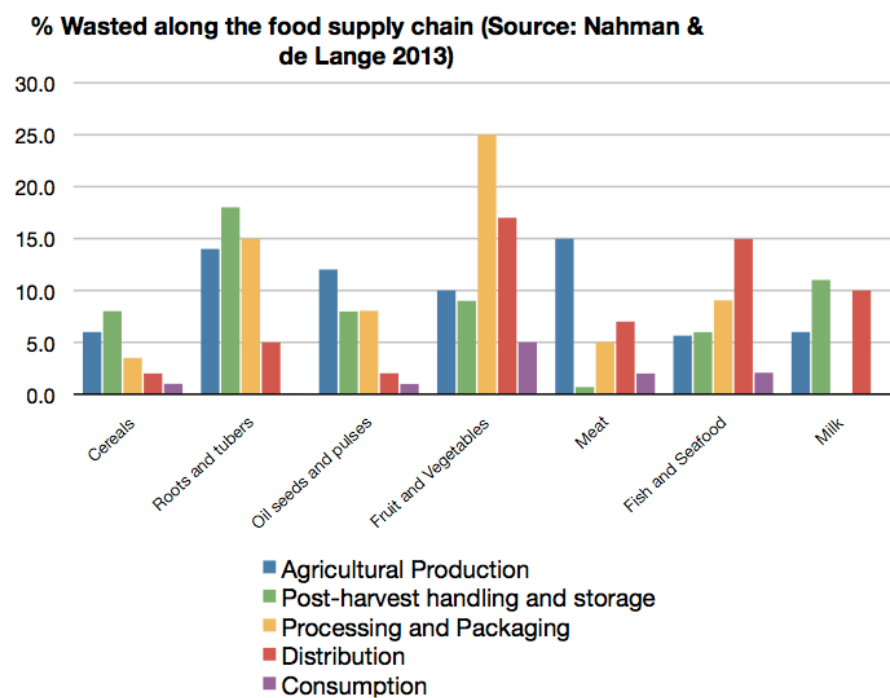


Figure 7.22: Food Waste along the value chain in South Africa (Source: Nahman & de Lange 2013)

Food processing and packaging is a predominantly urban activity, and through the presence of the CTFPM there is a concentration of post-harvest handling and storage in Cape Town. Furthermore the City is a major site of retail and consumption. It is clear that there is substantial food waste within the city. This is a sustainability challenge and opportunity. Box 7.2 provides a discussion of food waste in Cape Town, with a particular focus on supermarket waste. This Box provides insights into current barriers within food system governance to more sustainable management practices.

Box 7.2 Food Waste in Cape Town (Maya Marshak)

Approximately 4 billion metric tons of food is produced globally per annum, of which an estimated 30-50% (1.2-2 billion tons) is wasted (IMECHE 2013). With only half of the food grown actually being eaten, hunger it can be argued is less a question of not enough food than of access and logistics” (www.foodbank.org.za). Producing food that is not consumed not only wastes food, but also valuable resources such as land, water, energy involved in its production (FAO 2011). At present most food waste ends up mixed in with other wastes in landfills- leading to the production of methane - a powerful greenhouse gas and toxic leachate liquid that can contaminate underground water. Furthermore food waste is a bulky addition to landfills, which are filling up fast. In Cape Town there are few ‘suitable’ sites left for landfills.

In order to reduce food waste methods need to be put in place throughout supply chains to reduce, reuse/re-distribute and recycle food and prevent waste. Through the prioritization of waste minimization, the efficient redistribution of surpluses and the recycling of unavoidable waste, food waste can be transformed from being a “liability to a resource” (Stuart 2009). Transforming a system, which previously treated ‘waste’ as an undesired, unhygienic and inevitable externality of production systems is a complex task (Fagan 2003). Such a transition needs a multi-stakeholder approach, and cooperation between government, business and citizens. It requires the development of appropriate infrastructure, communication systems and a supportive environment for this to grow as well as significant behaviour change.

In efforts to encourage waste minimization and recycling as well as boost the recycling industry, many places around the world have banned commercial or residential food waste or both from landfill. Examples include Japan, Germany, Sweden, Taiwan, San Francisco and Portland (Stuart 2009). Massachusetts and Scotland both plan to ban commercial waste from landfill by 2014 and Vancouver is proposing banning all landfill waste by 2015¹². These proposed bans are being supported with investment in public infrastructure¹³, increasing partnerships with private companies and providing incentives and loans to private waste companies¹⁴. Campaigns promoting research, awareness, stakeholder dialogue and collaboration have shown to be vital in mobilizing change¹⁵. In the UK, the Department for Environment Food and Rural Affairs (DEFRA) has collaborated with the Waste and Resources Action Program (WRAP), a non-profit organization to research and ultimately transform the treatment of all food wastes in the UK¹⁶.

While the redistribution of surplus food in Cape Town has greatly increased due to the formalization of Food Bank South Africa¹⁷, there is still much to be done in terms of recycling food waste no longer fit for human consumption. There have been great advancements in recent years in waste policy and goals towards achieving zero waste to landfill have been set. Certain materials such as sewage sludge, garden waste and building rubble have been highlighted as priority materials to be diverted from landfill. Yet within new policy, food waste is not yet clearly defined and prioritized but rather is referred to as a fraction of organic waste along with garden waste and is collected mixed in with general waste (NWMS 2008). Municipal drop-off sites have been established for green (garden) waste where it is chipped and then composted by a private company. Yet these sites do not accept food wastes, which needs different treatment. One municipal landfill site does process food waste from mixed waste but this produces low quality compost generally considered unfit for growing food (Ekelund & Nystrom 2007). Overall food waste – both commercial and residential remains a largely under-recycled resource in the city for which few large scale recycling facilities exist.

A recent study roughly estimates food waste and food loss to be around 9.04 million tons per annum in South Africa, yet little in-depth research is available. The study concluded that more research is needed to help “ facilitate better large scale- waste management practices” (Oelofse & Nahman 20012). The South African Waste Information System (SAWIS) was initiated in 2006 to encourage generators to register and submit waste information (Purnell 2009, NWMS 2011). Yet

¹² <http://www.triplepundit.com/2013/03/metro-vancouver-ban-organic-refuse-landfill-2015/>

¹³ <http://www.theguardian.com/environment/2012/jul/03/ban-food-waste-landfill>

¹⁴ <http://www.wrap.org.uk/content/our-work>

¹⁵ <http://www.epa.gov/osw/conserves/materials/organics/food/fd-house.htm>

¹⁶ <http://www.lovefoodhatewaste.com>

¹⁷ <http://www.foodbank.org.za/who-we-are/network>

there has been a lack of commitment as registration is still voluntary (DEA 2012). Companies are also not obliged to recycle food wastes and only the disposal of food waste considered hazardous such as condemned meat needs to adhere to guidelines. Within the Meat Safety Act (2000) the focus is entirely on disposing of meat waste without harm to human health (Roberts & de Jager 2009). There is no policy outlining its' resource potential or how it should be recycled to avoid environmental harm. Large amounts are merely buried in hazardous landfill sites (Marshak 2010). While waste management policy calls for integrated approaches to managing waste, in practice much food waste is still treated as undesirable, unwanted material.

At present no citywide system exists for the collection and management of food waste in Cape Town, yet in recent years many private companies have developed a number of solutions for recycling food waste. Systems include offsite¹⁸ and onsite¹⁹ composting facilities, anaerobic digesters²⁰, large-scale worm farms²¹ and fly farms.²² Some large-scale food waste generators such as supermarkets and hotels are now using such contractors to manage their food waste. While recycling companies are growing it is a difficult environment in which to operate. Small companies specializing in niche technologies struggle to gain a foothold in a system where landfilling food waste is a legitimate, cheaper and easy way to get rid of unwanted food waste (Oelofse & Nahman 2012).

It is likely that as landfills fill up and landfilling costs rise companies generating large amounts of waste will naturally look towards recycling. Yet it is also important that Policy addresses the category of food waste as a priority, and that regulations guiding this category of waste are developed. It is unlikely that municipalities can address the challenges of providing basic service delivery and creating more sustainable waste management systems alone. Waste generators also need to be encouraged to work together to tackle the issue of food waste potentially through a national food waste minimization campaign, which has proven helpful elsewhere in mobilizing all stakeholders to build an alternative system. A focus on minimizing and diverting commercial food wastes from landfill could play a vital role in developing the recycling industry so that eventually household waste can be absorbed into it.

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¹⁸ See Zero to landfill Organics: <http://www.ztlorganics.co.za/about/>; See WastePlan <http://www.wasteplan.co.za/>

¹⁹ See Green Genie: <http://www.greengenie.co.za/>

²⁰ See Agama Energy: <http://agama.co.za/>

²¹ See Full Cycle: <http://www.fullcycle.co.za/>

²² See Agriprotein: <http://www.agriprotein.com/>

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7.7 Conclusions and Recommendations

7.7.1 Food processing

There remains a challenge of data on which to base recommendations. As discussed in the Food Flows Section (See Section 6), the private sector have been unwilling to share data or even basic information regarding their businesses. It is therefore not possible to know how much of Cape Town's food is produced within the city's boundaries is for consumption within Cape Town. It is also not possible to know where the food comes from. It would be possible for the City to keep more detailed and accurate records of what is produced by each factory and how many employees each has.

From the available data it is apparent that although Cape Town has a large and varied food-processing sector, many of the core foods consumed in the City are produced by large national and multinational companies. While this may have apparently economic efficiencies, concerns have been raised about the power and agency within the food system. The case of bread-price fixing in South Africa is illustrative of the problem of having a highly concentrated food production system. It is therefore pertinent to ask whether the City might have a role to play in supporting smaller processors of key basket of goods items. In particular, there is scope for the incentivisation of the production of healthier processed foods. The spatial distribution of the food-processing sector highlights four important issues for the City to consider.

1. Retention of the CTFPM: The first issue is the particular characteristics of the cluster of processors in Epping Industrial Estates 1 & 2 (see Figure 7.8). As discussed in Chapter

6, the Cape Town Fresh Produce Market (CTFPM) is a major conduit of fresh produce in the city. However, the market appears to be losing its influence on the food system as more farmers have direct contracts with the supermarkets. However, the management of the CTFPM argue that the market's location at Epping supports around 20 additional fresh produce and other food processing businesses (James 2013 pers comm). Additionally, the clustering of food-based processors at Epping provides operational logic for a number of logistical and packaging businesses and supports the many informal traders retailing both within and beyond the boundaries of the CTFPM. Finally, Food Bank Cape Town, which distributes food to 57 690 beneficiaries through 219 agencies across the city (Erispe pers. comm. 2013), directly benefits from the agglomeration of food processing businesses near the CTFPM.

Level of Priority: Medium

Responsibility: EESP to lead strategic planning

2. Food Waste Management: The clustering of food processing businesses in distinct nodes provides the opportunity for the City to consider recycling and re-use of food waste. As discussed in Box 7.2, the City is facing challenges of landfill capacity. Food waste is a major waste stream that could be more effectively deferred from landfill. The food processing hubs are areas of high bio-waste production, which may cause public health risks. They are however, also potentially areas of waste management innovation. There is an opportunity for the City to partner with the private sector to improve food system sustainability and create economic opportunities.

Level of Priority: Medium

Responsibility: Environmental Resource Management, Utility Services, Health, and partnership with waste companies

3. Incentivization of food processing as a growth sector: The food-processing sector provides many employment opportunities within the City, and areas of high potential for SMME development, as per IPAP2. As Figure 7.7 indicates, the areas of food processing cluster in the North and West of the city, away from the areas of high unemployment in the South East. This is potentially an area of opportunity for the City. The City could consider the food-processing sector as specific sector for job creation. Agro-processing is identified as a priority sector within the City's 2013 Investment Incentives Policy. Given the concerns about the increased presence of highly processed foods, and the current balance of processor types, the City could preferentially support industries producing healthier food types.

Level of Priority: High

Responsibility: Economic cluster, dialogue with DTI and DAFF

4. Finally, the City could seek ways to provide opportunities to connect small producers with food processors, and food processors to market opportunities. There is an opportunity given the flows of food into and out of the city to self-consciously establish Cape Town as a food hub.

Level of Priority: Medium

Responsibility: Economic Development.

7.7.2 Retail

The retail of food in low-income areas is an essential component of the food security of the urban poor. It therefore demands considerable attention from the City if food security is to be addressed. To date there has been little consideration of the role – positive or negative – of supermarket expansion on the food security of the poor. While supermarkets may bring cheaper food, they are not necessarily bringing cheaper access to healthy foods. Additionally, given the responsiveness of the informal sector traders to the needs of consumers in terms of access to credit, long opening hours and sale of products in affordable unit sizes, there are concerns that pressure on this sector might actually have negative food security impacts for the poorest residents of the city. These are important questions for the City to apply its mind to. At present, departments dealing with informal trade, formal trade and planning and business development management sit within the same Directorate in the City, but have not necessarily been brought together to consider the urban food environment as a whole.

The following recommendations are therefore made:

1. Studies should be conducted on the food retail mix and pricing of supermarkets and malls in townships in order to evaluate their provision of affordable, nutritious food.

Level of Priority: Medium

Responsibility: Proposed food system working group in partnership with universities.

2. There should be high level discussion on the positive and negative food security impacts of shopping mall developments. City officials working on formal retail, planning and building development management and informal retail should collaborate on food retail environment planning for the purpose of food security.

Level of Priority: High

Responsibility: Proposed food system working group facilitated by SPU member. To include P&DBM and Informal trading unit

5. There should be a specific focus on increasingly the sale of safe, healthy foods by informal traders near transport hubs. It is acknowledged that formal and informal food retailers cluster around transport hubs, but that many of the foods sold around these hubs are poor quality, often less healthy foods. Given the dependence of commuters on food from these hubs, preferential trade of safe, healthy foods at these hubs would have direct food and nutritional security benefits.

Level of Priority: High

Responsibility: Informal Trading Unit with the Food Control Programme

6. The City should engage designers to design low-cost, low-tech solutions to the food spoilage problems experienced by informal traders. This project has clear connections to the WCD2014.

Level of Priority: Medium

Responsibility: Environmental Health with WCD team.

7.7.3 Sustainability

On the basis of the material presented, the following two recommendations are made:

1. The City should integrate food as a component into its wider Sustainability strategy documents. This should include social as well as environmental sustainability.

Level of Priority: Medium

Responsibility: Social Development and Environmental Resource Management.

2. Food waste should be recognised as a waste category within the City's waste management planning and strategies. Specific strategies should be developed to aid the diversion of food waste from retail and food processing businesses.

Level of Priority: Medium

Responsibility: Environmental Resource Management, Utility Services.

7.8 Overarching Conclusion on Cape Town's Food System

The strengths of the existing food system in Cape Town include:

- High agricultural productivity of wheat, livestock and horticultural products in the Western Cape
- Productive agriculture in and near the city that is argued to moderate food prices, and provide a range of sources of stock for traders serving low income areas
- Considerable focus by City, Province and the NGO sector on improving the viability of urban agriculture
- The dense network of flows of food within the City provide multiple means for households to access food
- Well-developed food processing sector
- The currently diverse retail environment that allows households to access food from different sources according to dynamics of household food security

Despite these strengths there are a number of weaknesses in the food system, which manifest themselves in the high levels of food insecurity experienced in the city:

- Lack of coherence food governance strategy at the national, provincial and local scales
- Provincial agriculture strategies that over-prioritise export-oriented agriculture and view agriculture for food security as a poverty alleviation strategy alone
- Increasing imports of highly processed foods
- Lack of transparency within the food system, beyond the farm level.
- High levels of concentration throughout the value chain, which hinders entrants of smaller businesses.

- Lack of consideration of the role of the expansion of supermarkets on the informal trade sector and the balance of healthy and less healthy food availability.
- Lack of environmental sustainability within the food system
- Highly volatile food price environment, coupled with food price monitoring systems that are not well suited to monitor the impact of food price increases on poor households.

8 Food Price Inflation

Key Summary Points

- There is considerable food price volatility locally and internationally.
- CPI's food component is limited as a measure of price inflation as experienced by the poor, whose consumption patterns deviate from the products and weighting of products within CPIF.
- Other measures, such as the Basic Food Basket and BFAP's Poor Person's Index, are better indicators, but all fail to account adequately for food bought through the informal retail sector – a vital source of food for low-income urban residents.
- Food price inflation must be understood in the context of costs along the value chain.
- The question is raised whether the promotion of alternative value chains might reduce costs and vulnerabilities of the food system to price shocks.
- The following recommendations are made:
 - *Advocate national government for pro-poor food price monitoring*
 - *Develop local food price monitoring which samples informal trade and retailers operating in low-income areas*
 - *Advertise prices of a basic basket of goods from retailers to improve consumer knowledge and influence retail pricing strategies*
- *Develop strategies to enable alternative shorter value chains to emerge.*

Reliability

This section indicates that there is clearly a problem of reliability in terms of price within the food system. Food price inflation exceeds general inflation. Food price inflation does not directly affect the reliability of the food system in terms of nutritional quality or food safety, but the impact of this inflation shapes consumer purchasing and consumption habits and therefore reduces access to nutritious and safe foods as cheaper foods are sourced.

Sustainability

There is no direct impact on the environment, social or economic sustainability of the food system.

Transparency

StatsSA and NAMC conduct extensive monitoring of food prices. However, this chapter argues that this monitoring is not sufficiently pro-poor and therefore there are limitations in the data to guide public policy on food security.

Role of City

There is no direct role for the City, however this chapter suggests that the City lobby StatsSA and NAMC for more pro-poor data collection approaches, and further suggests that in the absence of this, the City conduct its own data collection.

8.1 Introduction

There have been a series of global food price shocks in recent years. As indicated in Figure 8.1 this volatility is not the consequence of any single issue. Food price volatility is the outcome of local and international processes, short-term shocks and long-term trends, and of political, economic and environmental conditions. While the causes are complex, it is clear that food price volatility will continue to affect household food security, and is therefore an area of research for both agencies concerned with poverty and development and for those concerned with economic stability.

Three food price spikes in five years

Food price index, 2002–2004 = 100

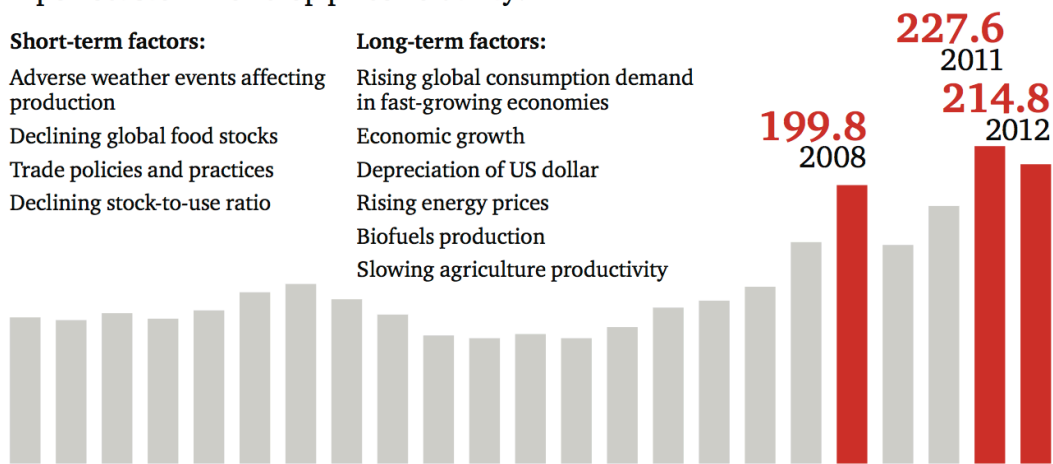
A perfect storm for crop price volatility:

Short-term factors:

- Adverse weather events affecting production
- Declining global food stocks
- Trade policies and practices
- Declining stock-to-use ratio

Long-term factors:

- Rising global consumption demand in fast-growing economies
- Economic growth
- Depreciation of US dollar
- Rising energy prices
- Biofuels production
- Slowing agriculture productivity



Sources: FAO, "Food Outlook: Global Market Analysis," May 2012; USDA Economic Research Service, "Why have food commodity prices risen again?" June 2011

Figure 8.1 Global food price volatility (Source: PWC 2012)

South Africa has experienced widespread food price inflation in the last twenty years and has had three distinct periods of heightened food price inflation since the turn of the century. Although influenced by international trends, there are local triggers to the South African experience. This chapter presents an overview of South African food price inflation and raises some questions about the potential impact of food price inflation on food security. The lived experience of food price inflation is addressed in Chapter 9.

The bulk of this section focuses on National level data. Data comparing Provincial level CPI Inflation to National figures are available, but it is not possible to access food inflation data at the sub-national scale. As Figure 8.2 and 8.3 illustrate, although there are differences in provincial and national inflation, there is not a consistent trend that suggests that CPI Inflation is lower in the Western Cape than elsewhere.

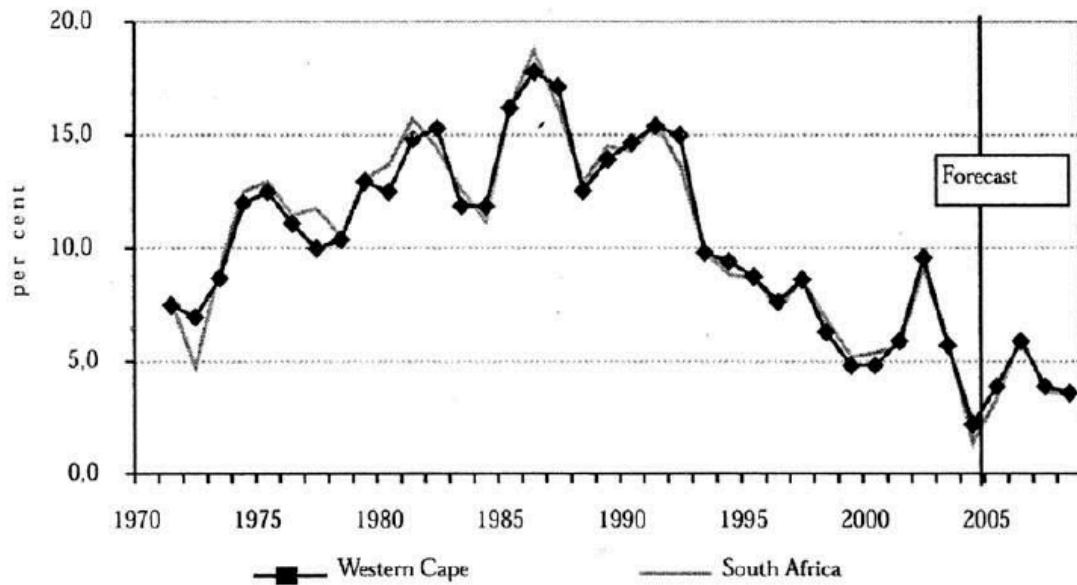


Figure 8.2 Consumer Price Index (CPI) Inflation in Western Cape versus South Africa, 1970-2008 (source: Western Cape Department of Economic Development and Tourism, 2006, p. 7)

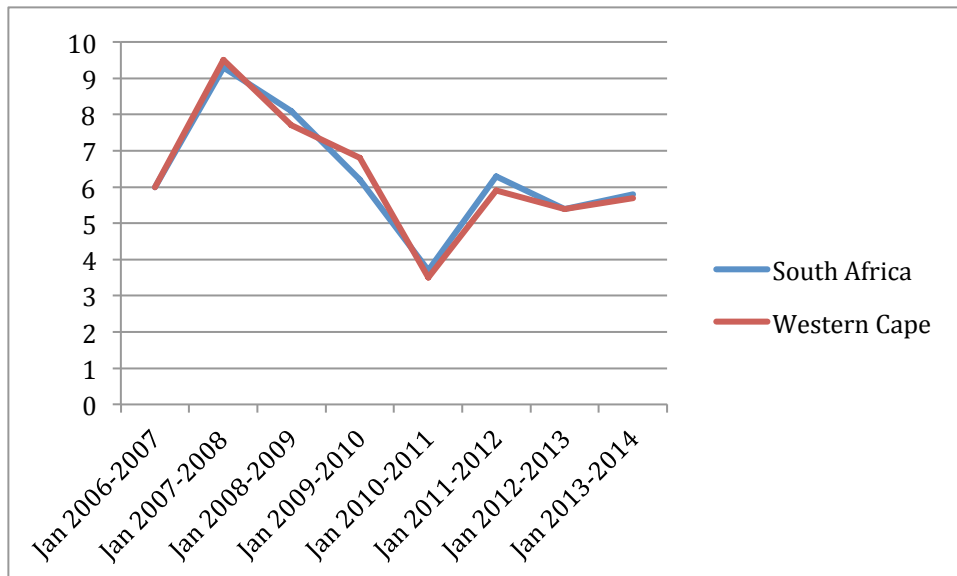


Figure 8.3 National and Western Cape CPI Inflation, 2007-2014 (Source: StatsSA Statistical Release P0141 – January 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014)

However, Table 6.5's comparison of prices at the Cape Town Fresh Produce Market with national figures found that prices at the CTFPM were on average 3.9% lower than national Fresh Produce Market averages over the time period 2007 to 2012. It is estimated that the CTFPM accounts for 40% of fresh produce consumed in Cape Town. This may make fresh produce cheaper for Capetonians.

8.2 Consumer Price Inflation

Food price inflation has long been recognized as a major contributor to general inflation in South Africa. The food price inflation's contribution to general Consumer Price Inflation (CPI) has always been considerable – 25.46% from 1980-1989, 22.49% from

1990-1999 and 30.00% from 2000-2008 (Rangasamy 2011, 187). Food inflation is much more volatile than non-food inflation, and by virtue of its persistent impact on prices after the shocks causing rapid inflation, it has been identified as an important source of underlying inflationary pressure in any economy (Rangasamy 2011, 189).

There has been considerable attention given to measuring CPI, and the food component of CPI (CPIF) in South Africa (Vink et al 2004). StatsSA uses CPI for two main reasons,

1. To measure inflation in the economy so that macroeconomic policy is based on comprehensive and up-to-date price information and to provide a deflator of consumer expenditure in the expenditure national accounts.
2. To measure changes in the cost of living of South African households to ensure equity in the measures taken to adjust wages, grants, service agreements and contracts (StatsSA 2013, 1)

CPI figures are calculated from data gathered monthly across South Africa. There are slightly different CPI baskets for each province and each primary urban, secondary and rural area. Figure 8.4 provides an indicator of the food price inflation according to CPIF since 2008. As Figures 8.5 and Table 8.1 indicate, there is massive variation in food price change across the different food types.

While the CPIF figures are the most comprehensive and rigorous dataset available to understand food price trends, it has been argued that CPI is not a useful measure for understanding the actual impact of inflation on individual households, and is particularly poor at identifying the impact of inflation on low income households. CPI has been critiqued both in terms of what foods are included in the basket and how the findings are aggregated, and for its neglect of the informal sector and food consumed outside of the home (Food Price Monitoring Committee 2003, Vink et al 2004).

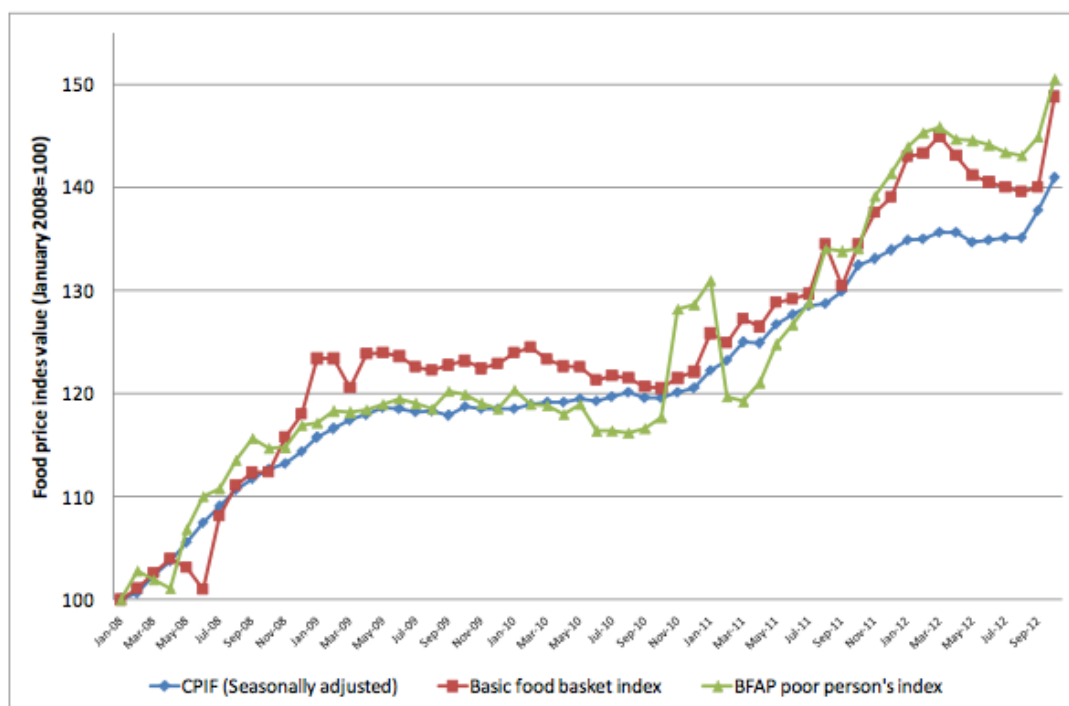


Figure 8.4: Monthly food price inflation, January 2008 to October 2012 (Source: BFAP 2012, 42)

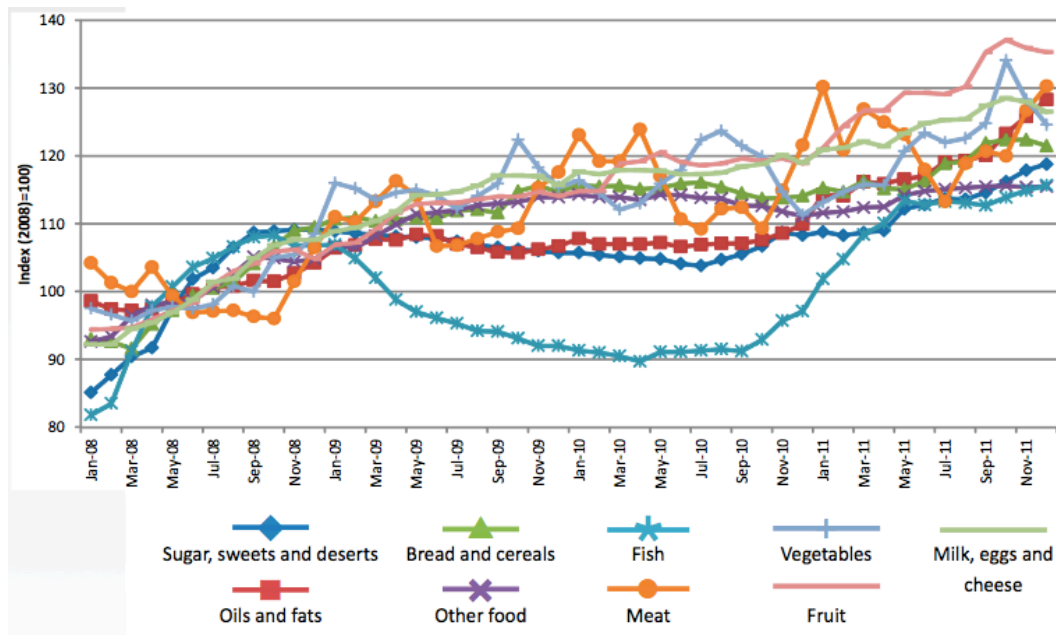


Figure 8.5: CPI for different food groups, Jan 08-Dec 2011 (Source: Stat SA 2012, in NAMC 2012, 32)

Table 8.1 Consumer Price Index for Urban Areas, July 2012-July 2013

	Period		
	July 2012	July 2013	Percentage change
Food	94.0	100.7	7.1
Processed	96.3	103.5	7.5
Unprocessed	92.0	98.1	6.6
Bread and cereals	94.5	101.4	7.3
Meat	91.9	97.2	5.8
Fish	99.0	104.7	5.8
Milk, eggs and cheese	98.3	104.9	6.7
Fats and oils	96.9	100.3	3.5
Fruit	89.1	93.2	4.6
Vegetables	89.9	101.9	13.3
Sugar, sweets and desserts	99.7	105.6	5.9
Other food	95.3	101.8	6.8
Non-alcoholic beverages	98.8	102.0	3.2
Hot beverages	99.2	102.8	3.6
Cold beverages	98.6	101.7	3.1
Alcoholic beverages	99.8	106.8	7.0
Spirits	100.2	107.4	7.2
Wine	99.8	105.5	5.7
Beer	99.6	107.0	7.4

Source: NAMC 2013

StatsSA have recently modified the items comprising the basket of goods and their sampling technique. The changes indicate the ongoing problems associated with a general inflation indicator like CPI. In terms of food items, they have removed samp, fish paste, Vienna sausages, savoury biscuits, dried fruit and nuts, frozen vegetables, and dried lentils and peas and have added Mageu, feta cheese, bread rolls, drinking chocolate, filter coffee and mineral water (StatsSA 2012). The StatsSA executive manager of price and employment statistics argues that this revision was necessary to reflect the changing purchasing habits of the rising black middle class: "Their increase in spending power is reflected in the addition of goods and services to basket that are seen as being discretionary" (Kelly 2013).

At the same time, the price collection activities have been amended to include more retailers in informal areas, in recognition that "we think that about 11% of food sales are through street vendors and spaza shops" (Kelly 2013). While the sampling approach has been modified to reflect the price realities of low-income areas, the basket of goods has been modified to reflect changing middle-class consumption habits and has therefore removed some of the basic food items consumed by the poor.

8.3 Basic Food Basket and Other Measures

In response to concerns about CPIF as a useful indicator of food price inflation for poor households, the Food Price Monitoring Committee (appointed by the government in response to rapid food price inflation in 2002) suggested a Basic Food Basket, which it felt, represented the dominant food items purchased by middle income to poor consumers. The Food Price Monitoring Committee argued that food price inflation impacted households in different income groups differently. They found that at the peak of the 2002 food price crisis, poor households experienced food price inflation at a rate of 23.1%, compared to 19% for rich households. These differences were attributable to the different basic food baskets of households in different income groups. Poor households were impacted more by changes in maize meal price, and wealthier households by prices of rice and bread (Food Price Monitoring Committee 2003, 77).

The March 2014 Consumer Price Index, published by StatsSA, highlights high food inflation. Breads and cereals had an inflation rate of 9.2%, and vegetables, 12.8%. Within the vegetable component, onions and tomatoes both had annual rates of over 20%. When these results are considered in the context of the food baskets of the poor and income distribution regimes, the lowest income quintile in Cape Town are most vulnerable to such inflationary pressures.

As a result, they developed a Basic Food Basket, which would better reflect the impact of food price inflation on poor households. This Basic Food Basket is monitored and reported on quarterly by NAMC. As is clear from Figure 8.6, there has been a consistent increase in the price of this basic basket over the last five years. The rate of increase of the price of the basic basket has exceeded that of CPIF, suggesting that the foods on which the poor rely are becoming more expensive than other foods.

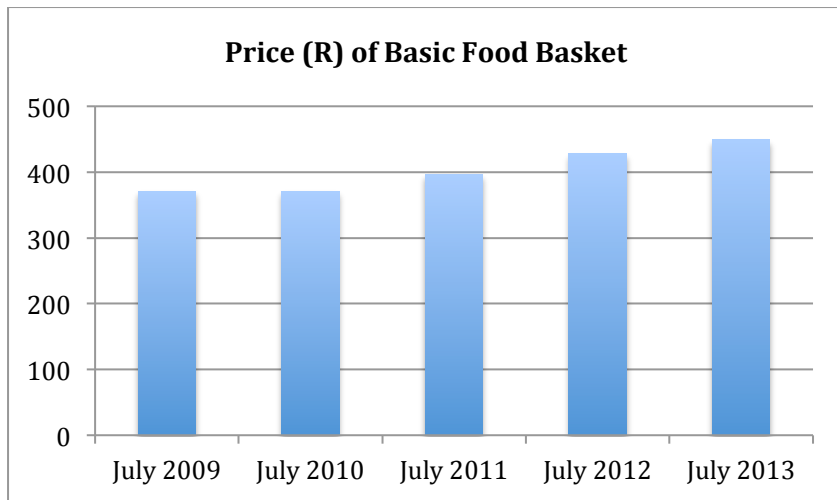


Figure 8.6: Price of Food Price Monitoring Committee's recommended Basic Food Basket, 2009-2013 (Source: NAMC 2009, 2010, 2011, 2012, 2013)

The food price inflation of the Basic Food Basket is increasing at a faster rate than income for low-income households. Figure 8.7 demonstrates the increasing proportion of household income necessary to purchase the basic food basket.

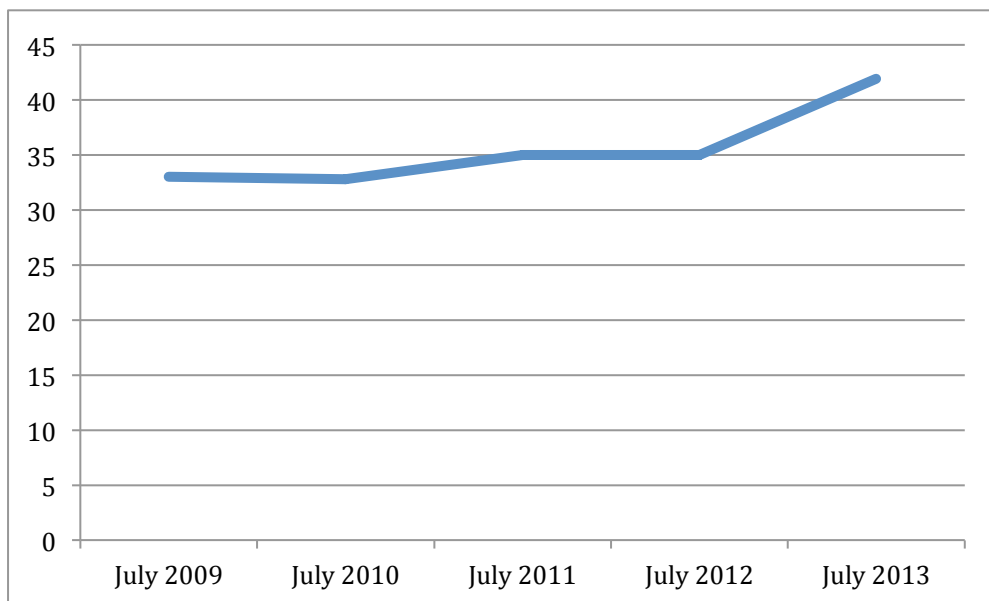


Figure 8.7 Food as a percentage of total expenditure by the poorest 30% of households (Source: NAMC 2009, 2010, 2011, 2012, 2013)

BFAP have developed another indicator to disaggregate food price inflation further in the form of the "BFAP Poor Person's Index" which is based on typical portion sizes of the five most commonly consumed foods in South Africa: maize, porridge, brown bread, sugar, tea and full cream milk. The BFAP Poor person's index was calculated "by weighing the food price data for these food items, based on the typical (cooked) daily portions of very poor consumers (as obtained from ...various nutritional studies...), in order to calculate the cost of a 'typical daily food plate' for the poor" (BFAP 2012, 41). This index is currently showing the greatest rate of inflation, confirming that the poorest are bearing the brunt of food price inflation.

There are other local measures that provide more nuanced accounts of food price inflation at a more fine-grained scale. PACSA, an NGO based in Pietermaritzburg, has been tracking the price of 32 items identified as key staples of the urban poor in four different retail stores in low-income areas of Pietermaritzburg since 2006. They found an inflation rate of 8.7% in 2013, which is higher than the 7.1% found in using CPIF. PACSA also found that in 2013 the most marked inflation was in food categories that formed staple foods of the poor (Table 8.2).

Table 8.2: Price Fluctuations of “must have” foods in 2013 PACSA food basket

“Must have foods”	Quantity	Sept_2012	Sept_2013	Annual change in Rands	Annual change in %
Maize meal	15 kg	R 92.73	R 97.91	R 5.18	5.58%
Rice	10 kg	R 61.74	R 74.24	R 12.50	20.25%
Cake Flour	10 kg	R 67.74	R 73.49	R 5.75	8.49%
Brown sugar	4 kg	R 37.73	R 44.01	R 6.28	16.63%
Cooking Oil	4 litres	R 60.74	R 65.48	R 4.74	7.80%
Total		R320.68	R355.12	R 34.44	10.74%

Source: Smith & Abrahams 2013, 12.

There is no clear single driver of food price inflation even within the same category of food in the same city. Figure 8.8 indicates the diversity of spot prices for frozen chicken from the four retailers sampled. This possibly indicates a lack of transparency in the value chain, but also provides an opportunity for shoppers, who are able to navigate different retail outlets to reduce expenses. In Belo Horizonte, Brazil, the City provides weekly information on the prices of a basic basket of goods to enable residents to shop most affordably and to promote competition among private suppliers and therefore keep prices low.

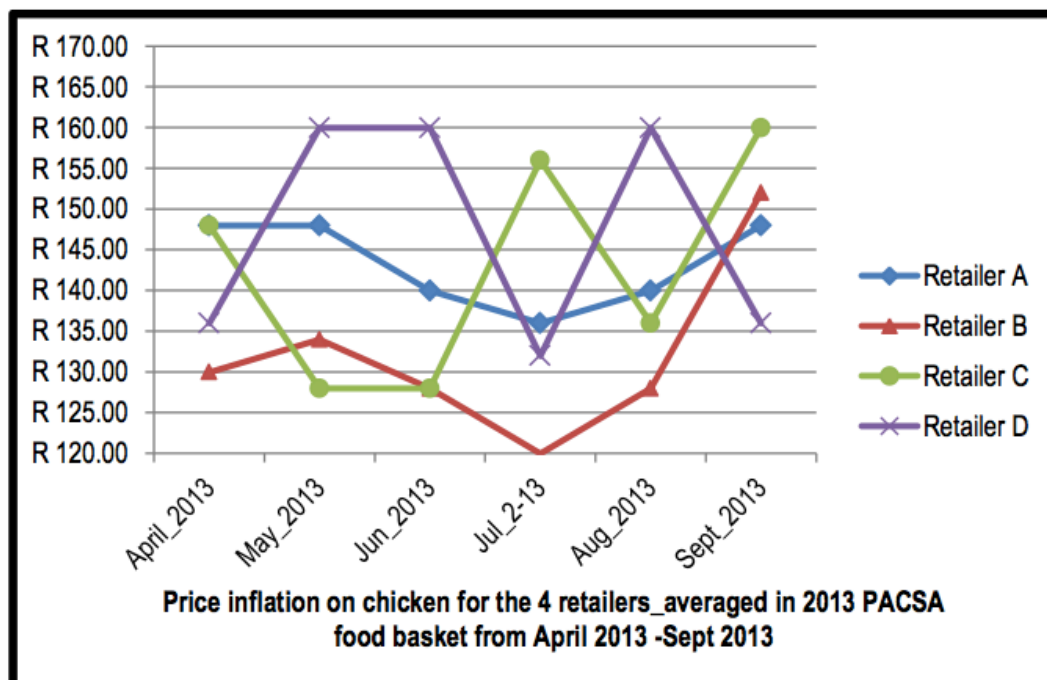





















Figure 8.8: Price fluctuations for frozen chicken pieces in 2013 PACSA across 4 retailers, April 2013-Sept 2013 (Source: Smith & Abrahams 2013, 4)

Poor households manage their food budgets carefully, but food purchase planning is difficult in a context of rapidly and unpredictably changing food prices. Table 8.3 demonstrates the year on year food price change of the 32 items monitored by PACSA with their sparklines to indicate trends. There is very little discernable pattern in price trends of individual food items. This level of uncertainty provides significant challenges for poor urban residents (who spent a large part of their income on basic foodstuffs) trying to plan nutritious, adequate daily consumption of food.

Table 8.3 Price fluctuations within the 2013 PACSA food basket, including sparklines

Sparklines	Foods	Price fluctuation (R)	Price fluctuation (%)	Year-on-year price change (R)	Year-on-year price change (%)
	Tomatoes	R 58.00	80.65%	-R 10.08	-10.97%
	Potatoes	R 17.75	65.16%	R 14.00	51.40%
	Cabbage	R 9.00	48.08%	R 1.89	10.10%
	Onions	R 6.00	42.92%	R 0.75	5.36%
	Cheese	R 29.72	42.32%	R 24.97	35.56%
	Salt	R 2.87	26.57%	-R 2.54	-18.61%
	Eggs	R 12.10	26.52%	-R 0.50	-0.98%
	Canned fish	R 6.00	26.11%	R 4.75	20.67%
	Beef	R 33.75	25.87%	-R 21.00	-13.66%
	Chicken	R 34.10	25.47%	-R 13.00	-8.03%
	Rice	R 14.75	23.89%	R 12.50	20.25%
	Coffee	R 10.75	19.55%	R 9.50	17.28%
	Cooking Oil	R 10.49	17.27%	R 4.74	7.80%
	Brown sugar	R 6.28	16.63%	R 6.28	16.63%
	Canned beans	R 2.86	15.90%	R 1.13	6.30%
	Stock	R 1.85	14.44%	R 0.55	3.90%
	Fresh Milk	R 2.58	14.01%	R 2.32	12.42%
	Cake Flour	R 9.25	13.91%	R 5.75	8.49%
	Mealie meal	R 11.93	13.87%	R 5.18	5.58%

(Source: Smith & Abrahams 2013, 13)

8.4 Formal and Informal Food Pricing

As noted previously, many low-income households depend on the informal sector for the bulk of their food. Prices and sensitivity to food price inflation are different within and between formal and informal trade sectors. In the case of non-perishables, the informal sector is often more expensive, but fresh produce and meat are often cheaper due to shorter value chains and different standards. The unit size of the informal trade sector is also often smaller than that captured in surveys of the formal retail sector.

Figure 8.9 demonstrates the price of items purchased by households living in Upper Manenberg in 2012. As is evident, spazas (or tuck shops as they are termed in Manenberg) are more expensive for most items than the nearest supermarket. However, they are often the preferred source of food as they sell in unit sizes that are affordable to low-income residents. These pricing dynamics are not well captured in the food price inflation calculations.

There are also concerns about the location of the formal retailers from which data are gathered. Pricing of food is not consistent across all stores within the same company. Supermarkets in low-income areas may be more expensive or in some cases cheaper than those in wealthier areas. Many of the supermarkets in low-income areas are franchises (Tustin & Strydom 2006). In the franchise system, franchisees are required to buy only from the company's distribution centres (unlike the company's own stores), and therefore pay more for their goods than they would if they were able to buy from a direct supplier or a nominated or approved supplier (Donnelly 2012). This has cost implications for the consumer.

As a result of sampling strategy, actual food price inflation experienced by the poor is not well quantified and there is an urgent need for better data collection on food price inflation in low-income areas.

Food Type	Tuck shops		Supermarket		Requirement for Household of Four ¹				
	Unit Size	Price	Unit Size	Price	Quantity	Price			
						Tuck Shop	Super market		
Bread	Albany/Blue Ribbon	R 7	Albany/Blue Ribbon	R6.50	Weekly	7 loaves a week	R 49	R 45.50	
	Daily Bread	R 5	Daily Bread	R4.80			R35	R33.60	
	Half Loaf	R 4	-	-					
Milk	1 litre	R 6	1 litre	R5.50		7 litres a week	R 42	R 38.50	
						Total	R91	R84	
fish oil	1 litre	R 13	1 litre	R12.00	Monthly	2 litres	R 26	R 19.90	
	500 ml	R 8	2 litre	R 19.90			R32		
Rice	500g	R 6	1kg/500g	R7.50/ R4.90			5kg	R60	R 35.90
	small packets (100g/300g)	R2/R5	2kg	R15.50				R100.00 (100g packets)	
Flour	500g	R6.50	1kg/500g	R10.50/ /R5.50			2.5kg	R 32.50	R 26.50
	Sugar	2.5kg	R 19	2.5kg		R15.99		2.5kg	R 19
		1kg	R 10	1kg		R9.50			R 25.00
	500g	R 5	500g	R4.50				R25.00	R22.50
	250g	R3.50	250g	R2.99					
	Small packets (100g/200g)	R1/R2	-	-				R25.00 (100g packets)	
Tea	25 teabags	R 6	25 teabags	R3.99			100 teabags	R24	R16
	Each	50c	-	-					
Coffee	100g frisco	R 9	100g frisco	R7.50			500g frisco	R45	R37.50
	small packets (20g/50g)	R2/R5	-	-					
Eggs	Dozen	R 6.50	Dozen	R5.50			8 dozen	R52	R44
	Each	R 1	-	-					
Baked Beans	1 tin	R 7	1 tin	R4.99			8 tins	R56	R35
						Total	R314.50	R230.80	

Figure 8.9: Relative prices of food “essentials” from formal and informal retail sources, Manenberg, Cape Town, 2012 (Source: Cooke 2012, 67)

8.5 Causes of Food Price Inflation

The causes of food price inflation are many and act across a range of spatial scales. In their most recent Annual Food Price Review, NAMC and DAFF (2011) identify a number of local drivers of food price inflation. The document focuses mainly on the cost of farming inputs, most notably the high costs of fuel, fertilizer, and animal feed, as well as

the cost of packing material, animal health and crop protection and maintenance and repairs. It also identifies the increased cost of electricity and labour as drivers of food price inflation. While these are important drivers of Producer Price Inflation (PPI), food price inflation needs to be considered in the context of pricing mechanisms along the value chain.

Figure 8.10 provides an overview of increasing fuel prices from 2005 to 2011. While this has important implications on the cost of primary production, it is important to remember that this has cost impacts across the value chain. The South African food system is dependent on transporting foods long distances on road, due to underinvestment in rail infrastructure. Likewise, the rapidly increasing cost of electricity impacts primary production, and the cost of food processing and of cold storage. The increases in fuel and electricity costs increase the price of food along the value chain, and also upon consumers purchasing and preparation habits.

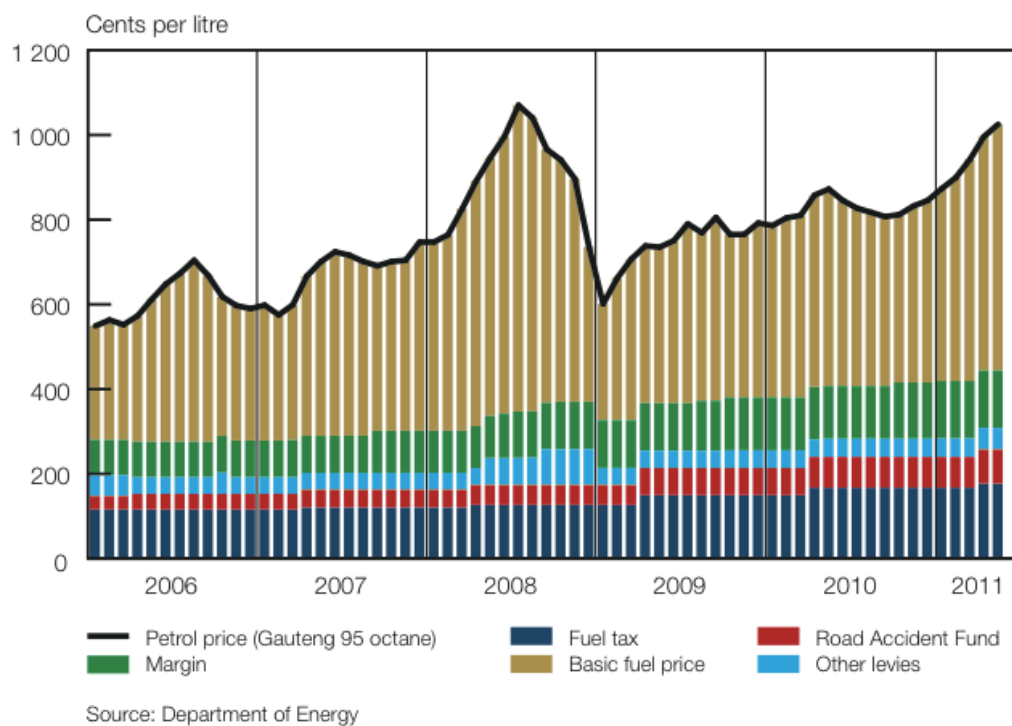


Figure 8.10: South African Fuel Price, 2005-2011 (Source: South African Reserve Bank 2011, 4)

Figure 8.11 demonstrates the relationship between PPI and CPI. The most recent phase of CPIF inflation has not been closely related to commensurate PPI agro-food inflation. This confirms that there is a need to better engage the causes of food price inflation throughout the whole food system.

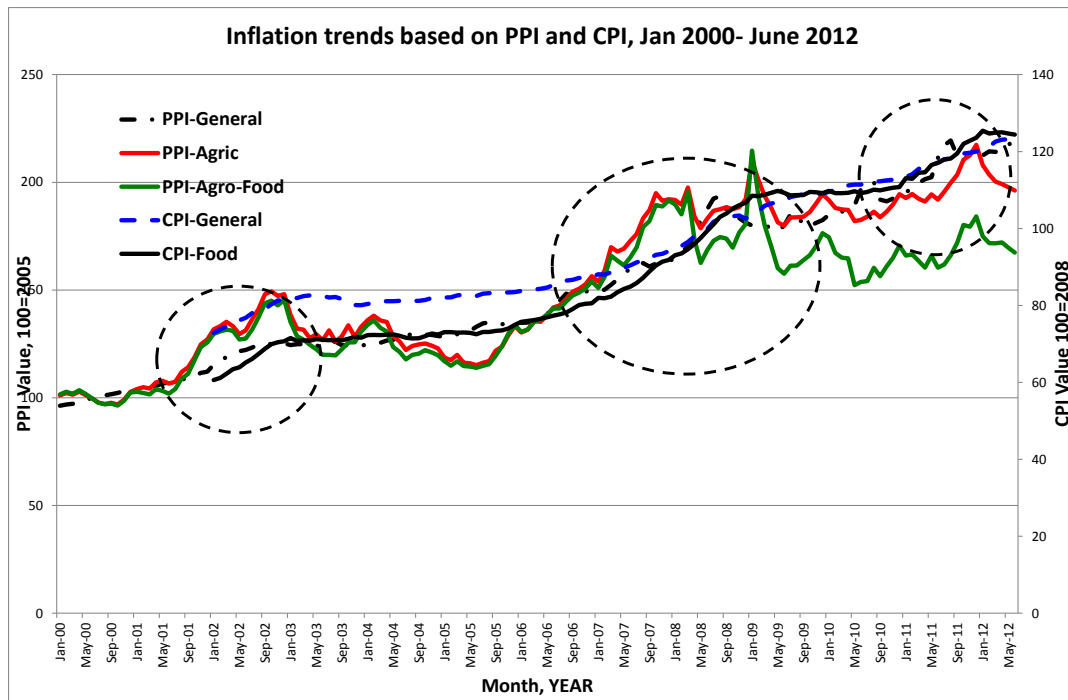


Figure 8.11 Inflation trends based on PPI and CPI, Jan 2000-June 2012 (Source: Jacobs 2013)

Table 8.4 and Figure 8.12 illustrate price transmission along the value chain. In the case of milk, under 40% of the final retail price derives from primary production cost. In the case of white bread, it is less than 25%.

Table 8.4: Typical cost composition of pasteurized full cream milk in 2l container offered for sale in a retail store

Item	Low Cost		Low cost		Low cost	
	R/2 ℓ	Percentage of selling price	R/2 ℓ	Percentage of selling price	R/2 ℓ	Percentage of selling price
Raw milk price (2 ℓ)	6.40	38.6	5.70	38.6	5.80	40.3
Action 1:						
Raw milk collection and transportation to processing plant	0.70	4.2	0.53	3.6	0.50	3.5
Action 2:						
Processing and quality assurance	1.50	9.1	1.26	8.5	1.20	8.3
Container (2 ℓ plastic or 2 ℓ gable top)	1.50	9.1	1.37	9.3	1.30	9.0
Filling of 2 ℓ containers	0.12	0.7	0.11	0.7	0.10	0.7
Action 3:						
Marketing and distribution by milk processor	2.55	15.4	2.42	16.4	2.30	16.0
Interest, profit and overhead costs	1.40	8.4	1.37	9.3	1.30	9.0
Selling price to retailer	14.17	85.5	12.76	86.4	12.50	86.8
Action 4:						
Retailer mark-up	2.40	14.5	2.00	13.6	1.90	13.2
Selling price to consumer	16.57	100.0	14.76	100.0	14.40	100.0

Source: NAMC 2012, 53

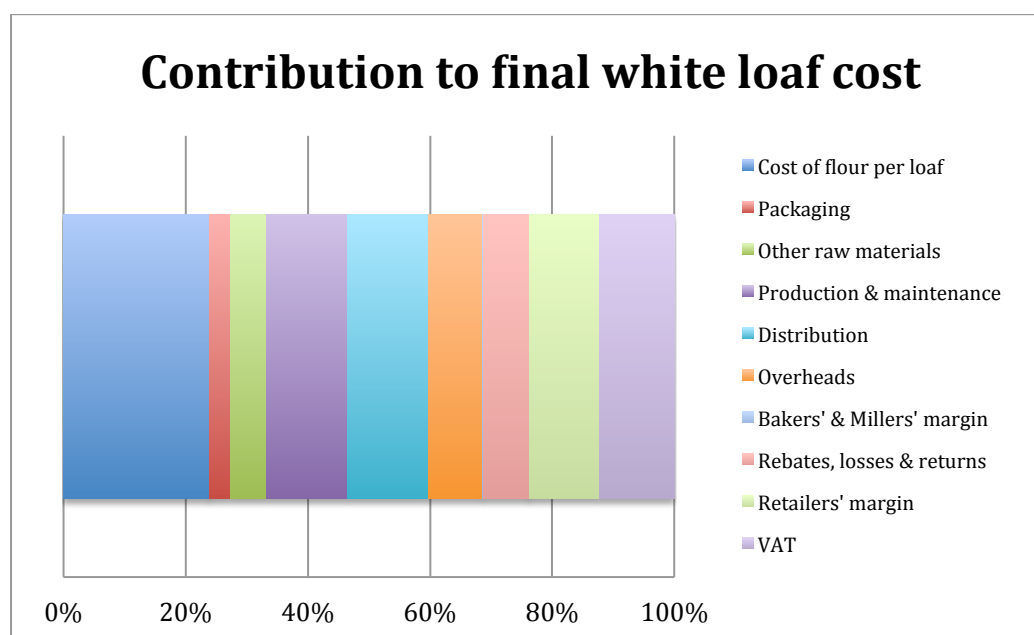


Figure 8.12: Average cost on the Wheat-to-white-bread value chain (Scenario 1 – 508g high) (Source: NAMC 2012: 71)

8.6 Conclusion and recommendations

As demonstrated above, there is high food price inflation and general food price volatility in South Africa. Existing data sets to measure food price inflation do not

adequately address the lived experience of the urban poor due both to the items included in the basket of goods. The final retail price of foodstuffs is derived from many points along the value chain, and supermarkets in low-income areas are often more expensive than those in wealthier areas by virtue of their franchisee status.

As demonstrated above, there is high food price inflation and general food price volatility in South Africa. It has been argued that the existing data sets to measure food price inflation do not adequately address the lived experience of the urban poor due both to the items included in the basket of goods and the under-sampling of informal traders. Additionally, it has been demonstrated that the final retail price of foodstuffs is derived from many points along the value chain, and that supermarkets in low-income areas are often more expensive than those in wealthier areas by virtue of their franchisee status. As discussed in Section 3.1, the food system in South Africa is highly concentrated with limited options for companies outside of the major players. These prevent alternative value chains from developing.

The following opportunities therefore arise:

- 1 Advocate for pro-poor food price monitoring with official national food price monitoring, most notably through monitoring of formal and informal retailers in low-income areas

Level of Priority: High

Responsibility: Economic Development, Dialogue with StatsSA and NAMC on food price monitoring

2. Development of food price monitoring by the City, which includes pricing in informal sector, in the absence of improved monitoring by StatsSA.

Level of Priority: High

Responsibility: Commissioned studies by local universities.

3. Advertising of prices of basic basket of goods to improve consumer knowledge and influence retail pricing strategies

Level of Priority: Low

Responsibility: No clear line of responsibility

4. Develop strategies to enable alternative shorter food value chains to emerge. These may mitigate price shocks and provide greater resilience in the food system. This would entail facilitating access of local produce to local processors, and of local processors to retailers. While the primary responsibility for this rests with economic planning, it is essential to note that this implies involvement of a number of departments that shape the food system, including transport.

Level of Priority: Medium

Responsibility: EESP, dialogue with DTI and DAFF

9 Food Security, Indicators and Coping Strategies

Key Summary Points

- Although South Africa is food secure at a national scale, there are high levels of household food insecurity
- The Western Cape is generally assumed to have one of the lowest incidences of food insecurity in the country. However, the use of proportions instead of actual numbers masks the extent of the problem.
- Although the City of Cape Town has the highest Human Development Index (HDI) in the province, the number of malnourished children per thousand in Cape Town was higher in 2011/12 than the Province's average (3.2 per thousand and 3.0 per thousand respectively). Given that the City accounts for 64.2% of the Province's total population, the number of malnourished children per thousand in the Province if Cape Town's figures are excluded would be even lower.
- Food insecurity is increasingly manifesting in the form of obesity, diabetes and other non-communicable diseases. This suggests that food insecurity must be understood in the context of the changing food system.

9.1 Introduction

Chronic poverty and chronic food insecurity are all pervasive in South Africa. This is largely a result of skewed income distribution patterns and structural inequalities (HSRC, 2000). In 2009, the proportion of those living below the \$2.50 a day poverty line was estimated by Statistics South Africa at 36% (with 52% below the upper-bound poverty line of R577 per capita per month) (Statistics South Africa, 2012). Overall food sufficiency at the national level has therefore not translated into food security at household and individual levels.

Although improvements in overall food security have been recorded in the past decade, the 2012 General Household Survey found that a significant proportion of the South African population still suffers from hunger and food insecurity: 13% of households are vulnerable to hunger and 48% have limited access to food (Statistics South Africa, 2013). The first South African National Health and Nutrition Examination Survey (SANHANES-1) paints a similar picture: only 46% of the country's population were deemed food secure. Another 28% were at risk of hunger while 26% experienced hunger and were food insecure (Shisana et al., 2013).

The challenges of food insecurity in the country are experienced in both the rural and the urban areas. While food insecurity has traditionally been seen as only affecting rural households, the SANHANES-1 contest this perspective. Although 37% of respondents experiencing hunger were in the rural formal sector, 32% were in urban informal areas (Shisana et al., 2013). The highest prevalence of risk of hunger was actually in urban informal areas (36%). The residents of these areas are mainly low economic status who are largely unemployed, or if not, earn low incomes and struggle to provide the basic necessities.

Food security levels also vary at the sub-national level. Provinces with high levels of poverty also report acute problems of food insecurity. The 2012 General Household Survey indicates that the most serious food access problems are in the North West (34.6%), Northern Cape ((28.1%), Eastern Cape (28.0%) and Mpumalanga (25.7%)(Figure 9.1).

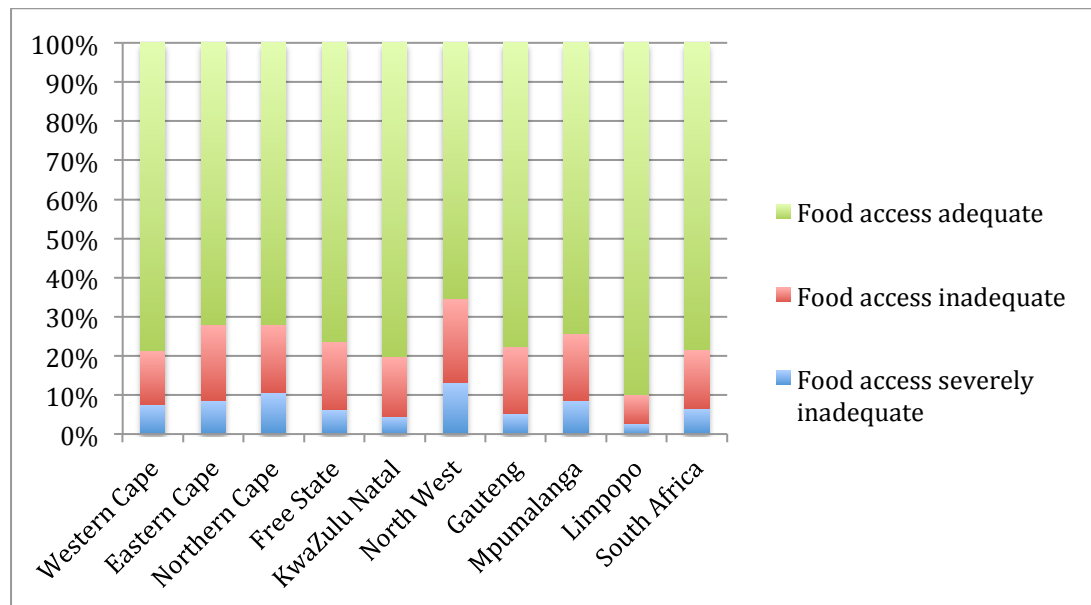


Figure 9.1: Percentage of households experiencing food adequacy/inadequacy by province, 2012 (Source: Redrawn from Statistics South Africa, 2013, p42)

While the proportion of households experiencing food problems was lower in Gauteng and the Western Cape, these provinces are not immune to food insecurity. As Figure 9.1 shows, 21% of the population of the Western Cape have problems accessing enough food (Statistics South Africa, 2013, 42). The absolute number of households experiencing food access problems in the province (842 814) is higher than Mpumalanga (802 834) or the Northern Cape (284 333). An earlier study in on hunger prevalence in the Western Cape showed that children are heavily affected by food insecurity (Labadarios et al., 2005). The study reported that 59% of households had run out of money to buy food, in the past 12 months, and that 27% of children aged 1-9 had experienced hunger. Thirty two percent of children had eaten less than they should and 25% had their meal sizes reduced (Table 9.1).

Table 9.1: Hunger Prevalence in the Western Cape

Study Population	Children 1-9 years
Sample size	259
Method	Hunger scale
Run out of money?	58.3
Rely on limited food?	44.7
Cut size of meals?	37.6
Mother eats less than she should?	44.1
Child eats less than should?	31.8
Children are hungry?	27.1
Cut size of child's food?	25.0
Go to bed hungry?	9.4

Source: Labadarios et al., 2005

At the household level, food insecurity is therefore an issue of concern in the Western Cape Province. Given that Cape Town contains 64% of the province's population (Western Cape Government, 2012), issues of food insecurity need to be investigated and prioritized. Although the city has the highest Human Development Index (HDI) in the province in 2010 (0.74), against a provincial average of 0.71, the number of malnourished children under five (3.2 per thousand) was higher than the Western Cape's 3.0 per thousand.

Food insecurity is not simply vulnerability to hunger, but also consumption of nutritionally deficient diets. The recent South African National Health and Nutrition Examination Survey (SANHANES-1) indicates that about 27 per cent of boys and 26 per cent of girls zero to three years of age are chronically malnourished (Shisana et al. 2013). While malnutrition persists, overweight, obesity and diet-related non-communicable diseases, such as diabetes, are on the increase. According to national studies, over 50% of women and 30% of men are overweight or obese (Puoane et al. 2002; Shisana et al. 2013). Anaemia is a public health problem of moderate significance among adult women in South Africa at 22 per cent, and iron deficiency anaemia among women of reproductive age at 9.7 per cent (Shisana et al. 2013). Vitamin A deficiency among this group (13.3 per cent) is also a moderate public health problem.

These findings are consistent with the changes in diet known as the nutrition transition. These dietary shifts are in part the result of urbanization and the time scarcity of urban life, and the desirability of a "modern" diet, but they must also be understood as the outcome of the changing food system and the unaffordability of healthy foods, as will be

discussed further in this section. It is essential therefore to consider food insecurity in the context of wider food system changes.

9.2 Measuring Food Security and Insecurity

Key Summary Points

- Although seemingly simple as a concept, there is considerable disagreement over how it should be defined and measured. Food security measurement approaches are the outworking of the definitions of food security used. Definitions themselves are informed by a set of broader values. Definitions and their related measurement approaches frame policy responses and the imagined sets of possibilities to address the problem as it is framed by the data. The question posed by this presentation is what do current measurement approaches reveal and what to they obscure? What kinds of policy responses do they make viable and what other kinds might they limit?
- This section identifies and describes the strengths and weaknesses of five clusters of household food security assessment approaches: Food insecurity experience-based measurement scales; Dietary intake assessments; Household expenditure surveys; Coping strategy indexes; and, Anthropometry.
- The section argues that although food insecurity manifests at the household scale, its causes extend into the food system and wider urban system. If assessment is conducted at the household scale alone, this obscures the wider systemic issues and ties interventions to the household scale. It is therefore argued that a Food System Assessment approach has considerable utility.
- It is suggested that a food system study assessment approach could have the following impacts: *Outline a vision for a sustainable food system in the city, Develop a baseline of the current food system, Develop an understanding of food security issues, opportunities and practices, Provide a gap analysis between the current state and the vision of the city, and, To create an action plan to address food security issues in the city.*
- The following recommendations are made:
- *The study recommends a suite of indicators: HFIAS, HDDS, MAHFP and a food system assessment. It further recommends that the GHS data on food access tracked be used between food security surveys and that the City approach StatsSA to include a dietary diversity assessment in its General Household Survey.*

Food security is a multi-dimensional phenomenon that requires a suite of indicators to capture its various dimensions. Moreover, the general understanding of food security has changed over time, resulting in the constant need for new methods and indicators. For example, although the concept of a 'secure, adequate and suitable supply of food for everyone' was first enunciated at the 1943 Hot Spring Conference of Food and Agriculture in the United States (Weingartner, 2004; Maxwell, 1996), it has since been redefined and expanded many times. Maxwell and Frankenberger (1992), for example, reviewed literature on food security and found 194 different studies dealing with the conceptualization of food security and 172 studies on food security indicators. Five

years later, Clay (1997) provided an additional 72 references dealing with the same food security issues. The conceptualization of food security has thus evolved over time, with understanding shifting from a primary concern with food availability to include the dimension of food access, utilization and stability of supplies.

The most widely used definition of food security, crafted by the FAO, considers food security to exist 'when all people, at all times, have physical, social and economic access to sufficient, safe and nutritious food that meets their dietary needs and food preferences for an active and healthy life' (FAO, 2010:8). This definition captures a multiplicity of food security dimensions, ranging from availability, accessibility, adequacy, acceptability and agency. While the conceptualization of food security has changed, so have been the methods of assessment. In earlier years, there was a preoccupation with quantitative measures of food security. More recently, there has been increasing incorporation of qualitative aspects of measurement that take into consideration how access to food is negotiated and experienced. This has resulted in the development of new assessment tools and a variety of indices of food security. A single aggregate or composite measure of food security does not exist (Carletto, Zezza and Banerjee, 2012). This is because the multi-dimensionality of food security makes it technically complicated to come up with a single index that adequately captures all of the aspects encapsulated in the food security concept. Measuring food security therefore requires a cocktail of measures geared to capturing different dimensions (Ballard, Keeple and Cafiero, 2013).

The challenge of measuring food security is reflected in figures from different studies. The 2012 General Household Survey, for example, concluded that 12.6 percent of the households nationally are vulnerable to hunger (Statistics South Africa, 2013). By contrast, the South African National Health and Nutrition Examination Survey (SANHANES-1) states that only 46% of the country's population is food secure (Shisana et al., and SANHANES-1 Team, 2013). The variation is undoubtedly a function of the different methodologies and indicators being used and the fact that different dimensions are being measured. Such variations make it difficult to compare results between different surveys even if they are carried out within the same geographical area and during the same time period (De Cock, 2012).

Only a suite of indicators may therefore be able to capture the complexity and diversity of food security in different contexts (Battersby, 2012). This report focuses on those that are better able to measure the multiple facets of the food security phenomenon. Used consistently, these assessment methods can also track progress within a particular geographic area. Although food security can be measured at different scales, this report mainly concentrates on food security measurement at the household and individual level. This is because it is at this level that most factors influencing food security are ultimately experienced (Table 9.2). The key modalities include quantity, quality and acceptability.

However, it is important to note that although food security is mainly experienced at the household scale, many of the drivers of food insecurity are not identifiable through household scale analyses alone. Household-scale indicators cannot be used to understand the wider food system dynamics that cause food insecurity. Households with the same characteristic, but living in different areas, for example, may experience different food security levels because of extra-household factors such as differential access to food sources and different prices of food in different geographic areas. Thus there is need for ongoing food system evaluation to keep up with the rapidly changing food system.

Table 9.2: Essential components of a measure of food insecurity at the individual and household level

Component	Individual Level	Household Level
1. Quantity	Energy sufficiency of intake	Repleteness of household stores
2. Quality	Nutrient adequacy of intake	Quality and safety of on-hand food
3. Psychological acceptability	Feelings of deprivation or restricted choice	Anxiety about food supplies
4. Social acceptability	Normal meal patterns	Conventional sources of food

Source: Labadarios, et al., 2009, 10.

Methods are needed which will easily allow the City to estimate the prevalence of food (in)security in the city, enable the identification of food insecurity causes, facilitate the detection of high-risk population groups and allow the establishment of a reliable monitoring and evaluation system for assessments be done on a continuous basis. The suggested methods are cheap and cost-effective, have been verified for their validity in different contexts, and will allow for the measurement of various aspects of food security with a greater degree of certainty and enable comparisons across space and time.

It is important to state up-front what it is that needs to be measured, so that a direct link can be established between different aspects of food security and their measurement and indicators. In short, the measures (and indicators) here presented measure the four key dimensions of food security (Carletto, Zezza and Banerjee , 2012):

1. Food availability: The availability of sufficient food quantities, such food being supplied through either production, trade or other sources such as aid.
2. Food access: The access by households to adequate food or resources that they can use to acquire food within their political, legal, social and economic environment.
3. Food stability: Access to food at all times regardless of season, economic or other related climatic and cyclical patterns.
4. Food utilization: The utilization of food through adequate diet, clean water and health care.

By targeting these aspects of food security, the City of Cape Town will be better able to understand the state of food in(security) in the city in relation to how well households are provisioned, what foods they consume or lack, what times of the year households lack food and why, as well as other issues related to food security.

There are a number of approaches and indicator types that the City may draw on. Table 9.3 provides an overview of the strengths and weaknesses of the main types of assessment tools addressing household food security. This table excludes information on food system assessment, which is argued to be an important approach for the City to consider.

Table 9.3: Summary of food security assessment methods (Source: Bashir & Schilizzi, 2012; De Kock, 2012)

Method/Indicators	Description/Principles	Advantages	Weaknesses
Food Insecurity Experience-Based Measurement Scales (FIEMS) (HFIAS; HFIAP; MAHFP; HFSSM)	Input: Scale containing items representing the conceptual and multidimensional nature of food insecurity. Algorithm to convert scale scores into FI categories. Output:	Measures directly the phenomenon of food security according to individual experiences. Captures the psychosocial dimensions of food security along with physical experiences. Valid across varied socio-cultural settings Can be used for mapping that leads to better understanding of causes & consequences of food insecurity.	Difficult to generalize across different cultures Difficult to establish cut-off points for classifying households into different levels of food security. Does not capture food safety dimension. Different reference time periods and frequency response options needed in different settings.
Dietary Intake Assessment (DIA) (DDS; FVS; FFS)	Input: Different items consumed by individual/household in a specific period (24hrs/7 days). Output: Sum of the different foods consumed by individual/household over a specific time period	Measures consumption directly (and not availability) Addresses both dietary quality & caloric intakes at individual level Can be asked of individuals as well as households Useful to understand recent and longer term dietary intake Possible to understand intra-household food security levels	Rely heavily on respondent's memory –can lead to measurement error. Assessment of adjusted recall estimates is a very difficult task that may lead to high measurement errors. Simple form of the measure does not report quantities. Needs experienced researchers to interview respondents.
Household Expenditure Surveys (HES)	Input: Household information on expenditure of food & other necessities Output: Caloric intake per capita per household	Flexible-allows for mapping of determinants at local & national level. Dietary quality data can help understand the food security dimensions.	Measures available amount (ignores consumed amounts at given time-frame). Does not account for amount of food consumed outside the home Conversion of available food to caloric intakes involves major assumptions that can cause measurement errors. Does not collect data on food wasted.
Coping Strategy Index	Inputs: questions on how households are responding to food shortages. Outcome: how households are responding and/or adapting to the presence or threat of food shortages.	Uses simple questions that are easy to understand & implement Captures directly the notion of adequacy and vulnerability.	Comparison across households or localities is problematic, (poorer household tend to report smaller quantities) Can be misleading (both richer and poorer household may report smaller portions, but it does not imply an equal increase in food insecurity)
Anthropometry	Input: Weight, height, body size, & other information on food provisioning, preparation, composition of food & consumption. Output: Proportion of population that is malnourished	The highly standardized measurements of weight & height are vastly reproducible across individuals. Mapping of nutritional security can be done at both national & local levels. Evidence-based cut-off points.	Requires a lot of time to conduct Measures food security indirectly (since the indicator result from the interaction of food security & health status) (Nutritional health indicator) Generally expensive

Having considered the strengths and weaknesses of the different types of indicators and the needs of the City, the following four household-scale food security assessment methods and indicators are recommended:

a) the Household Food Insecurity Access Scale (HFIAS); b) the Household Food Insecurity Access Prevalence Indicator (HFIAP); c) the Household Dietary Diversity Score (HDDS); d) the Months of Adequate Household Food Provisioning (MAHFP) measurement of household food access. These tools are outlined below. Further technical details of each tool are provided in Appendix D.

Additionally, it is recommended that food system indicators are also monitored.

9.2.1 The Household Food Insecurity Access Scale (HFIAS)

Developed and popularized by the Food and Nutrition Technical Assistance Project (FANTA), the HFIAS (and its sister measure, the HFIAP) is based on the argument that the experience of food insecurity causes predictable reactions and responses that can be captured and quantified through a survey and summarized in a scale. The questions in the survey instrument ask how frequently, over the past month, respondents or household members either felt or behaved in a particular way in the face of food vulnerability or insecurity. The questions asked are designed to capture, among other things: feelings of uncertainty or anxiety over food; perception that food is of insufficient quantity and quality; nutritional adequacy and preference; reported reductions of food intake; reported consequences of reductions of food intake; and, feelings of shame for resorting to socially unacceptable means of obtaining food (Coates, Swindale and Bilinsky, 2007).

Table 9.4: Questions used to establish the HFIAS

<p>1. Anxiety and uncertainty about the household food supply:</p> <p>In the past four weeks did you worry that your household would not have enough food?</p>
<p>2. Insufficient Quality (includes variety and preferences of the type of food):</p> <p>In the past four weeks ere you or any household member not able to eat the kinds of foods you preferred because of a lack of resources?</p> <p>In the past four weeks id you or any household member have to eat a limited variety of foods due to a lack of resources?</p> <p>In the past four weeks did you or any household member have to eat some foods that you really did not want to eat because of a lack of resources to obtain other types of food?</p>
<p>3. Insufficient food intake and its physical consequences:</p> <p>In the past four weeks did you or any household member have to eat a smaller meal than you felt you needed because there was not enough food?</p> <p>In the past four weeks did you or any household member have to eat fewer meals in a day because there was not enough food?</p> <p>In the past four weeks as there ever no food to eat of any kind in your household because of a lack of resources to get food?</p> <p>In the past four weeks did you or any household member go to sleep at night hungry because there was not enough food?</p> <p>In the past four weeks did you or any household member go a whole day and night without eating anything because there was not enough food?</p>

The questions are related to the occurrence of a particular food-related event, and are then followed by questions of the frequency with which each was experienced (See Appendix D for further detail).

The HFIAS scales from 0-27, with higher scores denoting higher food insecurity.

9.2.2 The Household Food Insecurity Access Prevalence indicator (HFIAP)

The Household Food Insecurity Access Prevalence indicator (HFIAP) is closely linked to the HFIAS as it uses the same module of nine questions. As Coates, Swindale and Bilinsky (2007) indicate, the HFIAP is a categorical indicator of food security, which classifies households into different groups according to their responses. Responses to the nine questions are coded and used to calculate an index, which is then used to classify households into four levels of household food security: a) food secure; b) mildly food insecure; c) moderately food insecure; and d) severely food insecure. Households are categorized as being more food insecure if they respond affirmatively to more severe conditions or experience those conditions more frequently (Frayne, Pendleton and Crush, 2010). The tool for computing these categories are outlined in Appendix D. The HFIAP indicator from this calculation is then used to indicate what proportion of the sample is in each food security category.

The benefit of the categorical approach of HFIAP is that it provides for ease of comparison between sites and between sample periods. If assessments are done periodically, the HFIAP indicator can provide a snapshot of whether there has been improvement or deterioration within a given area.

9.2.3 The Months of Adequate Household Food Provisioning (MAHFP)

The Months of Adequate Household Food Provisioning (MAHFP) is another experience-based measurement of household food security that is valuable in assessing the level of food security over time. For a household to be food secure, it is essential that household food provisioning be stable and consistent throughout the year. However, the reality is that such a situation rarely occurs, particularly among the poor, since a household's ability to meet its food needs may vary during the year. Such variations may be due to factors such as reduced production, reduced income from employment, natural disasters, loss of employment or any other shock that impacts negatively on access to food.

The MAHFP measure of food security captures variability by showing which months of the year a household has enough food and which one it does not (Swindale and Bilinsky, 2010). The measure was originally developed to capture seasonal variations in food supply and access in rural areas. However, its use in urban areas has shown that poor households do not experience a regular food supply over the course of the year, though for different reasons than their rural counterparts.

The MAHFP is simple and easy to calculate measure since it only involves interviewers asking respondents the months in the previous year in which they experienced food shortages. The responses are then tallied in order to see how many months in the previous twelve months a household was adequately provisioned (See Appendix D for details).

The value of the MAHFP to the City of Cape Town is that it can identify those months in which most households in the city are likely to experience problems. The MAHFP is also sensitive to crises and can thus be used to identify ups and downs in food provisioning with events that effect household food security, making it a good trigger indicator of impending food crises (Konda, Sigauque, and Payet, 2008). The weakness of the MAHFP indicator is that it does not reveal much about the causes of variable patterns in household food provisioning which have to be inferred from other information and survey data.

9.2.4 Dietary Intake Measurements

To complement the battery of food security assessment measures discussed above, there is also need to understand the different varieties of foods being consumed by residents of Cape Town. This is because dietary diversity is a good proxy for food security. There are a number of measures that can be used to measure dietary diversity. These include: household dietary diversity scores (HDDS), the food variety scores (FVS), and the food frequency scores (FFS).

Theoretical and empirical evidence suggests that dietary diversity indicators are effective food and nutrition security indicators as they capture the consumption of both macro and micronutrients that are essential for human growth and health. In addition, economic theories of demand suggest that people will only diversify into higher value micronutrient-rich foods (e.g. meat, fruits, fish eggs), when they have satisfied their basic needs (Heady and Ecker, 2013). Individuals and households who find it difficult to meet their basic needs are likely to consume narrow diets, and hence the absence of diversity in their diet is indicative of low levels of food security. Ruel (2003) provides an extensive review of validation studies of dietary diversity indicators from 1996–2002 and found a strong association between dietary diversity scores and nutrient adequacy in developing countries.

This study recommends the use of the Household Dietary Diversity Scale (HDDS). The HDDS uses a 12-group scale to measure how many food groups a household consumed over a given reference period, which is usually 24 hours, 72 hours or 7 days (shorter time periods are preferable to minimize error due to memory recall loss). All foods are classified by the FAO into 12 groups (See Appendix D for details) (The 12 food groups are not fixed and can be expanded to cater for contextual differences). The responses to questions concerning the consumption of food from individual food groups are collected and tabulated. The dietary diversity measure for a household is therefore simply the number of food groups from which the household consumed food within the given reference period. This means that the maximum HDDS household score is 12, which represents a highly diversified diet and thus a high level of food access. The lower the HDDS, the less diversified the diet and the poorer the food access. To calculate the HDDS indicator for the sample, one needs to sum up the total household HDD scores and then divide by the total number of households in the sample.

According to Swindale and Bilinsky (2006), the HDDS is an attractive proxy indicator of food security because: a) a more diversified diet is an important outcome in and of itself; b) a more diversified diet is associated with a number of improved outcomes in areas such as child anthropometric status; c) a more diversified diet is highly correlated with such factors as household income; d) questions on dietary diversity can be asked at both the household or individual level, making it possible to examine food security at the household and intra- household levels; and e) obtaining the data is relatively straightforward.

Because the HDDS uses food groups rather than individual foods, it aims to capture diversity in diets as different food groups are usually composed of foods that provide different nutrients. Thus a higher HDD score is not only reflective of an increased number of food groups, but also an increase in the variety of foods as well as micronutrients. The major drawback to the dietary measures is that it does not take into account food that has been purchased and consumed outside the household, although this is easier to capture at the individual level. This is critical in urban areas where the proportion of food purchased and consumed outside the home has been increasing dramatically. However, since the HDDS is designed to reflect average household dietary diversity among all members, providing for food purchased and consumed outside the household by individual members may lead to overestimating the HDD scores. Food that has been prepared at home and eaten elsewhere (e.g. at school or at work) is accounted for.

9.2.5 Coping Strategy Index (CSI)

A number of studies have focused on the coping strategies used by households facing food security challenges. They typically employ four major consumption-related strategies:

1. Households may change their diet-change to cheaper, less preferred foods;
2. Household attempt to increase their food supplies using short-term strategies-e.g. borrowing or purchasing on credit, begging, consumption of wild fruit;
3. Households try to reduce the number of people that they have to feed; and,
4. Households attempt to manage food shortfalls by rationing available food - cutting portion size or number of meals, skipping meals, mothers prioritizing children/men.

The coping strategy index was developed because valid and reliable figures for income, expenditures and production at the household level are rarely available, nor are they usually very accurate. The CSI is designed to capture the short-term food sufficiency element of food security at the household level through a range of short-term coping mechanisms that are used when there is not sufficient food in the household. However, the CSI is not an absolute measure that can provide an indication of food gaps, and cannot distinguish between chronic and transitory food insecurity. It is therefore not recommended that this approach be used by the City.

9.2.6 Food System Assessment

As established in the Terms of Reference for this study, food security, or the lack thereof, is the outcome of complex and multi-dimensional factors comprising a food system. Although experienced primarily at the household scale, the drivers of food insecurity occur beyond the household. It is therefore not sufficient to monitor household scale indicators alone. As established in this report, the food system is undergoing transformation. These changes will affect the extent and nature of food insecurity in Cape Town. It is therefore essential to include some form of food system assessment in long-term monitoring of food security.

A food system assessment examines the different components of the food system to understand their functionality and competitiveness, as well as to identify existing assets and gaps within the system. An assessment of the food system enables planners to understand the connections that exist between food system mechanisms and outcomes in order to formulate policy and interventions to improve these outcomes.

For food security specifically, a food systems assessment is a process that allows an audit of the status of households and/or communities regarding the availability of food, access to that food and the way the food system generally functions to enable or inhibit people's access to food and other linked resources. As the International Federation of Red Cross and Red Crescent Societies (2007) points out, a comprehensive food systems assessment not only identifies the *needs* of a community but also provides an *understanding* of the context and dynamics that have led or are leading to a crisis. When a food systems assessment is done periodically, it facilitates the tracking of progress in the identified problem areas and gaps (Kaufman and Pothukuchi, 2000). Among other things, a food systems assessment asks the following questions (Red Cross and Red Crescent Societies, 2007):

- a) How do people in the city make a living?
- b) What resources do these people have?
- c) How do people (individuals/households) meet their food needs?
- d) Who appears to be most food insecure in the city?
- e) Who is at risk of becoming food insecure?
- f) What are the linkages between production, processing, distribution and retailing in the city?
- g) How efficient or redundant are these linkages?
- h) What improvements are needed in the city to facilitate food access and where are they needed?
- i) Are households/communities that are vulnerable receiving assistance?
- j) How are vulnerable households/communities in the city surviving?
- k) How can the local authority aid households in their survival strategies?

The advantages of carrying out a food system assessment are many. Firstly, a food system assessment allows for the establishment of a baseline for tracking change and progress. Secondly, an assessment would help the city to define a vision for a local food system. Thirdly, because the food system assessment considers the totality of the system, it would help the city to understand how food and other associated issues are

interlinked. Fourthly, the City of Cape Town would be able to identify critical pressure points as well as unearth contradictions within the system. As Meter (2011) points out, such an exercise also helps in thinking through how the system can be improved. A comprehensive food systems assessment is difficult and costly and requires technical knowledge and expertise. A city such as Cape Town would probably not need annual food system assessments but could profitably be carried out every five years. Given the ongoing research interests in this topic at the University of Cape Town and the University of the Western Cape, there is an opportunity for the City to partner with experts in the field in order to conduct such studies.

But what are the indicators for a food systems assessment? The answer is that there are no standard indicators for this type of assessment. The indicators are dependent on the needs and aspirations of the city in relation to what it envisions a secure and sustainable food system to be. Nevertheless, the critical components that need to be assessed include:

- a) Percentage of population that is food insecure;
- b) Rates of obesity/overweight;
- c) Percentage of low birth weight;
- d) Prevalence of dietary-related diseases;
- e) Number and distribution of wholesalers and retailers;
- f) Number of grocery stores and fast food outlets per capita;
- g) Location of supermarkets, convenience stores and informal traders;
- h) Percentage of population with walking distance to food outlets;
- i) Existence of food deserts and other barriers to accessing food;
- j) Cost of nutritious food basket in relation to income in low-income areas;
- k) Number of charitable organizations in an area;
- l) Number of households utilizing charitable organizations for food;
- m) Number of households accessing food through state provided services;
- n) Distance food travels from source to table;
- o) Ability of local production to meet needs of residents;
- p) Percentage of food consumed in the region that is grown in the region;
- q) Price of local food compared to imported food;
- r) Iteration of challenges facing households in provisioning themselves;
- s) Range of strategies being adopted by households to survive.

For a food system assessment to achieve its intended goals, a wide range of indicators must be included. These must, of necessity, comprise economic, social, environmental and health indicators.

9.2.7 Use of indicators from national surveys

The indicators recommended would provide a nuanced view of the state and drivers of food insecurity. However, it is acknowledged that the City may lack the resources to carry out frequent surveys of food security. It is therefore suggested that the City use findings from the General Household Survey (GHS) to track food security between surveys.

StatsSA's General Household Survey historically only asked questions about household hunger, which is a poor proxy for food insecurity, as it only captures the extreme manifestation of the problem. It does not address the ways in which households modify their diets in order to achieve their minimum caloric needs. More recently however, the GHS has contained a suite of four questions that address food access, namely:

1) Did your household run out of money to buy food during the past year?

Has it happened more than five times in the last 30 days?

2) Did you cut the size of meals during the past year because there was not enough food in the house?

Has it happened more than five times in the last 30 days?

3) Did you skip any meals during the past year because there was not enough food in the house?

Has it happened more than five times in the last 30 days?

4) Did you eat a smaller variety of foods during the past year than you would have liked to, because there was not enough food in the house?

Has it happened more than five times in the last 30 days?

This is clearly a blunter set of indicators than those suggested for the City, but will provide sufficient data to monitor trends in food access between surveys. However, it must be noted that the sample size of the GHS may be insufficient to closely monitor trends, given the small sample size and the lack of pro-poor sampling.

In addition to the suite of questions included within the GHS, it would be extremely valuable to include the HDDS questions in the survey. Although a simple tool, it provides a good indication of nutritional adequacy. The City should therefore approach StatsSA to request that this indicator be included in future surveys.

9.3 Current Levels of Food Insecurity in Cape Town

Key Summary Points

- Although there are many national surveys that incorporate food insecurity as a variable, they are not very useful to engage the question of food security in Cape Town. The sample sizes in each city are small and they do not provide sufficient information to connect food insecurity to other variables.
- A number of site-specific surveys explicitly focusing on food insecurity in Cape Town have been conducted in Khayelitsha, Philippi, Ocean View, Manenberg, Masiphumelele, du Noon and Nyanga.
- These studies all show high levels of food insecurity.
- Income poverty is a good indicator of household food insecurity.
- Food security must be understood in the context of nutritional security.
- Dietary diversity is a useful indicator of nutritional adequacy.
- In the Western Cape around 915 000 individuals have dietary diversity scores that suggest inadequate nutrition.
- Long term limited dietary diversity has important health and development impacts. This is particularly important in the context of individuals with HIV and AIDS.
- There are distinct Hungry Seasons in the City when expenditures on non-food items are high and casual employment is limited.
- The following recommendations are therefore made:
 - *Ongoing monitoring of the incidence of food insecurity*
 - *As per Section 8 – food prices should be monitored*
 - *The City should embark on nutrition education through its existing programmes and City publications. The information should be cognizant of the wider food system and poverty context in which residents live.*
 - *Additional social protection measures should be developed to mitigate against known Hungry Seasons.*

Urban areas like Cape Town have traditionally been considered better served in terms of basic needs such as food, healthcare and general nutrition. Because of their close proximity to goods and services, city residents have generally been regarded as food secure. But, this view is not necessarily correct as proximity to food and other services does not equate to access to food. As The State of the World Cities Report 2006-7 asserts, a considerable proportion of the urban population in developing cities are “suffering from extreme levels of deprivation – more debilitating than the rural poor” (UN-Habitat, 2006). Cape Town is not an exception. Even though it is the second richest city in South Africa, it is paradoxically also home to significant numbers of the poor and food insecure.

Around 24% of the population in the city is unemployed and 37% of households live below the poverty datum line of R3 500 per month with 232 027 households are classified as indigent by the city (City of Cape Town, 2012). This segment of the population is certainly most vulnerable to hunger and food insecurity. Like most South African cities, Cape Town is characterized by the ‘two cities within one city’ syndrome where extreme affluence and acute poverty co-exist in the same urban space. Despite the City’s concerted efforts to bring development to all in the post-1994 period, most

black and coloured communities remain marginal to the economic benefits of the city. Rates of unemployment are 35% among black Africans and 23% among Coloureds, compared with only 10% amongst Asians and 5% among whites (City of Cape Town, 2012).

There has been no citywide assessment of food insecurity to date. The GHS has included questions that capture the number of households experiencing adult and child hunger, but as discussed above – hunger is not synonymous with food insecurity, and these figures therefore capture only the extreme manifestation of food insecurity. Figure 9.1 illustrates the findings from the 2005 and 2012 surveys. In the case of both adult and child hunger there appears to have been some improvement, although the vastly different sample sizes suggest caution be taken in comparing surveys.

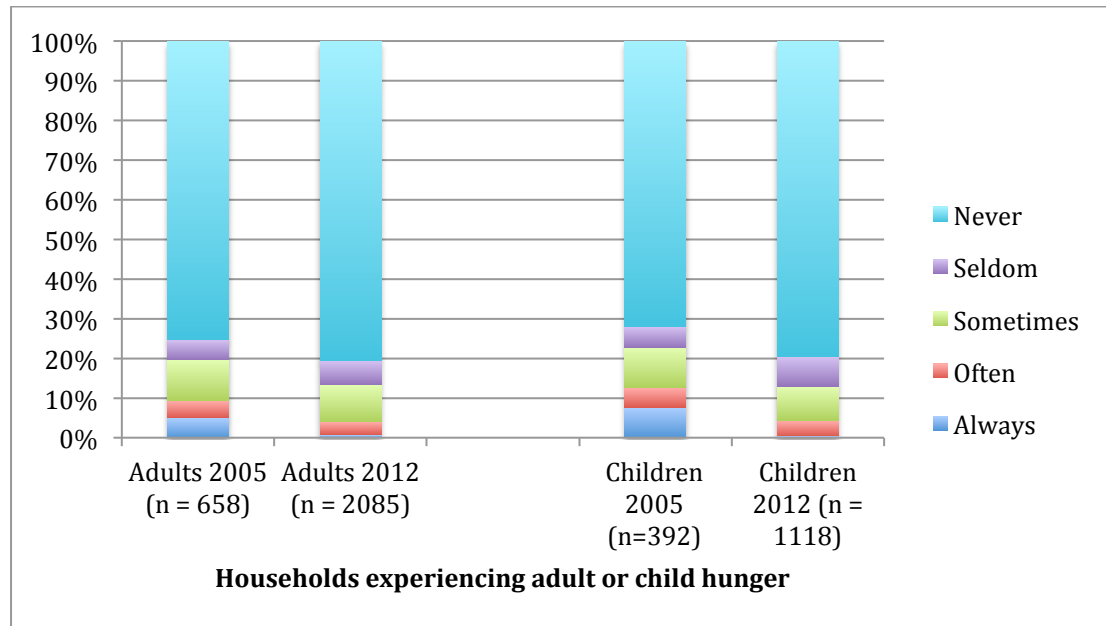


Figure 9.1 Household hunger figures - GHS 2005 & 2012 (Data source: CoCT)

Since 2009 the GHS has included a suite of questions about food access, these provide a better indication of food security within the city. As discussed in the Section above, these are whether a household has ever run out of food, had to cut meal sizes, skipped meals or reduced variety. The 2012 GHS survey reflected that between 18 and 25 percent of the sampled population had experienced these different food access challenges, and for each access challenge, about half of those had experienced the severe form of this challenge (five times or more in the past 30 days) (Figure 9.2).

As noted earlier, these questions are a blunter set of tools than those suggested to the City, but have some utility. However, the lack of pro-poor sampling means that the City has access to data on a relatively small number of households vulnerable to food insecurity. This makes using the data set to track changing conditions of food insecurity difficult to do with any degree of accuracy.

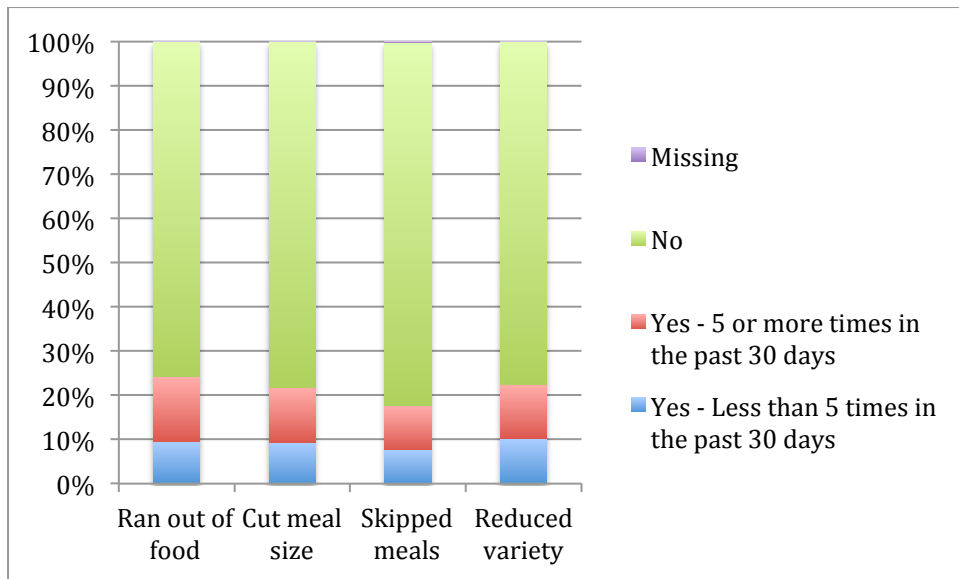


Figure 9.2 Food access problems, General Household Survey 2012 (data from CoCT)

It has been suggested that the Study should incorporate income as a proxy for food insecurity to provide the City with a city-scale representation of where areas of food insecurity are. This study stresses that food insecurity cannot be reduced to just a lack of income. There are a number of other factors at the household scale and beyond that impact a household’s ability to access sufficient nutritious food. These include stability of income, housing characteristics, household structure, as well as characteristics of the neighbourhood food system and geographical location.

However, it is accepted that availability of income to spend on food is a factor in household food security. Recent work by BFAP has found that for a household to consume a “balanced daily food place” of food, it would have to have an income of around R5 630 (BFAP 2012, 49). According to Census 2011, 61.5% of Cape Town’s households earn less than R6 400 per month; this places a high proportion of Cape Town’s households in a position of vulnerability to food insecurity if the BFAP figures are accepted. A second figure that may be used is a calculation derived from the NAMC’s Basic Food Basket. The closest NAMC calculation of the cost of the Basic Food Basket to the time of the 2011 Census was the August 2011 one, which placed the cost of the basic basket at just under R400 per person per month. NAMC estimated that the poorest 30% of households would need to spend 35% of their income on food to obtain this basic basket (NAMC 2012). In Census 2011 the average household size was 3.5 people. An average sized household would therefore need require R4000 in order to obtain this basic food basket, which has been argued by BFAP to be nutritionally inadequate.

The 2011 Census income data are not aggregated in a way that enables manipulation of the data to map these particular points (R5600 and R4000) that would guide the City as to where concentrations of food insecure households would be. The data are aggregated according to set categories. Figure 9.3 there represents sub-places according to the percentage of households within those sub-places falling under R4800 income per household per month. As this is the mid-point between the nutritionally adequate BFAP calculation and the NAMC’s basic food basket calculation, this is the best income proxy mapping available.

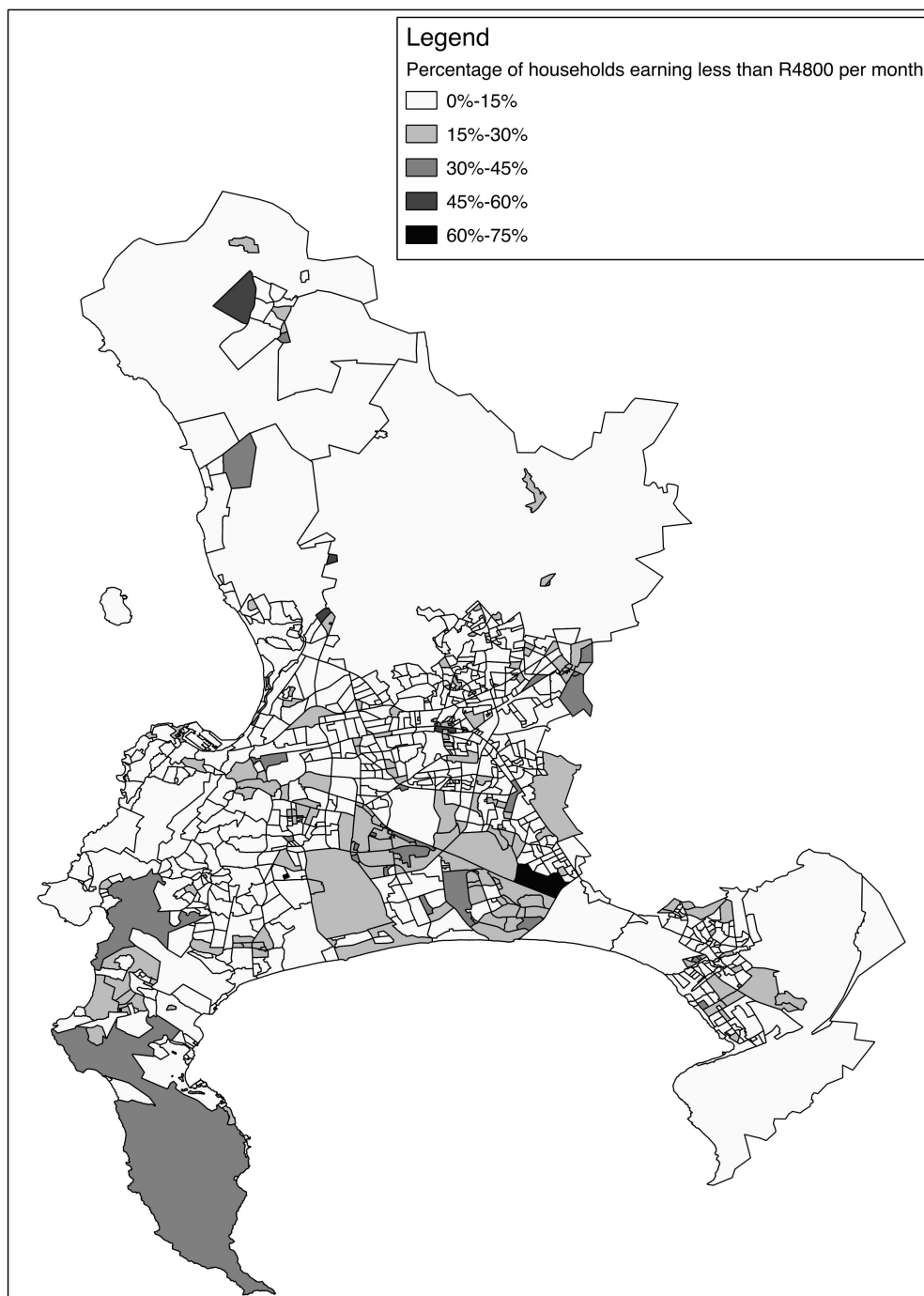


Figure 9.3 Proportion of households with incomes below R4800 per sub-place (Census 2011 data)

There are clear data limitations with the use of both the GHS and the census data sets as a means to understand the extent of food insecurity. Given the multi-dimensionality of food insecurity and the many causes household and non-household, there is considerable benefit to the use of finer grained case studies. Though caution needs to be

urged in extrapolating too much from case studies, the weight of evidence from multiple case studies in a range of poor areas of Cape Town provides insights into the City's food security challenge.

A number of studies, drawn upon in this chapter, indicate that household food insecurity is a serious problem in Cape Town. These include the AFSUN 2008 and 2013 household food security surveys. Although the 2008 survey was pro-poor (surveying 1060 households in Ocean View, Ward 34 in Philippi and Ward 95 in Khayelitsha), the 2013 study sampled households from across the city in low, middle and high-income areas. Assessment tools developed and validated by the Food and Nutrition Technical Assistance (FANTA) were used to measure food security (see Section 9.2). These included (a) the Household Food Insecurity Access Score (HFIAS) (b) the Household Food Insecurity Access Prevalence Indicator (HFIAP); (c) the Household Dietary Diversity Score (HDDS); and (d) the Months of Adequate Household Food Provisioning (MAHFP) score

9.3.1 Prevalence of Household Food Insecurity in Cape Town

The 2008 AFSUN survey indicated that 80% of poor households in three communities (Khayelitsha, Philippi and Ocean View) were either moderately or severely food insecure. A related case study carried out in Manenberg (Ward 45) found that 64% of households were interviewed were food insecure on the HFIAP (Cooke, 2012). The recent (December 2013) AFSUN survey found that 58% of households in the city as a whole were moderately or severely food insecure (43% were in the latter category) (AFSUN, 2014) (Figure 9.4). Food insecurity was most acute in low-income areas where 56% of households were severely food insecure compared to 14% and 3% in middle and high-income areas respectively. Similarly, only 18% of households in low-income areas were food secure compared with 74% and 94% in middle and high-income areas respectively. The low-income areas recorded an average HFIAS score of 9.9 compared to 2.1 in middle-income areas and 0.5 in high-income areas.²³

²³ Note: The intention had been to map these data. However, the very small size of the EAs and the small sample size per EA (taken to ensure breadth of coverage) meant that any maps produced were not clearly legible at the City scale, and it is not clear how meaningful average food security scores per EA are given sample sizes of 6 per EA.

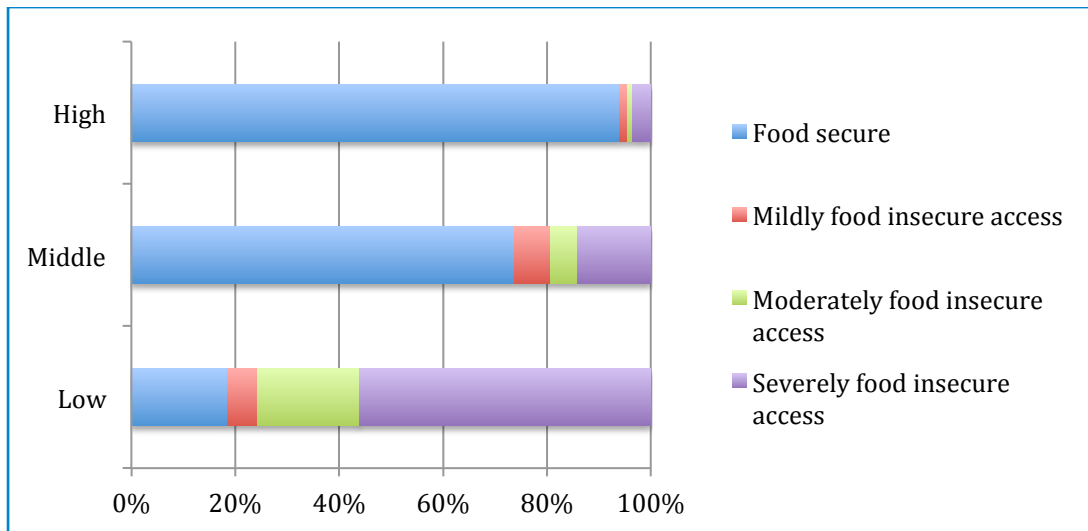


Figure 9.4: Prevalence of household food insecurity by income category (Source: AFSUN, used with permission)

The severity of the food insecurity problem in low-income areas is also shown in a separate AFSUN study in the low-income areas of Du Noon, Nyanga and Masiphumelele in December 2011 (Crush and Tawodzera, 2012). The primary purpose of the research was to assess the food security situation among the city's Zimbabwean migrant population. The study found that a massive 84% of surveyed migrant households in the city were moderately or severely food insecure (Figure 9.5).

Cooke's study in Manenberg (Ward 45), an area with 64% of households of households earning less than R3 200 per month according to Census 2011, found that 64% of sampled households were food insecure according to the HFIAP tool (Cooke 2012).

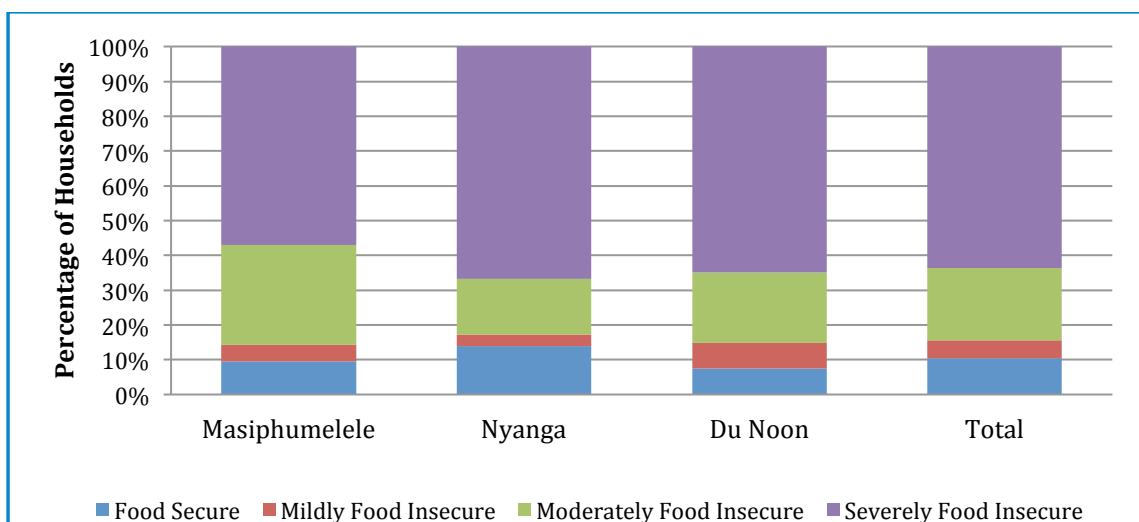


Figure 9.5: Levels of food (in)security among migrant households in Cape Town (Source: Crush and Tawodzera, 2011)

9.3.2 Dietary Diversity among Households in Cape Town

Urbanization is generally associated with dietary change including increased consumption of saturated fats, sugars, salt and processed foods (Drimie et al., 2013). In Cape Town, household food insecurity is not only characterized by food insufficiency (as measured by the HFIAP), but also by the narrow range of foodstuffs that household members consume.

The 2013 AFSUN survey paints a bleak picture of the Cape Town diet. Only 2% of households consumed food from all 12 FAO food groups in the 24 hours prior to the survey (Figure 9.6). In low-income group areas, only 18% of households surveyed consumed food from 9 or more food groups and more than half (55%) consumed from 6 or fewer food groups. The mean HDDS for low-income households was only 5.9 compared to 7.9 and 7.8 for middle and high-income households respectively.

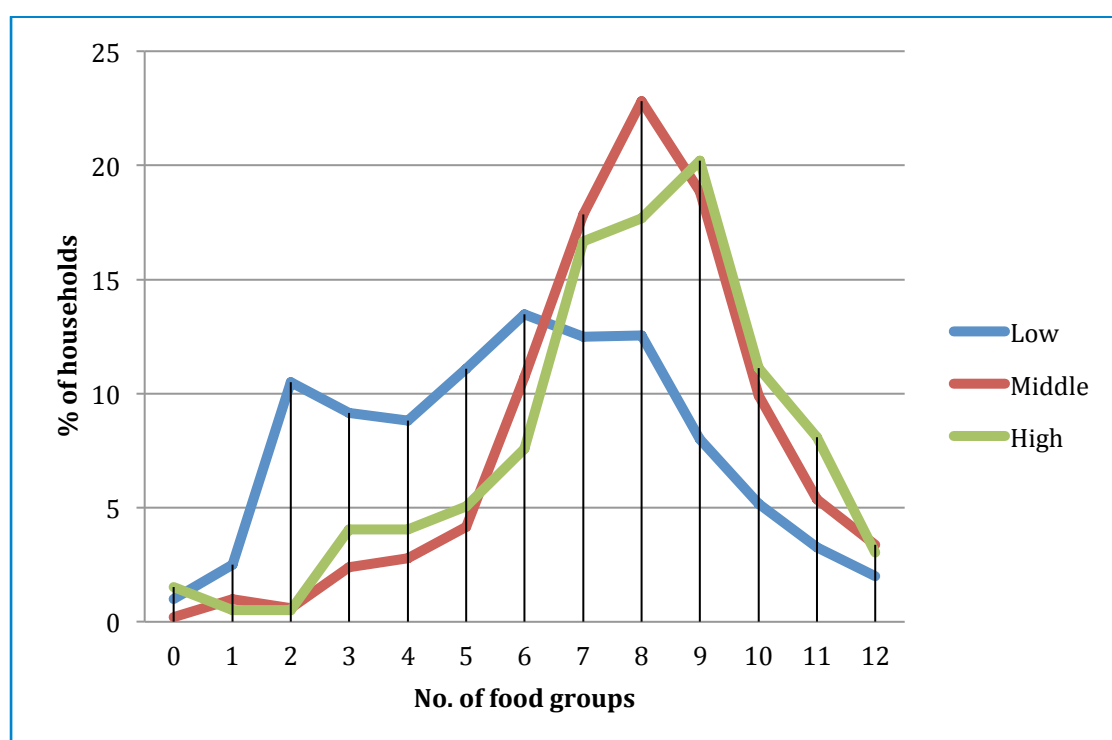


Figure 9.6 Dietary diversity by income category (Source: AFSUN, used with permission)

The 2008 AFSUN food security baseline survey provided insights into the preferred food groups of Cape Town’s poor (Battersby, 2012). Figure 9.7 shows the domination of cereals in the diet (consumed over 90% of households) and sweeteners such as sugar and honey (83%). Vegetables were consumed by 60% and white meat by 55%. Consumption of other high-nutrient foods was low. Migrant diets were similarly lacking in diversity. None of the households indicated consuming food from more than 10 food groups and the mean HDDS was only 5 (Crush and Tawodzera, 2012). In addition, only a minority of households consumed healthier foods such as eggs (33%), fruit (25%), foods made from beans, peas and lentils (19%) and fish/shellfish (16%).

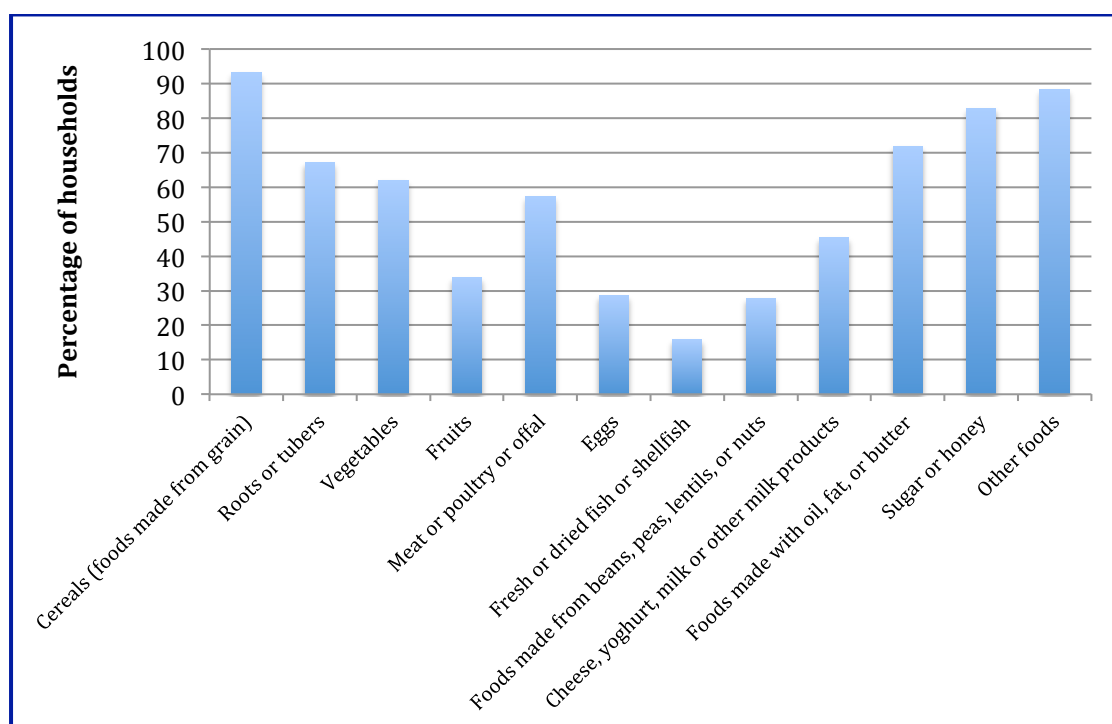


Figure 9.7: Foods eaten by households in Cape Town in the previous 24-hours (Source: Battersby, 2011, p15)

The importance of nutrients in a diet extends well beyond the energy value of the food. Iodine deficiency, for example, is associated with increased risk of miscarriage (World Bank, 2005). In children and adolescents, poor nutrition leads to poor physical and mental development (Aboussaleh and Ahami, 2009). Thus, the limited household diets of poor households in Cape Town reflect a deeper food insecurity problem. Interventions to mitigate household food insecurity should therefore not only make food available and accessible, but also make sure that the poor have access to the kind of food that meets their nutritional needs.

One areas of particular concern regarding low dietary diversity is interaction between malnutrition and HIV and AIDS. Haddad and Gillespie (2005 in Crush et al 2011, 8) describe the relationship as follows:

“HIV essentially accelerates the vicious cycle of inadequate dietary intake and disease that leads to malnutrition, while malnutrition increases the risk of HIV transmission from mothers to babies and the progression of HIV infection. Nutritional deficiencies may lead to oxidative stress and immune suppression which in turn lead to increased HIV replication and hastened disease progression. Increased morbidity brings with it heightened nutrient requirements and reductions in the efficacy of absorption and utilization of nutrients.”

It is therefore important to consider households affected by HIV and AIDS as having particular vulnerabilities to food and nutrition insecurity and should therefore be targeted in any new food security initiatives.

Food insecurity among poor households in Cape Town is characterized not only by high prevalence rates, but also by households consuming a narrow range of foodstuffs that

may be unable to provide them with the requisite nutritional requirements. In addressing concerns about dietary inadequacy in Cape Town, the City may need to approach national government to request that the VAT exemption on basic food items be extended to increase the affordability of a range of foods. It should also call on national government to examine the pricing structure of food, to ensure that healthier foods are more affordable than less healthy foods. The City may also partner with the Provincial Department of Health to engage in public education programmes that provide information on affordable and nutritious foods such as non-animal proteins, so that these are de-stigmatized and household members are sensitized as to the nutritional advantages of consuming such foods.

9.3.3 Months of Adequate Household Food Provisioning

The food secure are able to access food whenever they need it. The food insecure, by contrast, experience peaks and troughs in access throughout the year. The 2013 AFSUN survey found that households in different areas of the city are exposed to different levels of risk at different times of the year. Almost all high-income households (95%) indicated that they are adequately provisioned for all 12 months of the year. Fewer, but still 75% of middle-income households, are in a similar position. By contrast, 25% in the lowest income group experience twelve months of adequate food provisioning (AFSUN, 2014). The mean MAHFP was 8.7 (out of 12) for low-income households compared with 11.2 and 11.8 for the middle and high-income groups respectively. This finding corroborates the earlier AFSUN baseline survey where households in the low-income areas of Khayelitsha, Philippi and Ocean View had a MAHFP score of 9.2 (Figure 9.9).

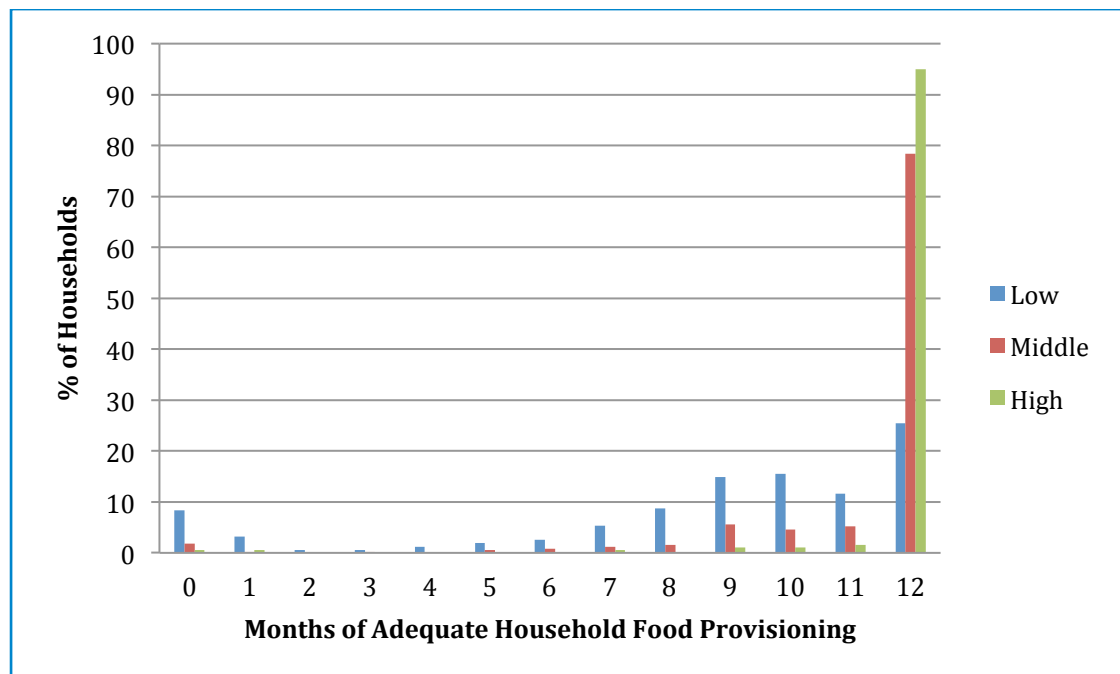


Figure 9.8 Months of Adequate Household Food Provisioning by income category (source: AFSUN, used with permission)

January food shortages are related to spending cycles where households overspend on food over the festive season and find themselves facing critical shortages in the following month when there are also other expenses to be covered such as school fees and uniforms (Figure 9.9). In addition, most businesses close down over December and January, reducing income and casual labour opportunities. The peak shortages in June are linked to adverse weather conditions in winter that prevent industries from operating at full capacity and thus employ less manual labour resulting in lower income among poor households (Battersby, 2012).

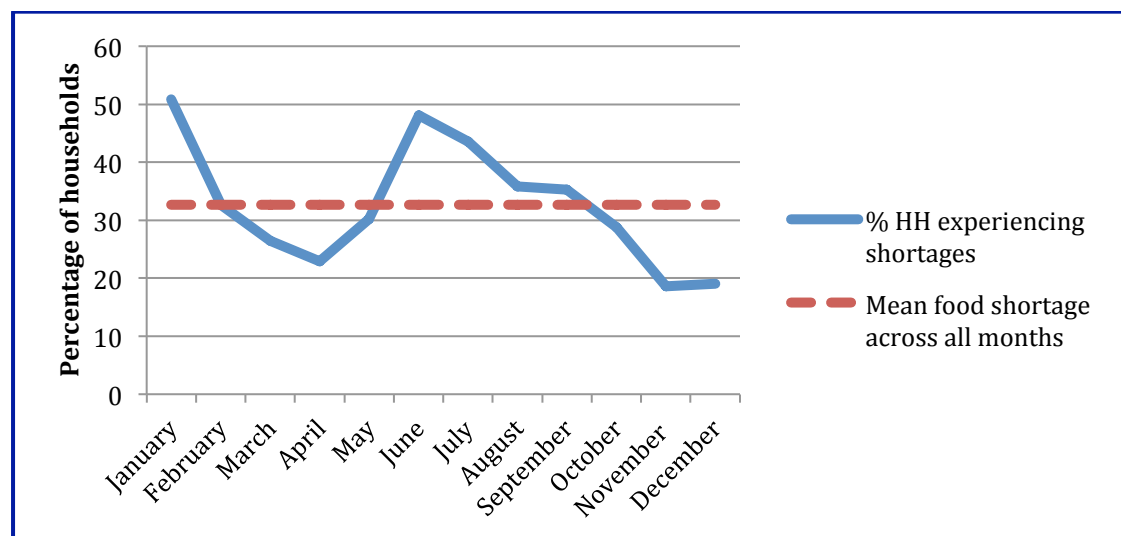


Figure 9.9 Months of food shortages among surveyed households in Cape Town (Source: Battersby, 2011)

A separate study of female-headed households in Vrygrond also found that households in the area experienced problems at the beginning of the year as they needed to take care of a large number of expenditures (in addition to high Christmas expenses) such as school fees, uniforms, clothes and books. They were also affected by the lack of employment opportunities at that time of year (Nandoo, 2012). The migrant food security survey in 2011 also found increased spending during the festive season and food insufficiency at the beginning of the year (Crush and Tawodzera, 2012). Most migrants also travel back to their countries and rural areas at the festive season, putting further pressure on household budgets.

In addition to these annual “hungry seasons”, there are also periods of hunger and fluctuations in diet during different periods of each month (See Section 9.5.4).

In thinking about the food security of poor households in the city, it is important to consider the impact of this irregularity of food supply on health. This is particularly important in the case of individuals with existing health problems, such as those with HIV and AIDS for whom consistent nutrition is essential.

9.4 Cost of the Food Basket

Key Summary Points

- Although a nutritionally balanced diet is essential for health and well-being, it is out of reach for a large proportion of the population. According to the latest StatsSA Income and Expenditure Survey, nationally the poorest ten percent of households spend 75% of their income on food. The second poorest ten percent of households (Decile 2) spend 54% of their income on food.
- BFAP's Poor Person's Index indicates that the daily per person cost of a balanced daily diet is R74.
- Healthier foods are consistently more expensive than less healthy versions of the same food. Therefore, under current food system and income conditions, nutrition education is not sufficient as an intervention to encourage people to eat more healthily.
- Child nutrition is an important determinant of future health. Although schools are sites of nutrition education and school feeding, they are also sources of less healthy foods through tuck shops. Tuck shops are run by School Governing Bodies as fundraising bodies. The school is therefore a site of conflicting nutritional messages.
- In addition, retailers formal and informal cluster around schools, making schools a site of less healthy food consumption.
- Food safety is an ongoing concern. Although there is considerable attention to the safety of the food producing and processing environment, evidence presented suggests that personal hygiene practices are potential risks to food safety.
- Finally, breastfeeding was identified as an important means to ensure infant nutrition and childhood development. Although initial uptake is high, many mothers switch to infant formula after a short time period. This is attributable to both personal and cultural factors, as well as structural issues such as the need to return to employment.
- The following recommendations are made:
 - *As per Chapter 8, the City should consider collecting and advertising food prices from retailers in different environments to inform consumers*
 - *The City should consider local by laws that limit the retail of less healthy foods in and near schools, or consider programmes to incentivise the sale of healthier foods.*
 - *The City should investigate strategies to address the structural barriers to breastfeeding, such as lack of provision of space in public places*

9.4.1 Cost of basic food basket

It is essential to have an understanding of the basic food basket of the urban poor in order to assess the nutritional quality of local diets, and the impact of food price inflation on these residents. The composition of the food basket is also critical in terms of health.

This section uses national-level income and expenditure data, drawing on analyses by the BFAP, NAMC and DAFF, to characterize the food baskets of urban households in different socio-economic categories. Drawing on further analysis of these baskets by the BFAP, we discuss affordability and likely nutritional adequacy.

The South African population is predominantly urbanized, with 67% of households living in urban areas. About 50% of households in the poorest deciles (1-4) are urban households. Household size in the poorest deciles is on average lower than in other deciles (2 to 3 persons). According to the most recent Income and Expenditure Survey and BFAP, households in Decile 1 (the poorest ten percent of households) have annual incomes of less than R9 184 (R765 per month) spend 75% of their income on food. The second poorest 10% (Decile 2) have annual incomes of between R9 184 and R15 268 (R765 to R1272 per month) and spend 54% of their total income on food.

A slightly different characterization of South African households has been developed using the SAARF LSM® (Living Standards Measure), which is based on the socio-economic status of adults (15 years and older). This measure focuses on access to variables such as durables, household location and type of dwelling, rather than on income. Using this measure, three 'lifestyle' levels are identified:

Poor consumers (LSM 1 to 4): 25% of the adult population, contributing less than 10% to incomes and expenditure.

Average or mass consumer group (LSM 5-7): 51% of the adult population, contributing 40% to income and expenditure

Wealthy consumers (LSM 8-10): 24% of the adult population, with more than 50% of income and expenditures. (SAARF, 2013 in BFAP, p 72).

While average household incomes increased in real terms across most income groups between 2005 and 2010, real purchasing power declined by 24% in the lowest income decile (BFAP, 2013). Households in the lowest income decile rely on wages (47%) and remittances (37%), and have limited access to government support programmes, with only 3% of income attributed to such programmes. In contrast, government support services contribute between 30 and 40% of incomes in households in the 2nd, 3rd and 4th deciles.

As depicted in Figure 9.10, Expenditure data from the StatsSA Income and Expenditure surveys of 2005 and 2010, indicate that at national aggregate level, consumption from own production is very low, there has been an increase in expenditure on fresh fruit and vegetable, a decline in the proportion of expenditure on basic processed foods such as maize meal and flour, and a slight increase in expenditure share of highly processed foods, such as ready-to-eat meals.

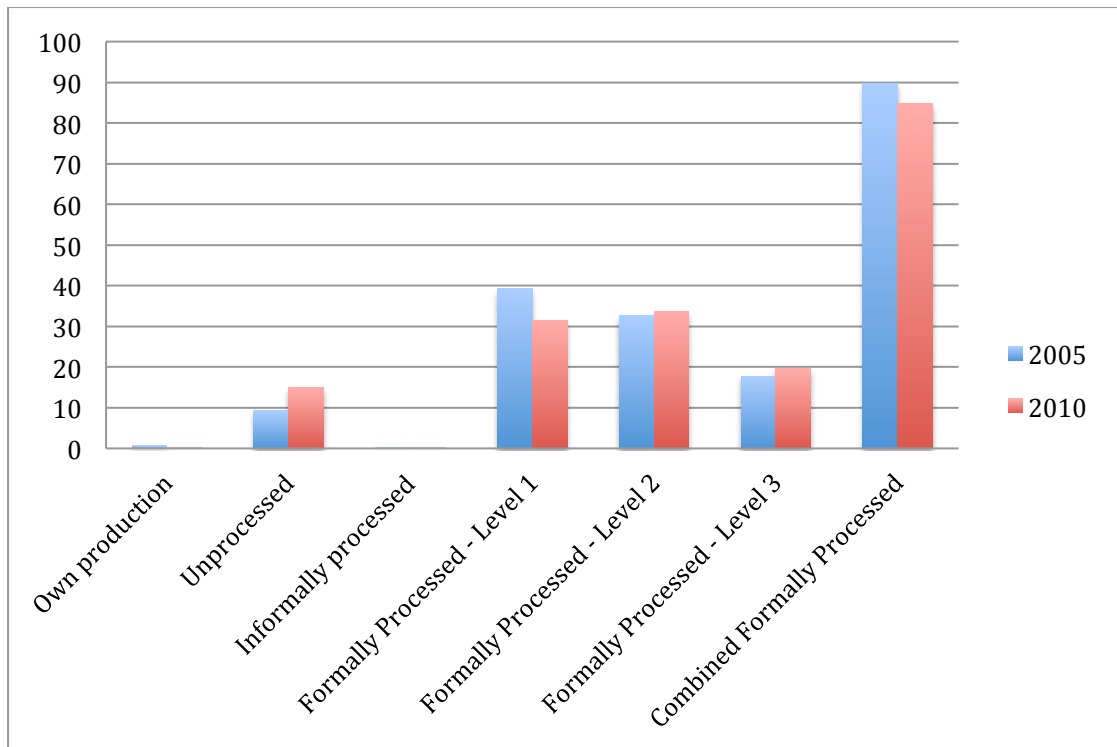


Figure 9.10 Food budget shares disaggregated by food processing level (Source: IES 2005, 2010, in BFAP, 2013, p 77)

BFAP explored the affordability of a balanced diet for low income households by estimating household income based on assumptions regarding wage levels, access to social grants, and numbers of adults and children in a household. Nutritionists then developed different meal options that would provide the required energy and dietary diversity and calculated the per capita cost of the options. The cost of the plates was calculated using official food price figures compiled by StatsSA and used by NAMC for price monitoring purposes.

At the most basic level, the BFAP Poor Person's Index (BPPI) daily food plate was developed based on available information about typical portion sizes of the five most commonly consumed foods in South Africa. These are maize porridge (532 g cooked); brown bread (150g); sugar (22g), tea (2.5g dry tea) and full cream milk (56g) (Steyn and Labadarios, 2000, Oldewage-Theron, et al 2005, Nel and Steyn, 2002). The BPPI plate is not nutritionally adequate (it provides only 2500 kJ, and is very low in protein and other nutrients) but provides a benchmark of the most basic diet, given that these are the foods most commonly consumed on a daily basis in South Africa. The 'balanced daily food plates' subsequently developed (Figure 9.5) provide the necessary dietary diversity and between 60 and 100% of the average daily energy requirement.

Table 9.5: Composition of 'food plates' to explore the affordability of a balanced diet (BFAP, 2013)

	Cost per person per day (per month) April 2013	Energy	Protein	Iron
Balanced daily food plate 1	R 74 (R2285)	10323kJ	115g	20 mg
Balanced daily food plate 2 (82% of energy of option 1)	R43 (R1322)	8507kJ	92g	23mg
Balanced daily food plate 3 (61% of energy of option 1)	R25 (R784)	6318kJ	71g	16mg
BPPI plate (25% of required kJ)	R4.26 (R130)	2800kJ	Not calculated	Not calculated

Source: Adapted from BFAP, 2013

Using four 'model' diets developed by the National Department of Health based on the South African Food Based Dietary Guidelines (FBDG), and prices at an urban supermarket geared to low income consumers, Schönfeldt et al (2013) estimated the cost of a daily food plate meeting the FBDG guidelines (Table 9.5). The authors concluded that prices for the different versions ranged from R22 per person per day to R44 per person per day. Even the lower-cost meal is beyond the means of households in LSM 1-4. Coping strategies employed by these households such as reducing portion sizes, limiting nutrient dense foods, and skipping meals, have negative nutrition consequences. Meat and dairy products contributed most to the cost of the 'model' meals, and maize meal the least. Estimates indicate that substituting less-costly food sources within the same food group (e.g. chicken feet for chicken breast or soup bones for steak) would reduce costs, but have negative dietary consequences. Furthermore, with the increased consumption of street- and fast-food, nutritional value can be further compromised (Schönfeldt et al, 2013).

9.4.2 Cost of Healthier Foods

Studies by Temple et al. (2009, 2011) reviewed food prices and energy density of different food items in the Cape Town area (Temple et al., 2009, Temple et al., 2011). Food prices of 55 of the most commonly consumed food items in South Africa were recorded at supermarkets located in three different socio-economic areas. For each food the cost of dietary energy (CDE) (translated into Rands per megajoule) and the energy density (ED) (translated into megajoules per 100 g) were calculated. The ED was based on food as eaten (e.g., beans and rice after cooking).

Nearly half of the food items were cheapest in Khayelitsha and most expensive in Seapoint (Table 9.11). Only high-grade mince, eggs, carrots and skimmed milk were cheaper in Seapoint. Maize meal, dry beans, brown bread, cola products and yoghurt were similar everywhere (Temple et al., 2009). The typical daily menu was most expensive in Seapoint and cheapest in Khayelitsha. The typical daily menus were

“improved” by replacing food items with healthier food items. The healthier daily menu was 9-12% more expensive (R 1.10 – R 1.60 per person). For a family of six this translated to an increase in R198 per month in Khayelitsha to R 290 per month in Bishop Lavis (Temple et al., 2009).

Table 9.6 Food price distribution in different areas of Cape Town

Seapoint	Area where cheapest	
	Bishop Lavis	Khayelitsha
Mince (high fat beef)	Lentils	Oats
Eggs	White rice	Spaghetti
Carrots	Brown rice	White bread
Skimmed milk	Beans	Brown bread
	Corn flakes	Whole wheat bread
	All Bran	Cake flour
	Chicken	Weetbix
	Snoek	Mince (low fat beef)
	Jam	Beef stewing meat
	Cookies (biscuits)	Mutton stewing meat
	Peanut butter	Sugar
	Soft margarine	Peanut butter
	Butternut	Hard margarine
	Pumpkin	Soft margarine
	Orange juice	Sunflower oil
	Grapes	Cabbage
	Whole milk	Apples
	2% milk	Baked beans
	Potatoes	Bananas
	Sweet potatoes	Tinned fish
	Sweets	Cheese
	Chocolate	Lettuce
	Frozen peas	Cucumber
	Fish (hake)	Tomatoes
		Spinach
		Tuna

Source: Temple et al. (2009).

A follow up study investigated the availability and cost of healthier food choices compared to the commonly consumed food (Temple et al., 2011). Food prices were recorded at three supermarkets in Cape Town, one in a poor black area, one in a poor area where most residents are of mixed ethnic origin, and one in an area where most

residents are whites and incomes are well above average. The price increase ranged from 11% (high fat vs. low fat mince) to 58% (brick margarine vs. soft margarine) (Temple et al., 2011) (Table 9.7). The findings of Igumbor et al (2012) indicate that there has been a rapid increase in consumption of foods that are high in energy density and low in cost of dietary energy – foods characterised by Monteiro and others as Ultra-processed. Sales of snack bars and noodles increased by more than 40% between 2005 and 2010. The consumption of Coca-Cola products per person per year increased from an already high 130 in 1992 to 254 per year in 2010.

These findings suggest that the current food system is not designed and governed to ensure access to healthy food. It is also clear that in a context of income poverty, nutrition education alone is not sufficient to shift consumption patterns, which are economically rational.

Table 9.7 Price increase for specified food items (commonly consumed vs healthier options)

Commonly consumed food	Healthier food	Increased cost if healthier option is chosen (%)
High fat mince	Lean mince	11
Full cream milk	Fat free milk	27
Corn flakes	All bran flakes	44
Brick margarine	Low fat margarine	58
White rice	Brown rice	39
White bread	Whole wheat bread	17

Source: Temple et al., 2011

9.4.3 Child and Adolescent Nutrition

Good nutrition is especially important for children and adolescents as it is directly linked to all aspects of their growth and development, and affects their level of health as adults.

This section focuses on three age cohorts: infants, children and adolescents.

Infant nutrition

Breastfeeding, and in particular exclusive breast-feeding during the first six months of life, has been proven to improve nutritional outcomes for infants. It can therefore play an important role in ensuring food security for infants. Breastfeeding alone is estimated to prevent 13% of under-five child deaths in low and middle-income countries across the world. Research indicates that infants not breastfed are more likely to acquire

infections such as gastroenteritis in their first year (Horta et al., 2007, Ip et al., 2007). Furthermore evidence suggests that babies not breastfed are more likely to become obese in later childhood (Li et al. 2003; Michels et al. 2007).

Most mothers in South Africa, and in Cape Town, initiate breast-feeding. The South African Demographic and Health survey performed in 2003 indicated that 20% of infants were never breastfed, implying an initiation rate of 80% (DOH, 2003). In Cape Town, an initiation rate of 88% was recorded in one study (Sibeko, et al 2005). While initiation rates are high, exclusive breastfeeding for the first six months of life is an uncommon practice. Estimates of exclusive breast-feeding rates range from 7% (UNICEF, n.d.) to 25% (Shisana et al, 2008). Infants start receiving fluids (other than breast milk) and food as early as two to four weeks after birth (Swart and Dhansay, 2008; Sibeko, et al, 2005). In the Cape Town study, the entire sample of 117 mothers with infants younger than 6 months provided water and/or other fluids and food, as giving only breastmilk was viewed counterintuitive and not practical (Sibeko, et al, 2005). Mothers may prefer formula feeding if they wish to return to work or school, or are HIV-infected. Over-dilution to save on formula milk expenses was also found to be a common practice (Thairu, et al, 2005; Faber et al, 1997).

Sowden et al., conducted an observational descriptive study with 55 mothers with infants aged 0 - 6 months (not breast-feeding) from day care centres and private clinics situated in the Cape Metropolitan area (Sowden et al., 2009).

According to results from the study the majority of included mothers (80%) made the decision of infant feeding after birth. Factors identified as breastfeeding barriers included i) a lack of knowledge and experience (38%), ii) a lack of facilities at public places (75%) and at work (71%) to breast-feed (Sowden et al., 2009).

Given the clear nutritional benefits to infants and the cost benefit to mothers, the promotion of breastfeeding is an important part of any food security strategy. However, given Sowden et al's (2009) findings, information alone is not sufficient, and care should be taken to address the identified structural barriers to breastfeeding, such as the lack of facilities in public places which may fall within the City's mandate.

Child and adolescent nutrition

Both the child and adolescent nutrition work presented focuses on food consumption at school. General information on nutrition in these age cohorts can be inferred from the household data. The school is an important site of study as it demonstrates the role of food system and other systems in shaping food consumption.

Temple et al. (2006) investigated the food consumption patterns of 476 adolescent students in Grades 7 and 10 in 14 schools in Cape Town. The schools were representative of the various ethnic groups and socioeconomic strata of the population. The survey collected information on eating habits at school, foods brought to school and food purchases, and breakfast consumption before school. A large majority had breakfast before school (78%) and ate at school (80%). Most of the food eaten was classified as unhealthy, whether brought to school or purchased (Table 9.8) (Temple et al., 2006).

Table 9.8: Food items brought to school and food items bought at school

Food items brought to school	Adolescents bringing the item (%)	Food items bought at school	Adolescents bringing the item (%)
Healthy			
Spread on bread or crackers	21.4		
Fruit	16.8	Fruit	11.8
Meat, processed meat, fish, eggs	13.0	Nuts	6.5
Brown bread	10.5	Brown bread	4.6
Fruit juice	9.2	Fruit juice	10.7
Milk and milk products	9.0		
Unhealthy			
White bread	25.4	White bread	5.5
Sweets and chocolates	25.0	Sweets and chocolates	46.0
Potato chips	23.9	Potato chips	46.3
High sugar soft drinks	15.8	High sugar soft drinks	33.2
French fries	12.2	French fries	25.6
Cookies and cake	10.7	Cookies and cake	11.8
		Meat pies	12.2
		Fat cakes	9.5
		Hot dogs	8.2

Source: Temple et al., 2006

Stupar et al. (2012)'s qualitative study looked at the eating habits and favourite food items and dishes of young people. The most frequently consumed foods include potato chips, pies, cakes (muffins, doughnuts and cookies), sweets (chocolate, lollipops and candy), sausage rolls and chip rolls (fried potato chips in white bread, often served with mayonnaise and ketchup). Participants normally bought a sweetened cold drink, but rarely juice or water for lunch (Stupar et al., 2012). Louwrens et al. (2010) conducted a survey on the soft drink consumption of children in Wynberg. The average consumption of soft drinks was 730 g (SD 530) per child per day (approximately 2 servings at 350 g), indicating the children consumed 40–80 g of sugar per day from soft drinks. Reasons for consuming the soft drinks included: taste, look, peer pressure, price, health, availability and personal preference.

The school is therefore a key site for nutrition interventions, both through the National School Nutrition Programme and through nutrition education. There has been extensive research on some of the challenges associated with school feeding reach (Hall and Monson 2006, Poswell and Leibbrandt 2006a & b), nutritional adequacy (Child Health Unit 1997, Clacherty et al 2006) and even conflicting messages on nutrition received by children through the types of food received (Child Health Unit 1997).

While the direct nutrition programmes have been extensively researched, what is less well understood is the role of the school as a source of food outside of these programmes (Temple et al 2006). Children obtain food at school from a number of sources outside of the context of the feeding school. These sources are driven largely by the economic contexts of schools and, as will be demonstrated, the kinds of food sold often provide contradictory messages to those of nutrition education and the feeding scheme.

Within the school environment, the first and most direct, non-programmatic source of food is the tuck shop. In interviews conducted with school principals by one of this study's consultants in 2005, the tuck shop was identified as a consistent revenue stream for the school. In one school, the annual provincial allocation was R147 000 per annum and the tuck shop brought in R25 000 per annum. This school also generated R50 000 from a food fair and flea market event and an additional R15 000 from an annual market

day at school in which pupils are encouraged to make food and bring it in to school to sell to their classmates. Given the importance of the tuck shop as a fundraiser, schools actively encouraged their pupils to buy from it. In one school the prize for an internal school competition was a set of vouchers for the tuck shop.

While some of the more elite schools have taken decisions to address the nutritional quality of foods sold in the tuck shop, the majority of schools sell popular, highly processed, high fat, high sugar foods like chips, pies and carbonated soft drinks (Temple et al 2006, Stupar et al 2012). The decision on what the tuck shop should stock does not rest with the school. The tuck shop, as a non-pedagogic function, is the responsibility of the School Governing Body (SGB). The SGB is tasked in the South African Schools Act to "...take all reasonable measures within its means to supplement the resources supplied by the State in order to improve the quality of education provided by the school to all learners at the school." (Department of Education 1996, 26 in Karlsson 2002, 331). As such, there is no obligation on the part of the tuck shop to adhere to nutritional guidelines, simply to generate revenue.

The SGB's tuck shop stocking decisions are therefore driven by both their income generation mandate and the desires of the wider parent body. In more middle-income areas, the tuck shops have responded to concerns about food and pupil health and behaviour. In lower income areas, a different set of concerns drive stocking: affordability and providing economic opportunities for parents.

At a number of lower income area schools, local parents sell homemade foods, like pies, samoosas and cakes to the school tuck shops in order to generate income (Battersby 2002). The economic realities of the school therefore undermine the nutrition messages that are part of the core curriculum. This is augmented by the presence of advertising of soft drinks on sponsored billboards at schools. The outworking of this is that nutrition education messages are compromised in the very environment in which they are being transmitted. In their work Temple et al (2006) asked pupils to distinguish between healthy and unhealthy foods. Although pupils were able to easily identify 6 of the 9 foods as healthy or unhealthy, almost 40% incorrectly identified Coca-Cola as healthy. Almost 50% identified samoosas and pies as healthy (Temple et al 2006, 256). The mis-identification of Coca-Cola as healthy may be the consequence of the advertising presence that the product has in many low-income schools and local retail. The mis-identification of pies and samoosas may be the consequence of these being home-cooked products and thus viewed as wholesome. The fact that these are the products sold in the tuck shop compounds nutrition confusion.

There is also considerable trade of food near to schools, even through the school fences. Many pupils do not eat breakfast at home, not necessarily because of a lack of household income, but because of time (Watson 2009). In Ibadan, Nigeria, found that 98% of schoolchildren bought their breakfast on the street (Children of the Tropics 1994 in Ruel et al 1998, 14). The food retail environment is an important determinant of children's food consumption habits.

The data presented in this section demonstrates that although the household is generally used as the unit of analysis in food security studies, it is also advisable that other scales and sites of consumption are considered. Children, for example, consume food outside of the home. Their nutritional status is therefore dependent on foods they consume at school or en-route. These extra-household factors need to be considered when considering food security levels and strategies to address food and nutrition insecurity.

9.5 Determinants of Food Security in Cape Town

Key Summary Points

- Food insecurity is not attributable to any single factor and must be understood in terms of the broader vulnerability context in which households operate.
- Household structure was identified as an important predictor of food insecurity, with female-headed households being the most vulnerable category.
- Employment and income stability are important enablers of food insecurity, but the geography of the city hinders the ability of low-income households on the periphery of the city to access employment and it hinders the viability of common alternative livelihood strategies.
- Households living in informal settlements are more vulnerable to food insecurity than similar household in formal housing due to problems of access to water, sanitation and food storage capacity.
- Household source food from a range of food retail and other sources. Different types of retailers provide different food security strategies for households. The retail environment is therefore an important determinant of food security.
- Social protection in the form of grants plays a role in enabling households to access food. School feeding is an important form of social protection in the city, which enhances childhood nutrition.
- Food price and other inflation are a significant source of vulnerability and profoundly influences food consumption patterns.
- The following recommendations are therefore made:
 - *Food and nutrition security interventions should be targeting in low income, peripheral areas of the city, with specific focus on female headed households and households in informal settlements as particularly vulnerable groups.*
 - *There is a particular need for employment and conditions to enable the establishment of businesses (formal and informal) in low-income areas, particularly in the SE of the city.*
 - *There is a need for more integrated planning of food retail environments with food and nutrition security as a guiding principle.*

Important determinants of food security at the household level include the location of households (formal versus informal), their access to food sources (markets), dependency ratio, household size and structure, household income, employment, absence of viable social protection and food prices.

9.5.1 Food Insecurity and Household Structure

The link between household structure and food security is complex (Rakodi, 1999). Urban households may postpone having children or send existing household members to rural areas to reduce expenditure or incorporate additional members to increase income and therefore have enough money for food. Studies have shown that children living with two biological married parents tend to fare better across a wide range of domains that include food security than those living in other family structures (Miller and Nepomnyaschy, 2013). Household composition largely determines the way in which

a household is able to respond to changes. It affects the amount of available labour, determines the food and nutritional requirements of the household, and often affects household food security (Anderson, 2003).

The 2008 AFSUN survey found that female-centred households in South Africa were more vulnerable to food insecurity than other types of households. In the case of Cape Town communities, 83% of female-centred households were food insecure compared to 82% of nuclear households, 76% of male-centred households and 70% of extended households. The recent AFSUN survey of migrants in Cape Town also found that female-centred households were more food insecure (Crush and Tawodzera, 2012). The vulnerability of female-centred households derives from the fact that most migrant women were in low paying jobs such as domestic worker or in the service industry as waitrons. Women therefore generally had lower incomes than their male counterparts. In addition, most of the women had single income sources and few alternatives, making them more vulnerable to food insecurity.

9.5.2 Food Insecurity and Household Income

A stable and sufficient income is important for household food security in urban areas. A reduction in household income or increase in food prices can therefore have catastrophic consequences (Tacoli, Fischer and Bhukari, 2013). In Cape Town, there is a significant relationship between income and food security. The 2008 AFSUN survey found that 80% of households in the lowest income tercile in Khayelitsha, Philippi and Ocean View were food insecure (Battersby, 2012). Figure 9.11, from the 2013 Survey, clearly shows that households in low-income areas have far higher levels of food insecurity. In the low-income category, only 24% of households were food secure, compared with 81% among the middle-income group and 95% for the high-income category.

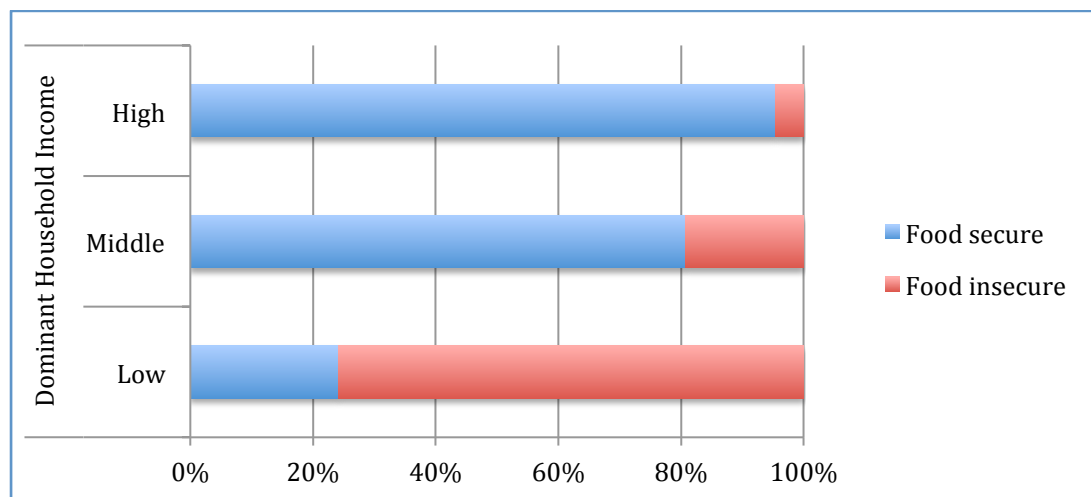


Figure 9.11: Household food security by household income in Cape Town (Source: AFSUN, used with permission)

Results from the migrant survey confirm the importance of income to food security. Only 2 percent of households with an income below R500 per month were food secure

in comparison with 23% for those with incomes between R3 001 and R3 500 and 62% for those in the R4 001–R4500 category.

Cooke's work in Manenberg identified the fact that reliability of income is an important driver of food consumption. If a household has a guaranteed income it is better able to plan food purchase and preparation and therefore has higher food security than households of equal or even greater inconsistent income (Cooke 2012). In times of income scarcity households access food on credit from the informal sector, but households often depend on loans from informal lenders who charge high rates. The general interest charged is 40% (Ntandane pers comm, 2013). Therefore, it can be concluded that while income is an important indicator of food security, the instability of income source is another source of vulnerability to food insecurity.

9.5.3 Food Insecurity and Employment

There is an intimate relationship between employment and household food security in urban areas. This is because working facilitates the mobilization of resources that are critical to accessing food, especially as few urban residents have recourse to own production. The majority of the urbanites access their food through purchase and therefore it is vital to have a reliable form of employment and adequate income to purchase food and pay for other obligatory urban expenses. Without a continuous flow of income, households are bound to experience food shortages and become food insecure. Households with at least one member in full-time employment are likely to fare better than those whose employment is intermittent.

In the 2008 AFSUN survey, only 52% of the adult population was employed. Unemployment rates were lowest in Ocean View (38%) and higher in both Philippi (54%) and Khayelitsha (53%) (Battersby, 2012). A study evaluating the impacts of poverty among residents in Khayelitsha Site C concludes that the area's distant location makes accessibility to and from the city centre contributes to high levels of poverty among households as a substantial amount of earned wages is spent on transport costs (Ndingaye, 2005).

The spatial legacy of apartheid still endures in terms of the location of employment opportunities. This means that the majority of the poor are still in a large measure economically and spatially marginalized within the city. Analyzing the changing nature of Cape Town's spatial economy, Sinclair-Smith and Turok (2008) conclude that there is a striking absence of formal economic activity in the south east of the city (the Cape Flats). The area is home to at least a third of the city's total population, but only contributed 0.5% of the total turnover and 0.3% of the city's total payroll in 2005. Those lucky to be in employment are engaged in low paying jobs such as in domestic work, security, and the service sector.

9.5.4 Food Insecurity and Food Prices

Significant food price increases can quickly erode the purchasing power of households since wages experience a commensurate increase. The global price hikes of 2007-08, for example, negatively impacted on the food markets of most countries and cities in the world. South Africa and Cape Town were no exception. South Africa's food inflation of 16.7% between October 2007 and 2008, for example, was 4.6% higher than general inflation (NAMC, 2008). Most respondents in the 2008 AFSUN survey indicated that

their economic conditions had worsened in the year prior to the survey, with 45% reporting that their condition was much worse and only 11% saying that they were better or much better (Battersby, 2012). In addition, only 28% of the households indicated that they had never gone without food because of food price increase while significant proportion of households had gone without food a different number of times per month (Figure 9.12).

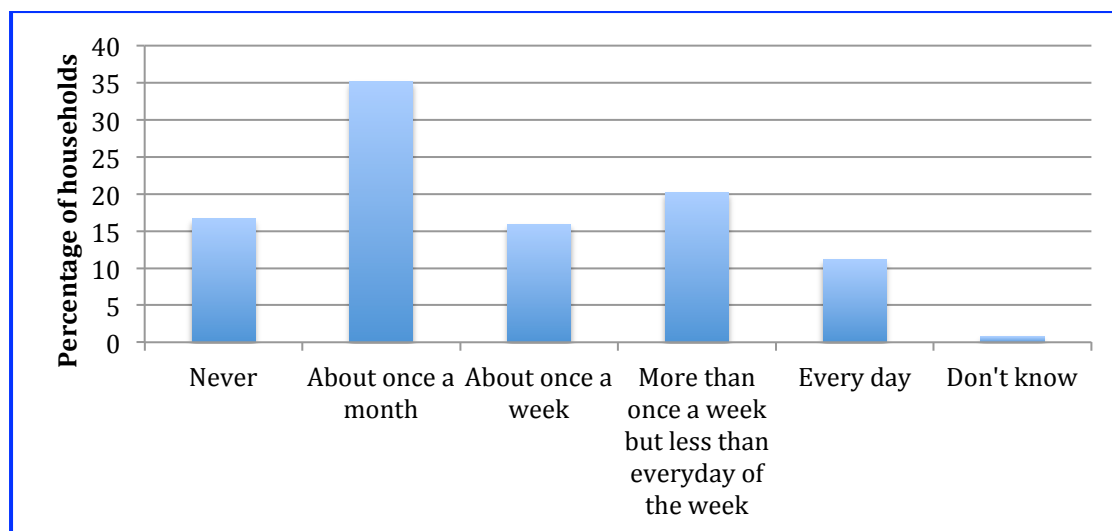


Figure 9.12: Frequency of going without food (Source: Battersby, 2011)

Although the worst of the price hikes triggered by the 2007-08 global crisis may be over, South Africans still have to contend with constant price increases (see Figure 8.4). Poor households struggle to secure enough food, let alone foodstuffs that constitute a diverse diet that is required for an active and healthy life. Smith and Abrahams (2013) report that households affected by price increases are eating more sugars, salts, fats and more processed foods that have very little nutritional value. They are also buying fewer fruits and vegetables (Smith and Abrahams, 2013).

9.5.5 Food Insecurity and Housing

The 2008 AFSUN survey found that even in poor areas of the city, shack dwellers were about 20 percentage points more likely to be severely food insecure than house dwellers (Figure 9.13). The increased risk is likely a result of the fact that most of these households were located further from formal markets, and hence had more limited geographical access to cheaper food (Battersby, 2012). In addition, most have limited storage and refrigeration capacity and are therefore more likely to purchase food in smaller units, which tend to be more expensive per unit volume.

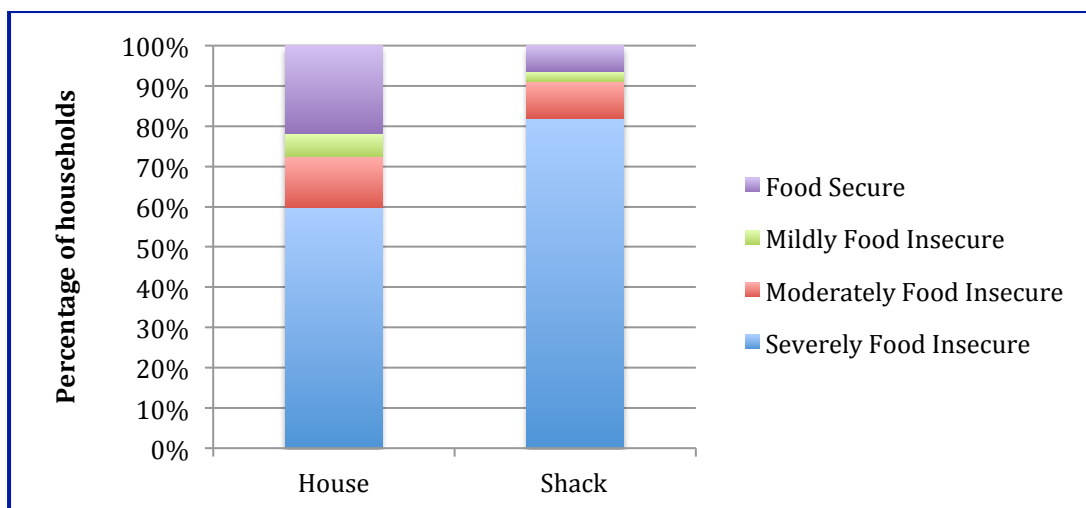


Figure 9.13: Food insecurity and housing (Source: Battersby, 2011)

With over 174 000 households living in informal settlements in Cape Town (Housing Development Agency, 2012), the interaction between housing type and household food insecurity cannot be overstated. In addressing the food needs of the poor in Cape Town, it is therefore necessary to look not only at prices and incomes, but also at the geographical location of the poor in relation to markets, and household resources such as storage, refrigeration and cooking technologies, which all shape what foods are purchased and consumed.

9.5.6 Food Insecurity and Sources of Food

Research has shown that groups at high risk of food insecurity often live in residential areas that are not well serviced by shops or have inadequate public transport (Southcombe, 2008). In most residential areas inhabited by the poor, shops tend to be sparse and public transport generally poor. High-income areas, by contrast, have infrastructure such as roads, retail and marketing systems that is well established and functional (Swift, and Hamilton, 2001). While the uneven location of shops makes economic sense to food retailers (who locate shops according to relative purchasing power in different areas), it also generates social problems related to unequal food access. In poor communities, household members often have to walk long distances to and from shopping outlets. This inhibits them from economizing through purchasing food in bulk, as they would most likely have to carry their groceries over long distances. They also alternatively end up buying food from informal outlets such as spaza shops or home-based retail stores in the area. These sources have the disadvantage that their foodstuffs are expensive; their prices unstable, the variety of products is poor and they sometimes sell stale products that are detrimental to health and food security (Chebelyon-Dalizu et al., 2010). Fresh produce traders and meat sellers however, are often cheaper than formal retailers. However, as discussed in Chapter 7, even when located in lower income areas, supermarkets are not necessarily the preferred source of food because of opening hours, unit size, lack of credit and established cultural practices around food. Distance and transport to shops are therefore key features of food access that may ultimately impact on food security at the household level, along with a series of household scale factors.

The 2013 AFSUN survey results show that most of the residents in the City of Cape Town purchase their food from supermarkets, fast food outlets and small stores. However residents in the high-income category reported visiting supermarkets more frequently than all other groups, especially on a weekly basis. (Figure 9.14) Households in the low-income category, on the other hand, patronise spaza shops more frequently (55% at least 5 days a week) in comparison to only 6% in the high-income group. These findings reinforce the findings of the earlier 2008 AFSUN study. The differences confirm that residents in the high-income areas have greater access to supermarkets than those in the low-income areas.

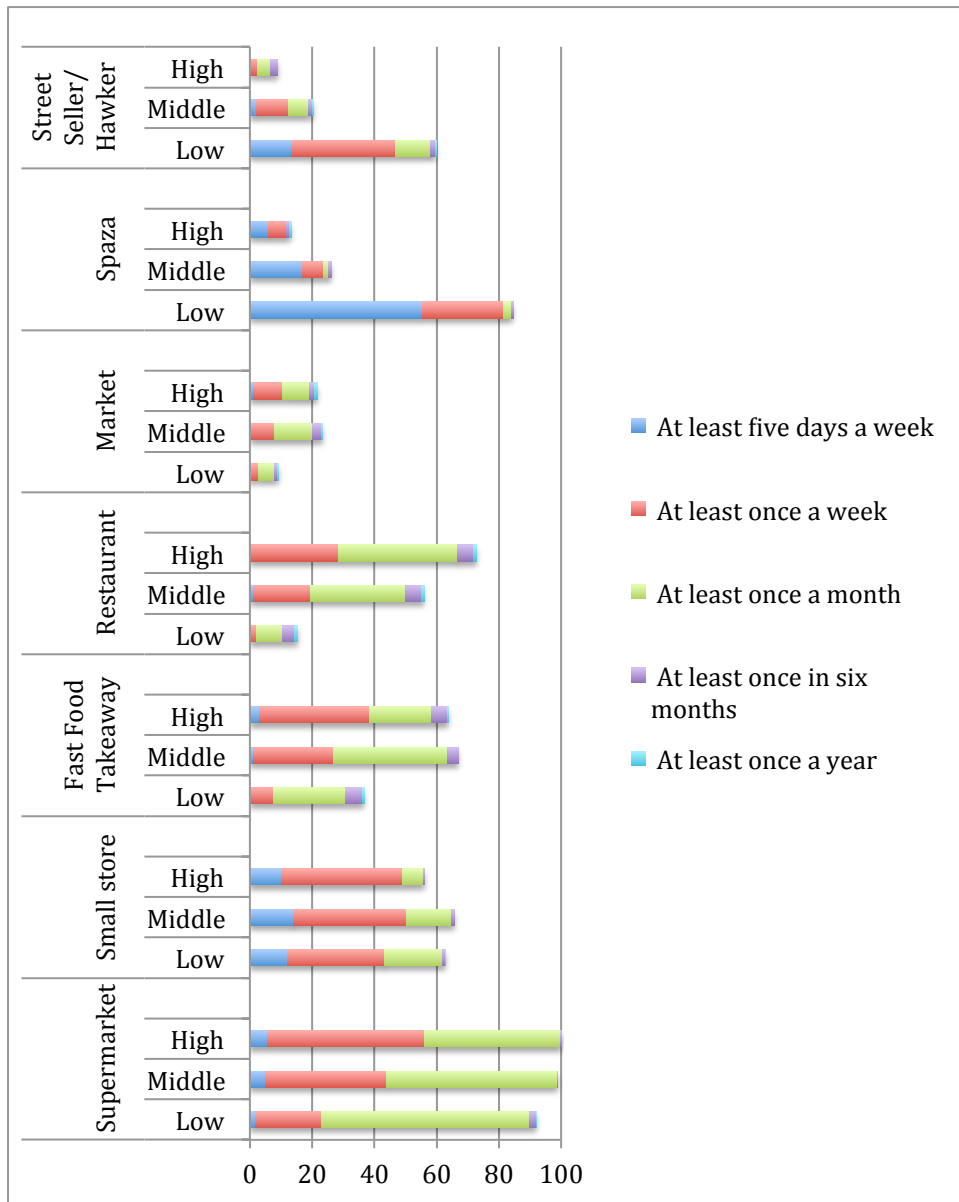


Figure 9.14 Market based sources of food (Source AFSUN, used with permission)

It is important to note that Figure 9.14 only identifies market-based sources of food. However, both the 2008 and 2013 AFSUN surveys reveal that food insecure households regularly access food through a number of non-market based sources, including sharing food with neighbours and borrowing food from neighbours.

Differences in sources of food, market or other, cannot be attributed to geographic proximity to retail types alone. The 2008 AFSUN survey conducted its research in three areas of Cape Town and found considerable differences in the food sourcing strategies of food secure and food insecure households *within* these areas.

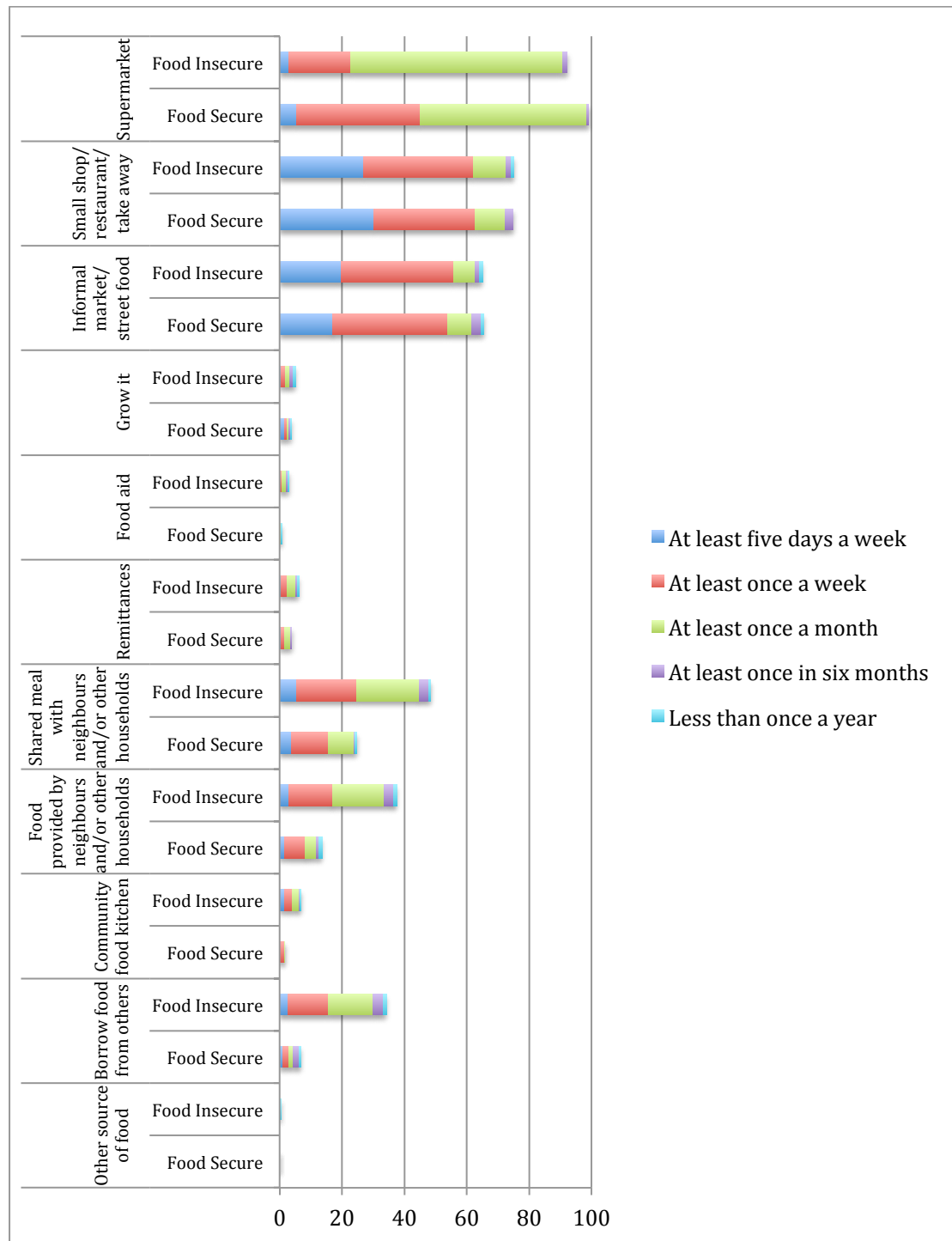


Figure 9.15 Sources of Food of food secure and food insecure households (Redrawn from: Battersby 2012, 153)

Figure 9.15 demonstrates that food insecure households are less likely to source food from supermarkets than their food secure neighbours. Both food secure and food insecure households were dependent on informal sector retailers for their daily or

weekly food purchases. This figure suggests that the physical presence of supermarkets does not in itself make them accessible to the most food insecure and that the retail model practiced by the informal food retail sector is more accessible to the most vulnerable to food insecurity (See Table 7.4 for more detail).

Another study (Cooke, 2012) in the lower-middle income area of Manenberg also shows a definite correlation between the dominant site of shopping for a household and its level of food security. The study found that households that were shopping solely or partly at local tuck shops were more food insecure than those that were shopping mainly in mixed supermarkets (Figure 9.16).

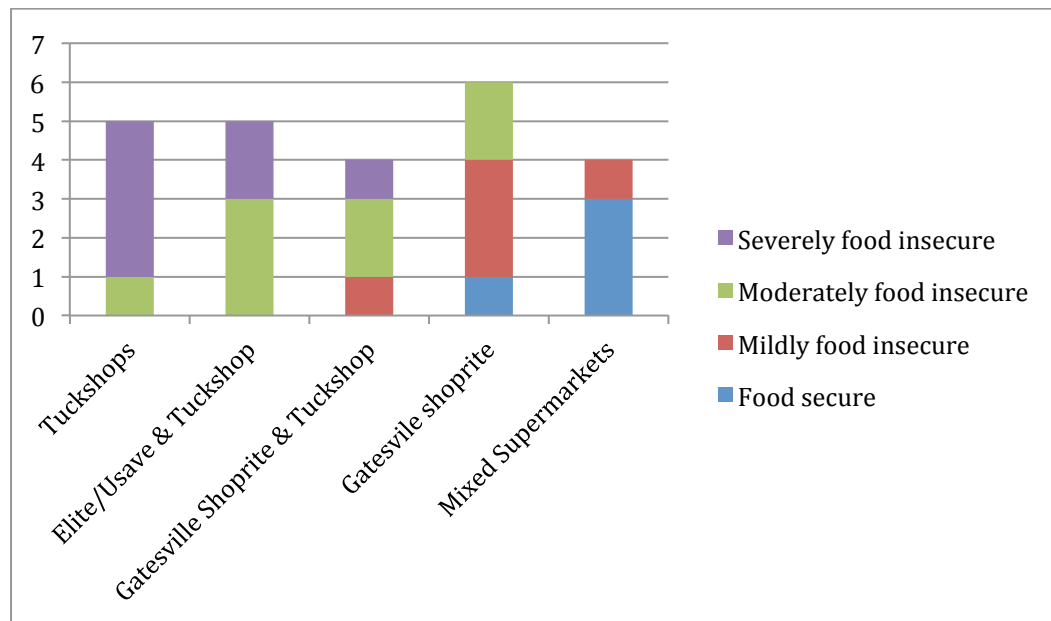


Figure 9.16: Food security and dominant site of shopping (Source: Redrawn from Cooke, 2012)

There are no formal shopping centres in her study area and the closest shopping malls, Vangate Mall and Gatesville shopping centre, are located about 4km away. Residents thus had to go there to buy food. Alternatively the residents ended up accessing food from informal food retail outlets that were closer but had the disadvantage of selling more costly food (Cooke, 2012). There was also very little variety in terms of the foods that were being sold within the local informal sector with foods such as meat, fresh produce and dairy products being largely absent. In addition, there also marked differences in prices between the informal retailers and the formal supermarket. By comparing prices of some basic foodstuffs required by a household for a week, the study showed that households purchasing from the formal retail system could spend about 26% less money than those purchasing from the local informal outlets.

Informal activities are often seen as critical for the poor as they offer services such as breaking up bulk purchases and extending credit during lean times, as well as helping customers to save on transport costs (Battersby, 2012). In addition, informal sector activities such as spaza shops offer a method of survival for the people running them and their families (Chebelyon et al., 2010). Besides offering convenient access to basic necessities, they also keep the money inside of the community, rather than sending it out of the community when people travel long distances to a supermarket (Ligthelm and Van Zyl, 1998). Hence, the movement of large retailers into low-income areas may not

only put small informal traders out of business (Battersby, 2011) but also result in capital outflow from the areas that are already lagging behind in terms of capital investment.

However, there are alternative views, which posit that supermarkets are beneficial. Some argue that supermarkets are a mechanism to alleviate food insecurity through a retail system with a much cheaper, healthier, and diverse selection of products than other retail formats. Furthermore, by investing in low-income areas, advocates suggest that supermarkets stimulate job creation, improve infrastructure, and transfer skills to employees (Jeffery, 2013). Supermarkets are very unevenly distributed in the city (Figure 9.17). Most are located in the Southern suburbs, Northern suburbs, City Bowl, and Atlantic Seaboard areas, while few are in the Cape Flats townships (Peyton, 2013). The lowest-income areas have by far the lowest density of supermarkets per 1000 household (Figure 9.18). Supermarkets are expanding into lower-income areas, led by Shoprite (Figure 9.19), but they are still not reaching the poorest areas of the City. The location of supermarkets in the city is clearly still driven by market-based factors, which favour investment in high-income areas.

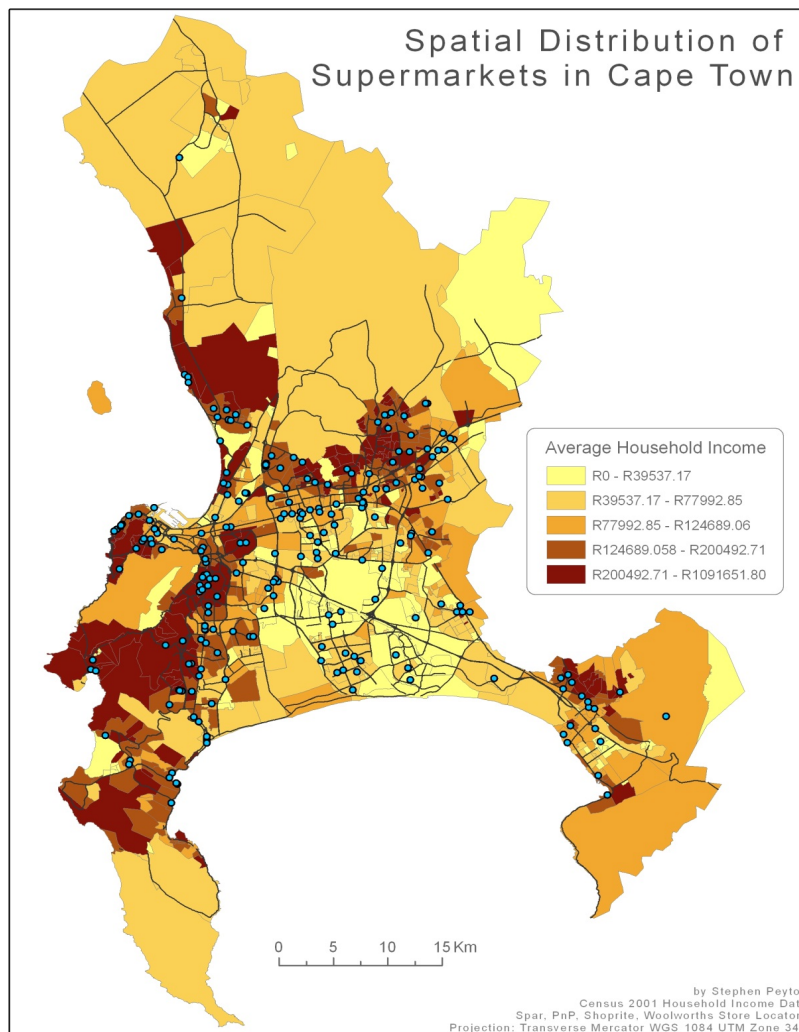


Figure 9.17 Distribution of Supermarkets in Cape Town (Source: Battersby & Peyton 2014)

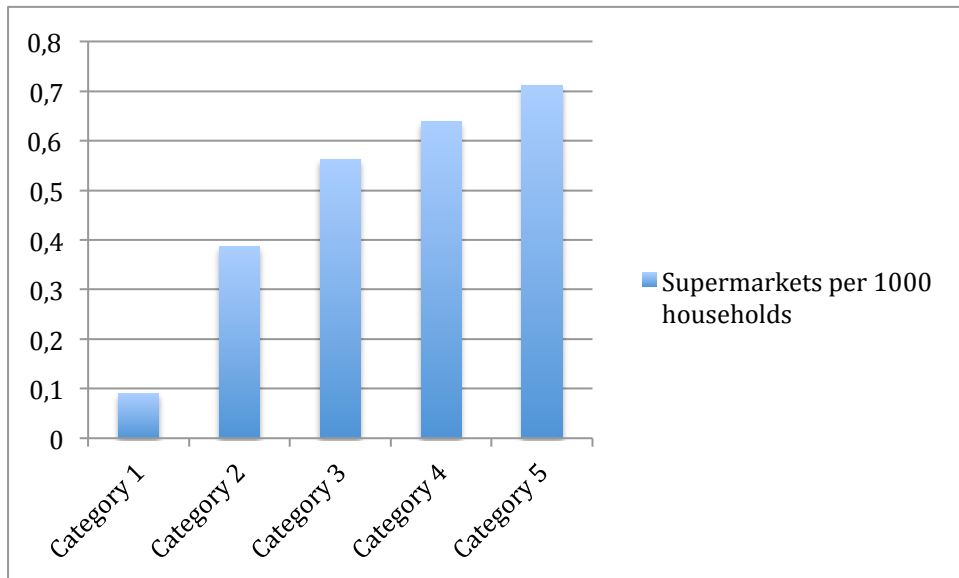


Figure 9.18: Supermarkets per 1000 households by income category (Source: Battersby & Peyton 2014)

As discussed in Chapter 7, having a mix of retail options provides consumers with a range of food options and therefore increases household resilience. There is a need therefore to plan food environments to include both formal and informal retailers.

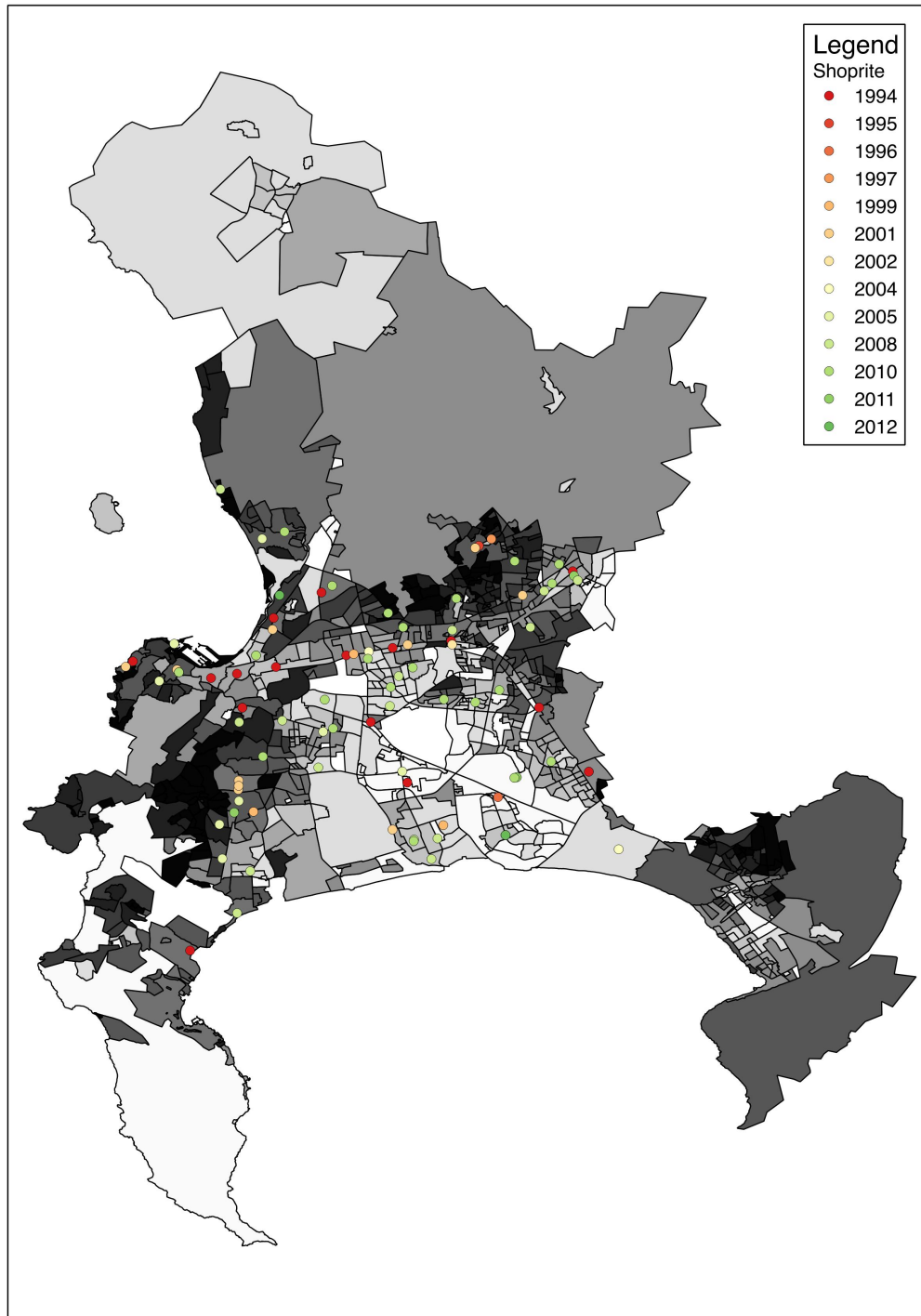


Figure 9.19: Expansion of Shoprite (Source: AFSUN with permission)

9.5.7 Food Insecurity and Social Protection

South Africa has a well developed and inclusive set of social grants targeted at the poor to fight poverty and other societal ills. These include cash transfers (e.g. old age grant, care dependency grant, disability grant, child support grant), free basic services (e.g. on

water and electricity) and on health (free primary health) and education (no fee schooling). To what extent are these protection mechanisms able to ameliorate food security problems in Cape Town?

The 2013 AFSUN survey found that over 60% of surveyed households in low-income areas regarded social grants as very important to food security (Figure 9.20), compared to 23% in the high-income group. The 2008 survey found minimal differences in the food security levels of poor households receiving and not receiving grants (Battersby, 2012). This may be because the grants were well targeted, raising the most vulnerable to a food security status comparable with non-grant households. It is more likely that the small size of the child grant was not sufficient to change the underlying food security status of the household. It was however noteworthy that all households producing their own food, were in receipt of an old age pension grant, which was significantly higher than the child grant.²⁴

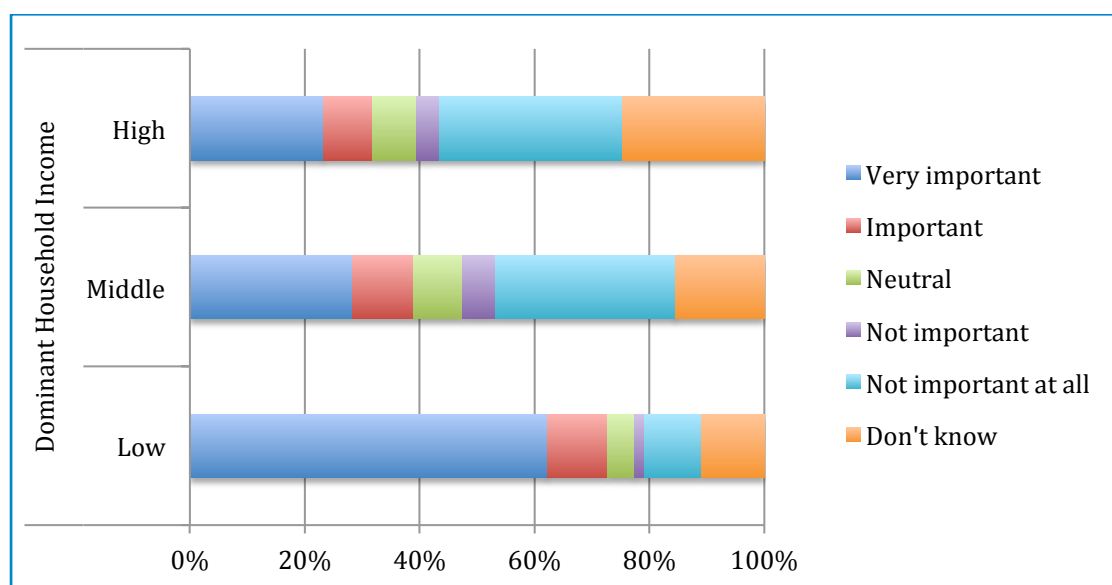


Figure 9.20: Importance of grants for household food security by income category (Source: AFSUN, used with permission)

There are other areas where social protection mechanisms make a difference to the food security of poor, especially among children of school going age. In the Western Cape, a number of initiatives are in operation to feed school children: 430,000 learners in 1,026 schools receive a meal every day. This is effected through various companies that are awarded tenders for the service by the provincial government as well as private funding from donors. The Peninsula School Feeding Association (PSFA), for example, was feeding two cooked meals daily to 22 000 children in 111 schools. Most of the feeding programmes are targeted at poor and food insecure localities, which should reduce the food insecurity of the affected children. Evaluating the effectiveness of the school feeding programme in Bonteheuwel, for example, Swartz (2009) notes that the programme was making a significant impact in improving the food security of learners. He recommends that the school feeding schemes provide take-home rations to students over weekends so that they are not in need during weekends.

²⁴ As of April 2014 the Child Support Grant is R310p.m. The Foster Child Grant is R830p.m. The Old Age Pension and Disability Grants are both R1350p.m.

9.5.8 Food Insecurity and Food Price Inflation

In the post 2008 period, the contribution of food inflation in the CPI has continued to increase (See Section 8 for extensive discussion). While general headline inflation is important in affecting households' access to food and therefore renders them food insecure, food price inflation is particularly important in driving food insecurity. In South Africa, the contribution of food prices to headline inflation in South Africa has increased quite significantly over the last two decades. During the 1980s the contribution of food-product to headline inflation was proportional to its weight in the consumer price index (CPI). However, between 2000 and 2008 the contribution of food-products to headline inflation, rose to approximately 1,4 times its weight in the consumption basket (Rangasamy, 2010). In the post 2008 period, the contribution of food inflation in the CPI has continued to increase. For example, food price inflation - as measured by the index for food and non-alcoholic beverages for the period July 2012 to July 2013 was 6.8, compared to the headline CPI of 6.3 (StatsSA, 2013). With such increases in the prices of food, poor households are generally rendered vulnerable.

The food categories that contributed most significantly to the food price inflation in urban areas were vegetables (13.3%); bread and cereals (7.3%) and milk, eggs and cheese (6.7%)(Table 9.9) (StatsSA, 2013). The consumer price index for all urban areas for the period July 2012 and July 2013 are given in Table 4.3 (StatsSA, 2013). With regard to specific foods, urban consumers paid 12.9% more for a loaf of brown bread, and 11.59% more for a loaf of white bread over the 12-month period. This was largely due to the substantial increase in local and international wheat prices.

Table 9.9 Consumer price index for urban areas Between July 2012 and July 2013

	Period		
	July 2012	July 2013	Percentage change
Food	94.0	100.7	7.1
Processed	96.3	103.5	7.5
Unprocessed	92.0	98.1	6.6
Bread and cereals	94.5	101.4	7.3
Meat	91.9	97.2	5.8
Fish	99.0	104.7	5.8
Milk, eggs and cheese	98.3	104.9	6.7
Fats and oils	96.9	100.3	3.5
Fruit	89.1	93.2	4.6
Vegetables	89.9	101.9	13.3
Sugar, sweets and desserts	99.7	105.6	5.9
Other food	95.3	101.8	6.8
Non-alcoholic beverages	98.8	102.0	3.2

Hot beverages	99.2	102.8	3.6
Cold beverages	98.6	101.7	3.1
Alcoholic beverages	99.8	106.8	7.0
Spirits	100.2	107.4	7.2
Wine	99.8	105.5	5.7
Beer	99.6	107.0	7.4

Source: StatsSA 2013

The NAMC 2013 compared prices of specific food items in both rural and urban areas during January 2011, October 2011 and January 2012 (NAMC, 2013). In January 2012, rural consumers paid R 2.37 more than urban consumers for the same food basket. Table 9.10 provides more data on the selected food items.

Table 9.10 Inflation contributing foods in the Basic Food Basket April 2012 - April 2013

	Period	
	July 2012 - July 2013 (%)	April 2012 - April 2013 (%)
Animal protein	5.6	5.9
Bread and cereal	4.3	-7.0
Eggs	7.6	9.9
Vegetables	11.6	14.4
Dairy	5.6	5.3
Fruit	4.5	2.2
Beans	6.5	6.5
Fats and oils	1.3	2.4
Coffee and tea	5.6	3.0

Source: NAMC 2013

Prices in the rural areas are mostly higher than that of their urban counterparts. Prices for white sugar (2.5 kg) and rice (2 kg) were for instance R 1.94 and R 1.57 more expensive. This is also true for 1 L milk (full cream), which was R 1.04 more expensive. However, sunflower oil and white bread were cheaper in the rural areas (R 1.77 and R 0.87 respectively).

While the cost of commodity crops, such as maize, is a factor in CPIF, agricultural conditions are far from the only drivers of inflation. Energy prices are one of the major drivers of food price inflation. Johnson (2008) argues that the elevated prices for crude oil and natural gas in particular have had negative effects on the prices of food. In addition, oil is an energy source that is tightly integrated with levels of food production, processing and transportation systems. For the past 2 years, the price of fuel in South Africa has been increasing rapidly. The price of unleaded petrol, for example, has risen from R11.47c in January 2013, to R12.16 (June 2013), R12.77 (December 2013), R13.16 (January 2014), R13.55 (February 2014) and R13.91 in March 2014 (www.aa.co.za). Within the same period, a loaf of bread costing R9.29 in January 2012, now costs about R10.90 in January 2014, an increase of R1. 79. Thus an increase in the price of fuel is most likely to result in increases in the price of basic commodities.

Given the increased dependence on imported processed foods in the South African diet, exchange rate fluctuations are likely to increase food inflation. While the rand was trading at R8.20 to the US\$ in December 2011, its value has plummeted and is currently trading at R10.82 (25/3/2014). A further weakening of the rand will most likely increase the levels of food insecurity among poor households in Cape Town, and indeed among the poor in general in the country.

It is not easy to assess the likely impact of food price inflation on food security, although in their Food Price Monitoring reports, NAMC do provide an estimate of the impact of food price inflation on the proportion of income spent on food for different income terciles. As discussed in Chapter 8 though, food prices do not change uniformly, with different food items changing price at different rates and at different times to others (Table 8.3). Additionally, different retailers and retailer types respond to prices further down the supply chain differently. There are often be considerable price differences between each of the big four retailers (see Figure 8.6), and between formal and informal sector retailers. Households will change their consumption patterns to offset inflation. They may replace chicken with beef, and potatoes with rice depending on the relative price. They will also shop around to ensure they get the best prices. Increasingly spaza stores, particularly those that are foreign owned and buy food as a group, have weekly specials brochures like those of the supermarkets. Households are able to navigate the food system to enhance food security beyond what the headline CPIF figures might suggest.

However, there is a threshold beyond households cannot buffer food and other inflation. In these cases, households will often go without food items in order to continue to pay for “essentials” such as transport money. “Choosing to go hungry” is therefore a strategy employed by households to buffer against short-term inflationary shocks. The food system is a lived system in which individuals exercise what agency they have in order to meet their household needs as best they understand them. It is therefore not possible to model simply the impact of food price inflation on food security.

9.5.9 Food Safety

Food and nutrition security policy has tended to focus on the challenges associated with availability and accessibility of food. However, the quality and safety of food is a crucial element of food security. In recent years there have been reports of incidents raising concerns about food quality and safety in Cape Town and South Africa more broadly, including the mislabelling of meat products, the re-brining of chicken, the sale of expired products and the salvaging of food waste from hazardous waste sites. Environmental pollution of living spaces and domestic hygiene, including food handling, which are almost always related to poverty and sanitation (Nath, 2003) may also have health

consequences. The World Health Organization estimates that there are 0.75 cases of diarrhoea per person worldwide annually (WHO 2009). In South Africa, diarrheal diseases account for 3.1% of total deaths – the eighth most frequent cause of death in the country (Bradshaw D, *et al.*, 2000; Norman R, *et al.*, 2000). However, there is little reliable data on causes of diarrhoea, making it difficult to draw conclusions regarding the impact of food-borne diseases on diarrhoea incidence

Although food safety is a key area of food system competence of the City, there is little available research on food security and food safety in the City. It is further likely that cases of food-borne illness are under-reported.

There has been some research conducted on the hygiene practices of food handlers in delicatessens of large retail groups and food service enterprises. Van Tonder et al (2007) examined personal- and general-hygiene practices of food handlers in delicatessens of a large retail groups in the Western Cape. They found that most participants did comply with the requirements for hand washing. However, 16% reported using cold water, soap and a nailbrush, 44% used hot water, soap and a nailbrush and 40% used hot and cold water and soap to wash their hands. In terms of food preparation, Van Tonder reported 6% working with long fingernails, 8% wearing dressings that are not moisture proof on wounds, 12% wearing jewellery and 2% chewing gum while preparing food.

Apron replacement occurs mostly once (32.0%) or twice (36.0%) a day with only 4% claiming to never replace their aprons. The majority of the participants also replaced their gloves more than 5 times per day.

A study among small and medium food service enterprises in the Tygerberg area, Marais et al found that the majority (>70%) of managers and food handlers had received no formal food safety training. Among managers, 57% believed that general cleanliness was the key issue in food safety. Food handlers scored low on the basic principles of food safety, with the majority achieving low scores for factors such as ways of identifying contaminated food likely to cause food poisoning (77,5%), period of keeping prepared food safe (50,9%), correct way of cooling (63,1%) or reheating food (84,9%), reason for checking date codes (68,1%) and the use of a thermometer (90,6%).

These studies are merely indicative of the extent of potential food safety challenges in Cape Town. There is clearly a need for better workplace, and home, training on food safety.

9.6 Household Survival in Cape Town

Key Summary Points

- Households in Cape Town employ a wide range of coping strategies to reduce food insecurity. This section reviewed the most important of these.
- Accessing informal credit is one the most common coping strategies. Money from these loans is often used to buying food. Interest rates average at 40%, which makes this a short-term strategy that puts households deeper in debt and therefore compromises long-term food security. Informal food retailers do offer food on credit, often without charging interest on the basis of social capital.
- Urban agriculture is an important coping strategies for households engaged in the activity, however, uptake of this strategy is limited. On the basis of limited uptake, it cannot be the only point of entry for the City to address food insecurity.
- Many households are surviving on social grants. Grants are commonly deferred from the individual receiving the grant to purchase household food. School feeding schemes provide an important source of food and households may use this as a copying strategy to ensure all household members get food.
- Skipping meals, and reducing the quality, range and quantity of food is so common a coping strategy that many households do not recognize it as such. Although it may be effective as a short-term strategy, it is not sustainable in the longer term.
- Households will also use assets to generate capital for food. The most common approach is the renting of rooms or backyard space. This coping strategy, as with other asset-based coping strategies, is dependent on having an appropriate asset base and is therefore not available to the many of the most vulnerable.
- The case study on post-fire recovery provides insights into households navigate their suite of coping strategy options in the context of a common shock in Cape Town.
- The following recommendations are therefore made:
 - *The City should partner with the NGO sector to provide mechanisms for less exploitative loan system.*
 - *Disaster Management and its partner NGOs could extend their appreciation of the components of food security, and consider mechanisms to monitor long-term recovery.*

Many Capetonians live with multiple and cumulative deprivations. The high costs of shelter, transport and other necessary expenses forces poor households to cut back on food expenses. The general literature on household vulnerability points to two broad means of dealing with risk and increasing resilience at the household level: (a) ex ante strategies of income generation; and (b) ex post strategies of consumption smoothing (Bird and Prowse, 2008). Strategies of income generation are generally designed to enable the household to avoid shock as well as mitigate the worst effects of those shocks, should the household fail to avoid them. Strategies of consumption smoothing enable the household to stretch the few resources that they have over a period of time.

9.6.1 Range of Strategies

The array of resource augmentation strategies that vulnerable households in the City of Cape Town are adopting include reliance on social grants; purchasing food on credit; borrowing money (especially from loan sharks) to purchase food; switching to less expensive foods; non-payment of utility bills; and shifting residence from formal to informal housing in order to save money that is then channelled towards food expenses. A survey of the livelihood strategies of female-headed households in Vrygrond, near Muizenberg, shows more than half of the households (58%) surviving on social grants, casual labour (36%) and on remittances of food (19%) (Nandoo, 2012) (Figure 9.21).

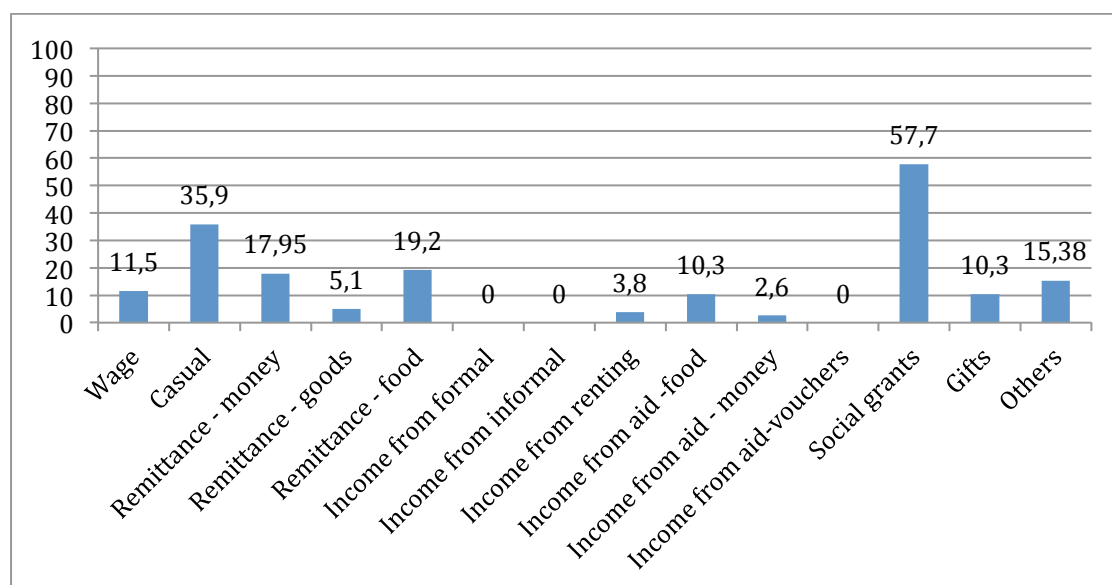


Figure 9.21: Household income sources in Vrygrond, Cape Town (Source: redrawn from Nandoo, 2012)

Although studies from other cities in Southern Africa report many additional strategies to raise income and cope with food insecurity, the additional livelihood strategies of the poor in Cape Town are limited. Battersby (2012) reports that only 19% of surveyed households in poor neighbourhoods had two or more additional strategies that they could rely on to raise income to meet their food needs. Half of the households reported that they had no additional strategies to augment wage income. Without opportunities to engage in other activities to supplement their main income, most poor households have inadequate income, which compromises their food security.

9.6.2 Surviving on Credit

In a study of indebtedness as a cause of poverty entrapment in West Bank in the Cape Flats, Ssebagala (2007) finds that most households are mired in debt and continue to accumulate further debt regardless of whether they have wage income or not (Ssebagala, 2007). Because of the high unemployment in the area, most households resort to borrowing to finance various expenditures including food. The main sources of

debt accumulation include credit from retail shops (50%), cash loans (34%), money lenders (7%) and spaza shops (4%).

The majority of households were not creditworthy, but were able to acquire more credit from banks and shops simply by showing proof of income regardless of the size and source of that income (Ssebagala, 2007, 47). Other households resorted to getting credit from 'loan sharks'. This was particularly true for those that had no working member and could not produce pay-slips required by banks and retail shops. To be assured of recovering money, loan sharks confiscate creditors' debit cards and identity cards as security. In a study of the nature of indebtedness of the poor and the extent of the problem in the Cape Metropolitan Area, Nagdee (2004) shows that many poor people were borrowing from money-lenders at ridiculously high interest rates; the loans themselves were mainly used to supplement low wages for consumption purposes. Loan sharks generally charge interest rates of 40% per month (Ntandane, pers comm., 2013). High interest rates usually led households into a debt trap as they continuously borrowed to fund their household expenditure after spending all their income on repaying loans.

Loan shark interest compounds the price of food. At 40%, a household borrowing R770 to finance the cost of a food basket would ultimately pay over R 1 008. A household financing its food basket through borrowing from a loan shark thus requires R308 more than a household that is financing itself to purchase the same food basket. The importance of this is self-evident: poor households that pay for their food through loan shark financing or borrowing become more vulnerable to food insecurity as they end up paying more for their food than other households. The recent work by AFSUN presented in Chapter 7 on informal trade, identified that many informal retailers do not charge interest for food bought on credit. Informal traders therefore provide buffering against dependence on loan sharks for credit.

The 2008 AFSUN survey also showed evidence of households surviving on both formal and informal credit to finance their expenditure needs (Battersby, 2012). Nandoo's (2012) survey of Vrygrond found that 17% and 20% of the households in the study were using formal and informal credit respectively. Likewise, the AFSUN migrant food security survey in Du Noon, Masiphumelele and Nyanga found that 18% of households were resorting to informal credit.

9.6.3 Urban Agriculture

Urban agriculture was discussed at length in Chapter 5 of the report. The question here is whether urban agriculture is an income augmentation mechanism for households facing food security challenges. Both the 2008 and 2013 AFSUN surveys in Cape Town found very little evidence to support this argument. In areas such as Khayelitsha, Philippi and Gugulethu, some households improve their diet by growing their own vegetables in individual and community gardens. In addition, some households are getting an income from selling their vegetables. The Harvest of Hope project run by Abalimi Bezekhaya, for example, helps urban farmers to sell vegetables directly to customers.

However, care should be taken to assess the viability of urban farming and its contribution to total household income and food security and not generalize about its potential. This is because most of the areas in the city are not suitable for farming. The Cape Flats, for example, experience hot summers, are exposed to strong winds which increase the water evaporation rate and increase the costs of farming (Reuther and

Dewar, 2005). Thus, the potential of urban agriculture is area specific, and should not be seen as a blanket solution to the food problems besieging the poor.

9.6.4 Surviving on Grants

South Africa is one of the few countries in Sub-Saharan Africa with a comprehensive set of social grants. These grants make a significant impact on day-to-day survival of individuals and households, allowing the recipients to secure basic energy and food needs. In South Africa, the grants range from the old age grant, disability grants, child grant and war veterans' grants to the foster child grant, and are dependency grant.

In 2012, 34% of households and 20% of individuals in the province were receiving grants. With the exception of Gauteng, the Western Cape has the lowest proportion of households receiving grants. In absolute terms, 1 991 375 households were recipients (more than the 1 455 162 and 572 930 households in the Free State and the Northern Cape Province respectively.) Du Toit and Neves (2006) show that grants have a very positive impact in most households. This is because the grants benefited not only the grant recipients but other household members as well. They allowed household members to purchase food, purchase property, build or improve homes, help in financing agriculture, and pay for children's education. Besides simply enabling households to survive, the grants also play an important empowering role when used to invest in income generating projects and investing in their own productive capacity. Additionally, they provide a degree of predictability of income, which enables households to plan food purchasing and therefore increase their food security.

Jacobs (2008) examined the effectiveness of the child support grant in meeting the child's needs in Gugulethu and found that grants are not used solely for the child's needs. In most cases, the grant is simply incorporated into household income. On average, households received a third of their total income from the child support grant, while the remainder came from other state transfers, and just over one third from employment. For those households living in the informal settlements in the area, the dependence on the child grant was even higher with the grant accounting for 51% of total household income. Food purchase was one of the most important expenditures for the grant money with 37% of the expenditures for food, 30% on education, 13% on clothing, 7% on clothing and 13% on other various expenditures such as rent, electricity and transport (Figure 9.22) (Jacobs, 2008).

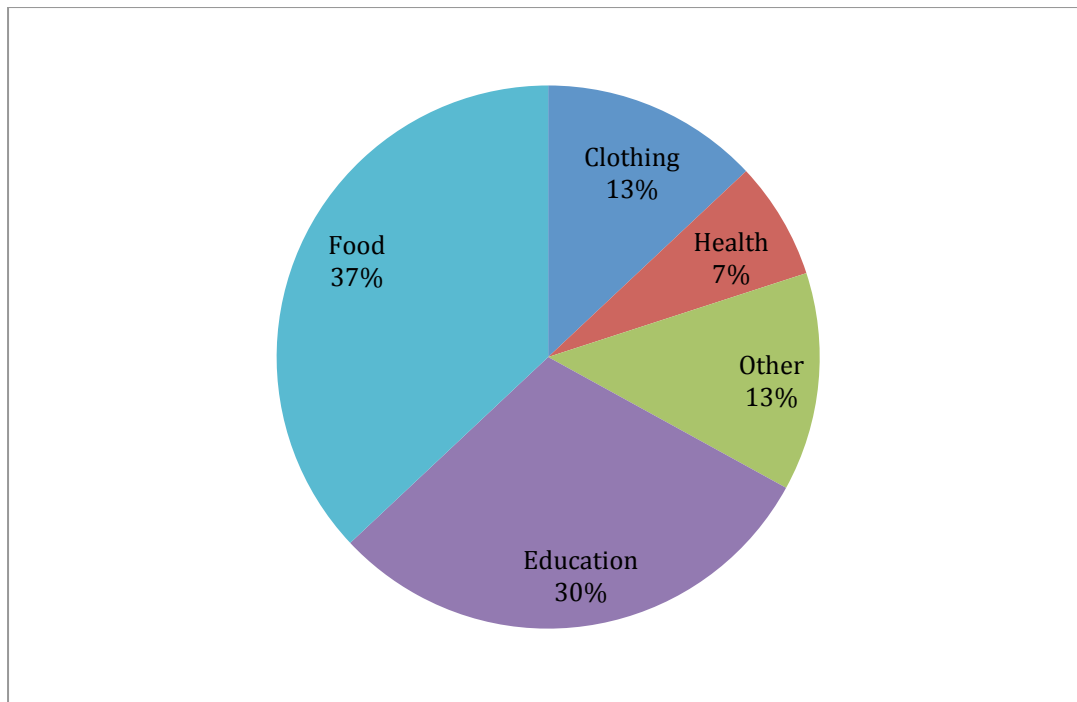


Figure 9.22: Expenditure patterns of the child support grant in Gugulethu (Source: Redrawn from Jacobs, 2007)

Nagdee (2004) shows that the greatest proportion of the grants received by the poor in the city are channelled towards the purchase of food (44%). Other expenses such as electricity, clothes, transport and school fees take second place. The findings of this study are similar to those of Ongolo (2009) who examined the role of the disability grant in the lives of visually disabled adults on the Cape Flats. The disability grant is used for various household expenditures, but all the study recipients reported food as the first spending priority.

9.6.5 Begging and Borrowing and Sharing Food

Begging is usually a last resort activity that people engage in to supplement income and meet subsistence needs. While begging is demeaning and leads to the loss of self-esteem, most of those who beg do not have a choice and would rather lose their dignity than their lives. Hence it is common in most cities in South Africa to find the poor begging for food. A survey of the livelihood strategies of female-headed households in Vrygrond shows that households that are in distress and cannot meet their daily food and other requirements have no option but to resort to begging. There, 14% of surveyed households indicated begging for money and food as part of their livelihood strategies (Nandoo, 2012). The proportion of households utilizing begging as a livelihood strategies was very low in the 2008 AFSUN survey (Battersby, 2012) but the migrants survey (Crush and Tawodzera, 2012) found 12% of households utilizing this strategy. Women and children in the streets or going from door to door petitioning for money and/or food mostly did begging.

Besides begging, some poor households in the city borrowing food from their neighbours and friends. In the 2008 AFSUN survey, a significant proportion of households indicated that they had acquired food from neighbours (29%) in the

previous year, while other households reported sharing meals (44%) and eating food that had been provided by others (34%) (Battersby, 2012).

Cooke's (2012) work in Manenberg found that in times of scarcity it was common practice for children from households that were struggling with food access to eat at neighbours' houses. Households would prepare a large pot of food, bulked out with beans and potatoes in anticipation of this practice.

Likewise, Tsolekile (2007)'s study on urbanization and lifestyle changes reports that households facing food challenges in the township of Khayelitsha indicated borrow food from neighbours and relatives in order to cope. Most indicated that they were uncomfortable with begging and only resorted to doing so because they did not have a choice. As discussed in Box 9.1, individuals exercise this coping strategy with caution, as they do not want to drain accrued social capital. In the context of areas of high food insecurity, people are borrowing from poor neighbours. There are concerns that in the long run, this may reduce the resilience of these borrowed from households to food insecurity.

9.7 Household Consumption Smoothing

Poor, food-insecure households in Cape Town adopt various strategies to smooth their consumption. These include skipping meals, eating fewer meals, shifting to cheaper alternatives as well as eating a limited variety of food.

9.7.1 *Skipping meals/Eating Fewer Meals*

Households do not ordinarily skip meals unless they are faced with serious food security challenges. Skipping meals allows them to save on their food stocks and to stretch whatever food resources they have. Cooke's (2012) study of urban food access in Manenberg found that 64% of households in the area had to skip a meal once or twice a week in order to smooth their consumption. In addition, 28% of households indicated that they regularly ran out of food completely at least once a month.

While skipping meals is detrimental to the food security and hence nutritional status of household members, most poor households in the city have no choice but to skip meals as a way to smooth consumption. The SANHANES Survey found that 19% school children do not eat breakfast at home in the morning (Shisana et al., and SANHANES-1 Team, 2013). Although there are a variety of reasons for this, one of the most important is there is not enough food in the household to feed any or all members. Some households would prefer to keep the little food that is there for either the afternoon or the evening meal. Additionally, if parents know that children are going to get food at school, they prefer to defer income to essential feeding at home. This kind of intra-household food allocation strategy may have long-term impacts on the health and nutrition of children.

9.7.2 Shifting to Cheaper Foods

When household resources are inadequate, most poor people generally disregard dietary and food quality issues. Rather they tend to concentrate on the amount and adequacy of the food that they are capable of acquiring. Thus quality tends to be sacrificed for quantity. In the same vein, poor households under stress tend to shift from the purchase of expensive to more affordable foods. This is particularly true when food prices increase dramatically, and poor households are unable to keep up with such increases because of constant incomes. Research on the constraints on consumption of non-animal proteins in Hanover Park by Cyr (2012) found that some households faced with the threat of food insecurity were resorting to non-animal proteins that were generally cheaper and therefore more accessible. The most common non-animal protein consumed was dried beans. In addition, households in the area indicated that their choice of food was being influenced by food prices, which were rising beyond their reach. Non-animal proteins were thus a less expensive alternative to meat. Non-animal proteins are also an important filler food that provided households with an inexpensive way to extend dishes and feed hungry families.

9.7.3 Eating a Limited Variety of Food

In extreme stressful circumstances, the poor and food insecure have no option but to limit their food choices. Households end up consuming a monotonous diet of starchy foods and very little protein and other nutrients required for a healthy living. Thus, while 'Enjoy a variety of foods' is one of the South African Food-Based Dietary Guidelines, very few among the poor can afford to enjoy that variety. Data from the South African National Health and Nutrition Survey (SANHNES-1) shows that households were limiting the variety of foods that they were eating in order to smoothen consumption (Shisana et al., and SANHNES-1 Team, 2013).

Box 9.1 provides a case study of how households navigate coping strategies and food security in a context of shock.

Box 9.1 – Food security in a post-fire context: A discussion of coping strategies (Sarah Duncan)

Low-income households are vulnerable to chronic and transient crises. Food insecurity is a major chronic challenge. Within the City of Cape Town, shack fires are a major transient challenge.

This box presents findings of a study conducted on food-based coping strategies in households affected by the 1 January 2013 fires in BM Section, Khayelitsha, which resulted in residents being relocated to OR Tambo Hall. The project used photovoice as a way to give fire victims a means to explain their coping strategies and post-fire experiences. Fires are a common occurrence in low-income areas, with Khayelitsha's Fire Station responding to an average of 80 fire incidents per month (de Lille 2012).

Pre-Fire: Before the fire households experience food insecurity caused primarily by income poverty, but compounded by unsanitary and unsafe conditions. As female household heads, participants felt particularly vulnerable to incidences of assault and burglary. The increased risk of shocks from crime and violence led participants to be tentative in their navigation of space, for example accessing water from outside taps and bathrooms only during the day.

Although the bulk of food was purchased from formal and informal markets, they were also able to draw on social networks to source food. However, the use of social networks required an active engagement in which participants would access and manage them between the lines of personal survival and social network saturation and loss. For example, one borrowed only small

items such as salt from neighbours so as not to over extend good will. Social Networks, along with other food security influencing factors, were lost and disrupted by the fire and the move in to the O.R. Tambo Hall.

In the Hall: Immediately after the fire households, 150 households were moved into the O.R. Tambo Hall by Disaster Management and received emergency food relief supplied by Food Bank, Mustadafin and the Community Bible Society. While 150 households moved into the hall, 704 fire-affected households elected not to enter the Hall and moved in with family and friends. The participants in this study used moving to the Hall as a long-term coping strategy. It meant that they were ensured a place on the rehousing list and it meant that they did not over-stretch their social networks. Additionally, it enabled them to save money (largely from social grants) to re-establish themselves once they were re-housed. While ostensibly food secure in terms of guaranteed access to food, the women in fact experienced food insecurity as they felt they lacked agency, they stated that the food provided from one of the agencies made them sick (although this was mainly equated with the lack of cultural familiarity with the foods provided), and they believed that the volunteers ate the meat out of the pots and had poor hygiene standards (see Figure 1).



Figure 1: Inappropriate food aid serving conditions identified by a research participant

Temporary Relocation Area: When the participants moved into the Temporary Relocation area, they initially expressed excitement about recovering autonomy over their food consumption. However, hindrances to food security soon emerged. One of the participants' TRA house was so poorly built that she could not lock her house, which made her vulnerable to theft. This therefore prevented her from buying in bulk. Some of the houses did not have access to electricity (the Gift of the Givers houses had solar panels) and so they had no choice but to cook on gas were forced to cook on gas (more expensive than their previous legal and illegal electricity connections and gas use mix), and light their houses with candle – which made the fire survivors nervous. There was limited storage space which not only hindered what could be bought, but also perpetuated a sense of uncertainty (see Figures 2 and 3)

While in the TRA participants diverted money from food purchase to re-establish their asset base. This was noted as the most important hindrance to food security, outside of unemployment. Choosing to go hungry is a coping strategy, but not a sustainable one. One of the participants stated that she felt 'angry' at having to use food coping strategies, and 'shame' at accepting aid from NGOs and community members:

'Like "oh shame, you were in that disaster thing, shame. I can give you this thing, like shame", it robs you of your confidence...and you have to take because you don't have a choice. And it backs the memory of the first of January, all those memories of that day'.

They felt that their attempts at recovery were also not helped by the perceived poor communication by governance stakeholders, for example, in terms of aid initiatives. In particular, NGO aid was mismatched with recovery when it was unevenly distributed among, causing more community divisions than unity.

Figure 2: A food cupboard – An aspiration

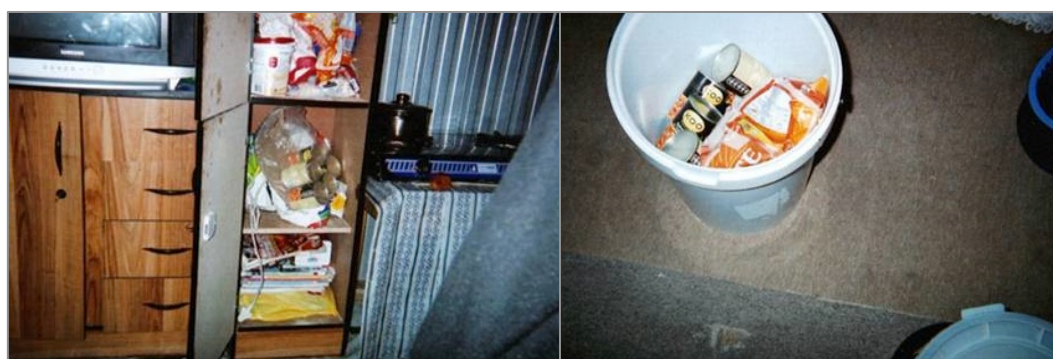
Figure 3: Food in a bucket – Undesirable storage

Conclusions: Social networks play a vital role in food security coping strategies of the poor, Food security needs to be understood in subjective as well as objective terms, and there are opportunities to enhance post-disaster aid. Collectively, participants were food insecure before the fire and they remain food insecure despite recovery and aid efforts. Improved quality, equally distributed and appropriate aid delivery could be better governed, uniting rather than dividing the community in their recovery efforts. Without the contextualised acknowledgement and involvement of social networks, food security subjective elements, and appropriate aid for recovery, communities - such as the participants - will continue to be food insecure and trapped in a repeating cycle of poverty.

FOOD COPING STRATEGIES ²⁵			
BASED ON LITERATURE (Maxwell, 1996 – a)	PRE-FIRE	HALL	POST
<i>Eat less preferred food</i>	✓	✓	✓
<i>Bulk buy</i>	✓		✓
<i>Not cook everyday</i>	✓		✓
<i>Eat smaller portions</i>	✓		✓
<i>Borrow food/money for food</i>	✓	✓	✓
<i>Maternal buffering</i>	✓	✓	✓
<i>Skip meals</i>	✓		✓
<i>Skip eating whole days</i>	✓		
<i>More people work</i>			
<i>Sell assets to buy food</i>	✓		✓

De Lille, P. (2012) 'Mayor Pays Tribute to Firefighters for Outstanding Service'. Media Release – Speech by Executive Mayor. 12 January 2012, Communication Department, Cape Town. [Online] <http://www.capetown.gov.za/en/MediaReleases/Pages/Mayorpaystribfirefightersforoutstservice.aspx>

Source: Duncan, S. (2013) Food security in a post-fire disaster context: Experiences of female-headed households in an informal settlement, Unpublished Honours Project, Department of Environmental and Geographical Science, University of Cape Town.



²⁵ Participants also used coping strategies not identified by Maxwell (1996 – b) for example, eating nutrient fortified foods like Morvite.

9.8 Conclusion and Recommendations

This chapter has examined the status of household food security in the city of Cape Town and identified a number of factors that determine the state of food insecurity in the city. The review of research amply demonstrates the pervasiveness of food insecurity among low-income households in the city. Food insecurity is characterized not only by access problems, where a significant proportion of the poor periodically suffer from food shortages, but also shows a worrying reliance on narrow diets. The research studies provide valuable insights into the challenges that the majority of poor households in the city of Cape Town face. In Cape Town, the poor have become as vulnerable to food insecurity as their counterparts in the rural areas.

What are the factors that are linked to food security vulnerability? The challenges that households in the city face do not emanate from one factor alone but an interaction of factors. Chief among the factors are the acute levels of poverty among low-income groups. With 37% of the city's households living below the poverty datum line of R3 500 per month, the chances of households failing to adequately feed themselves are high given that poverty and food insecurity are intimately related. Most of the poor people are domiciled in the Cape Flats, an indication that in food security terms, the 'apartheid city' mostly endures.

Food insecurity in the city is also linked to high unemployment rates among the poor. Without employment, poor households in the city find it difficult to raise the money that they need to pay for food and other household expenses like housing, transport, education, clothing, rent, water and electricity. Most of those that are employed among the poor are poorly remunerated and thus struggle to feed their household members.

Rising food prices are causing problems among the poor in the city. While the prices of fuel, electricity and food are increasing, incomes for the poor remains almost stagnant. The result is that the poor can barely feed themselves. Although a significant proportion are receiving government grants such as the child grant, disability grant or old age grant, the amount of money received is barely sufficient to live on.

While food security is more than just an issue of physical access, there is no disputing that the geography of food access in the city is skewed in favour of the middle and high-income areas. The low-income areas are poorly served by retail outlets and source food from informal shops and spaza outlets. While these outlets serve to bring food closer to the consumers and sometimes break down food into affordable quantities, the unit prices are higher than in large retail shops. Thus the poor, who generally lack the resources, are the ones that are purchasing from the most expensive outlets, rendering them more food insecure. Households living in informal housing are unable to maintain adequate food provision in part because they live in the most inaccessible parts of the city, live further away from sources of employment and cannot make significant savings by buying in bulk since they lack adequate storage, refrigeration and cooking facilities.

South Africa produces and/or purchases enough food to feed its population. It is therefore tempting to assume that there are no significant food problems in the country, particularly in the urban areas, where food is abundant in shops. This study shows that such an argument is naïve at best. An abundance of food at the national level does not necessarily translate to food security at the local or household scale. In the Western

Cape in general, and in Cape Town in particular, the number of households that are food insecure is unacceptably high.

Based on the findings presented in Chapter 9, the following recommendations are made:

Measuring Food Security and Insecurity

1. The following suite of indicators should be used to monitor food security and insecurity: HFIAS, MAHFP and HDDS. Additionally, the City should conduct food system assessments.
Level of importance: High
Responsibility: Strategic Information Analysis and Research, Proposed Food System working group in partnership with local universities
2. The City should monitor food security through the Food Access questions included in the General Household Survey.
Level of importance: High
Responsibility: Strategic Information Analysis and Research
3. The City should request to StatsSA that a dietary diversity component be added to the General Household Survey.
Level of Importance: Medium
Responsibility: Proposed food system working group, Mayor's Office

Levels of Food Insecurity

1. The City should consider collecting and advertising food prices from retailers in different environments to aid consumers in purchasing the lowest priced foods.
Level of importance: Low
Responsibility: No clear line of responsibility
2. The City should consider either local by laws that limit the retail of less healthy foods in or near schools, or consider programmes to incentivize retail of healthier foods.
Level of importance: Medium
Responsibility: Health Directorate in partnership with Planning & Business Development Management and Economic Development.
3. The City should investigate strategies to address the structural barriers to breastfeeding, such as lack of provision of space in public places.
Level of importance: Low
Responsibility: Community Services, with the Provincial Department of Health

Determinants of Food Security

1. Food and nutrition security interventions should target low income, peripheral areas of the city, with specific focus on female-headed households and households in informal settlements as particularly vulnerable groups.
Level of importance: High
Responsibility: Social Development
2. There is a need for more integrated planning of food retail environments with food and nutrition security as a guiding principle.
Level of importance: High

Responsibility: Proposed food system working group with Planning and Business Development Management and Economic Development.

Household survival and consumption smoothing

1. The City should partner with the NGO sector to provide mechanisms for less exploitative loan systems

Level of importance: Medium

Responsibility: Social Development

2. Disaster Management and its partner NGOs could extend their appreciation of the components of food security, and consider mechanisms to monitor long-term recovery.

Level of importance: Low

Responsibility: Disaster Management

10 Lessons from Elsewhere

Key Summary Points

- There has been a rise in interest in urban food governance worldwide, with North America being an area of particular strength.
- The establishment of a food governance structure including multiple municipal departments and external stakeholders has been identified as crucially important. A dominant Northern model is the Food Policy Council. Approaches in South America have been more state-driven. Both forms have strengths and weaknesses that need to be considered by the City.
- A common approach used to ground food governance is to develop an Urban Food Strategy and a Food Charter. This provides strategic direction and can be used to create connections between diverse stakeholders and projects.
- Multiple projects and initiatives in Production, Processing and Trade, Retail, Planning and Social Protection were reviewed. A detailed presentation of three specific projects was presented. Possible lessons for the City were identified.
- A number of barriers experienced by other cities have been identified: Lack of political will; time and finance constraints; Conflict with other priorities; Policy vacuum; Sphere of influence. This section concludes with a discussion of strategies to plan around or overcome these barriers.

This section presents food system and food security interventions that have been developed elsewhere. It focuses on three aspects of the interventions, a) Governance Structures, b) Food System or Food Security Strategies, and c) Specific interventions in the form of local ordinances, by-laws or programmes. The final component provides reflection on the strengths and weaknesses of these interventions in relation to their local contexts. Chapter 11 following interrogates the potential of these approaches to the Cape Town context.

Although the City may value extensive details of specific programmes and projects, throughout the primary and secondary research for this project, it was made clear to the consultancy team that what had been most important in other cities that had embarked on food system and food security governance was the process. Additionally, because of the very different roles and functions of municipal governance in these case study cities, direct applications for the City from specific projects are not readily apparent.

Internationally three distinct food governance trends are evident. The first appears to flow from the changes taking place in North America with a model of food policy council being replicated in developing world cities. In South America, a city government led process of food governance has emerged with cities such as Belo Horizonte, Porto Alegre and Bogota offering insights into different forms of food governance, often emerging within the context of radically different overarching urban governance strategies and approaches. The third approach remains deliberate and reflects a steady withdrawal of all forms of public action in the food governance environment. While this third trend is

not specifically an urban governance trend, it does manifest most directly in urban areas. In short, following from Pothukuchi's (2000) statement that inaction in the food planning environment does not have neutral consequences, but rather reflects negative outcomes, the deliberate and progressive withdrawal from food governance is a urban food governance action in and of itself.

10.1 The rise of food planning and urban food governance

There has been a rapid increase in interest in food planning and urban food governance in the last fifteen to twenty years. This interest has been driven both by increasing discomfort with the nature of the food system as it is linked to rising obesity and chronic disease from poor nutrition (as highlighted by authors like Michael Pollan, Eric Schlosser and Marion Nestle) and by increasing awareness of the possibilities for more general urban benefits that conscious engagement with the food system offers.

The first perspective was reflected in a recent piece in *The Atlantic* with reference to Hurricane Sandy's impact on New York:

“The recurrence of disaster is why it's so disturbing that city officials have little concrete data on how reliant their food system is on the private food distribution industry, and whether society is teetering a mere 'nine meals away from revolution' (an ominous old expression that appeared in The Atlantic all the way back in 1945). Worse still, they have little understanding of the logistical changes that have revolutionized how companies warehouse and distribute the food on which New Yorkers depend.” (Mahanta 2013).

This second, more hopeful, perspective was presented by New York's Speaker at the launch of the FoodWorks Initiative in 2009:

“Suppose I told you that New York City had the opportunity to create thousands of new jobs – but we just weren't doing it. You'd probably be pretty upset. Now suppose I went on to say that we've actually had that opportunity for years, we just weren't paying close enough attention. I bet you'd all have some choice words for me – the kind that shouldn't be repeated in polite company. Alright, now suppose I told you that by taking steps to create those jobs, we could also improve public health and reduce our energy consumption. We could fight childhood obesity and asthma. We could keep millions of dollars in the local economy, instead of sending those dollars across the country or around the world. But we still weren't doing it. Well the fact is, we have been ignoring those exact opportunities. For years, we've been missing a chance to create a greener, healthier, and more economically vibrant city. How? By ignoring the enormous potential of our city's food system.” (Quinn 2009)

The argument in both articulations is that we cannot take it for granted that food will just arrive in sufficient quantity and quality to reach cities' residents needs. As Moragues et al state:

“[E]vents such as the 2007-8 food price hikes have shown the vulnerability of access to food, and its connection with riots and national security concerns around the world. Also these price hikes have demonstrated once more the dependence of our food system on fossil fuels, which constitute just one of the many environmental impacts of our diets... In this context, food is rising up urban agendas and stakeholders at the local level - from the public, private and civil society sectors - are reasserting responsibility for food policy. Food plays a unique role in sustaining human life, since we all need to eat! And food is connected with a wide range of municipal and regional policy areas: from land-used planning to infrastructure and transport, environmental conservation, housing and economic development. Food,

then, can be a vehicle to integrate the economic, social and environmental dimensions of sustainability, as well as for addressing justice and health issues a different geographies and scales, including cities.” (Moragues et al 2013, 4)

It has been argued that food planning and governance should occupy a similar position in the public health agenda to the provision of clean drinking water and public sanitation (Castles 2005 in Heart Foundation 2011, Gostin 2013).

While food issues have been identified as critical urban challenges, it has also been noted that “municipalities have had limited jurisdiction over the food system, yet they are faced with the consequences of food system failure” (MacRae & Donahue 2013, 3). As a result, cities around the world have developed a range of governance structures and strategies to embed food system interventions in local government. The problem of lack of clear mandate is therefore far from unique to the South African context. Cities have attempted to find multiple ways to work around this mandate gap.

The majority of the systemic, rather than project- or programme-based, interventions have been generated in North American and European cities. It is recognized that the South African context is ostensibly very different, however there are points of commonality that make a review of these initiatives valuable.

Firstly, although there are significant differences in levels of wealth, issues such as nutritional inequalities and poor diets, poor access to affordable nutritious food and the dominance of large retailers are common to Cape Town and these cities. Secondly, although some are now highly developed, many of these international programmes emerged in contexts of urban policy vacuums and a lack of clear food mandates.

The review of food system governance literature suggests that there are three different, but connected types of intervention: Governance structures, Food system strategy development, and specific project- or programme-based interventions. The remainder of this chapter considers these three and concludes with an evaluation of the impact of the approaches.

10.2 Governance Structures

There has been an explosion of urban food governance systems in the last ten to 20 years. There has been no single, coherent approach. The types of governance approaches and structures have been largely determined by local interests, local food system conditions, and existing policies and political structures.

For example, the process in Bristol grew out of very engaged citizen movements; the process in Malmo was driven by the state. What has emerged therefore is a range of governance structures with varying levels of formality and organization, and governance processes ranging “from established functioning rules to tacit and self-organizing dynamics” (Moragues et al 2013, 13). Despite the diversity of origins and approaches, it is clear that food system governance cannot be the role of local government alone (Athreya et al 2010 xviii).

This section provides an overview of the major forms of governance structures. It focuses on US and Canadian Food Policy Councils, British and European food governance approaches and South American food governance approaches.

10.2.1 Food Policy Councils

The dominant model of food system governance the US and Canada is the Food Policy Council (FPC), the first of which was established in Knoxville, Tennessee in 1982 (Harper et al 2009, 1). Although Food Policy Councils are diverse in form, they can be broadly defined as:

“A structure that brings together stakeholders from diverse food-related areas to examine how the food system is working and propose ways to improve it. A food policy council may be an official advisory body on food systems issues to a city, county, or state government, or it may be a grassroots network focused for educating the public, coordinating non-profit efforts, and influencing government, commercial and institutional practices and policies on food systems” (Kent 2010)

This section provides a brief analysis of the structure, scale and focal areas of FPCs in the US and Canada drawing on a database of the Community Food Security Coalition.²⁶

North American Food Policy Council Review

As indicated above, FPCs have been established by a range of stakeholders from within the State and beyond. As a result they retain a wide range of governance structures. Table 6.1 provides an overview of the typologies of governance structure. It has been argued that this range is in part due to the diverse range “food policy entrepreneurs” (MacRae & Donahue 2013, 34) both within and beyond the state who drove the establishment of the local FPC. This is a process whereby “initiatives and/or individuals with limited resources, but often considerable knowledge and social capital, leverage their expertise to effect change in ways that aren’t necessarily common to traditional interpretations of food policy work. Such leveraging occurs in multiple domains, beyond economic development, and includes social and health policy change” (MacRae & Donahue 2013, 34)

Figure 10.1 presents the governance structures present in US and Canadian FPCs. It is notable that there are distinct differences between the governance structure forms in the two countries. This may be in part of the role of policy transfer networks in the US and Canada, particularly since in Canada 87.5% of all FPCs are in Ontario and British Columbia. The differences are also attributable to the countries’ different political structures. It is noteworthy that 61 of the 64 Canadian FPCs operate at the city scale, whereas in the US under half operate at the County/Local or Local scale.

²⁶ See www.foodsecurity.org

Table 10.1: Food policy governance typologies. (Source: MacRae and Donahue, 2013: 8)

Municipality driven	These food policy initiatives are financed by the municipality and directed by municipal staff with advice from external groups. The municipal government sets the mandate and provides financing and staff resources. They are housed within existing municipal government units.
Hybrid governance with direct government links	These food policy initiatives are a hybrid of civil society organizations and government with a conduit to decision makers through municipal council, and with municipal financing, political champions, and supportive staff. They are characterized by formal municipal endorsements, structural links, and accountability to a government body.
Hybrid governance with indirect government links	A hybrid of civil society organizations and government, but with fewer formal attachments and lower levels of financing and government staffing arrangements. The conduit to council is less direct, via departments and government staff. The linkages with government are still significant, but less so than the above hybrid version.
Links to government via a secondary agent	Not formally connected to government, but linked through secondary agencies. They may have important ties to government (such as a municipally endorsed food charter) or receive some government grants.
Civil society organisation with limited and informal government links	A civil society organization or project committee, on which government officials may participate. The organization may receive some government grants.
Independent organisations with no government links	No formal connection to government and do not seek to partner with government or receive funding. The initiatives, however, are developing a clearer structure and the ability to engage government in food system change.

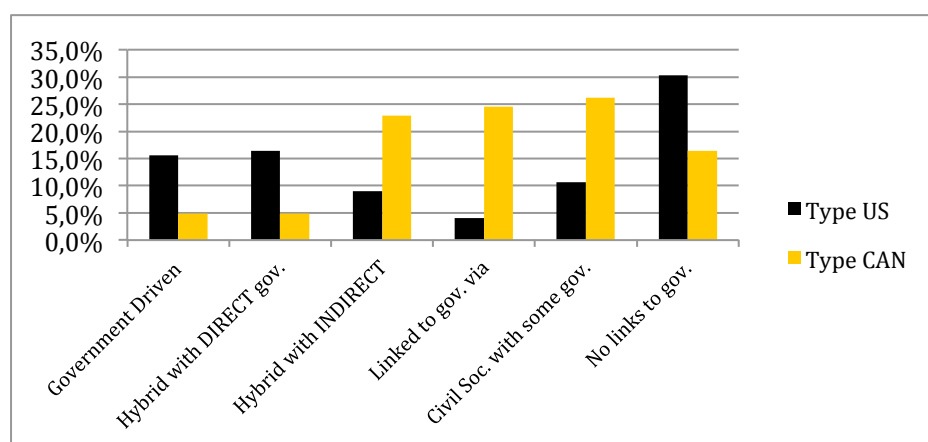


Figure 10.1: US/Canadian FPC governance regimes (US n= 105 and CAN n=61)

What is clear from Figure 10.1 is that the Canadian structures reflect a far greater level of partnership in the governance of the food policy structures. While all governance typologies are present, the majority of groups could be considered to reflect a greater level of civil society participation with government playing a facilitative and convening role as opposed to a leadership role. This trend reflects greater partnership and collaboration between groups, something that is evidenced the fact that there are just fewer than 50% less independent groups in Canada as opposed to the US. The governance trend, one that reflects a far greater level of collaboration within the Canadian case, was termed pluralistic governance by MacRae and Donahue (2013).

In addition to a diversity of governance structures and scales of focus, there is a range of areas of focus. These areas of focus represent perceived problems in the local food system and perceived areas of local capacity to intervene in the food system. In the review of US FPCs 23 areas of focus were identified, but 12 key areas emerged (Table 10.2).

Table 10.2 Key areas of focus of FPCs

Education	Food Security	Food access & advocacy	School feeding
Farm-to-table projects	Sustainability	Local food initiatives & programmes	Production (including urban agriculture, farm support and land access)
Planning issues & land use	Health & nutrition	Policy interventions & legal issues	Processes to enable the collection of data, mapping and food system knowledge generation

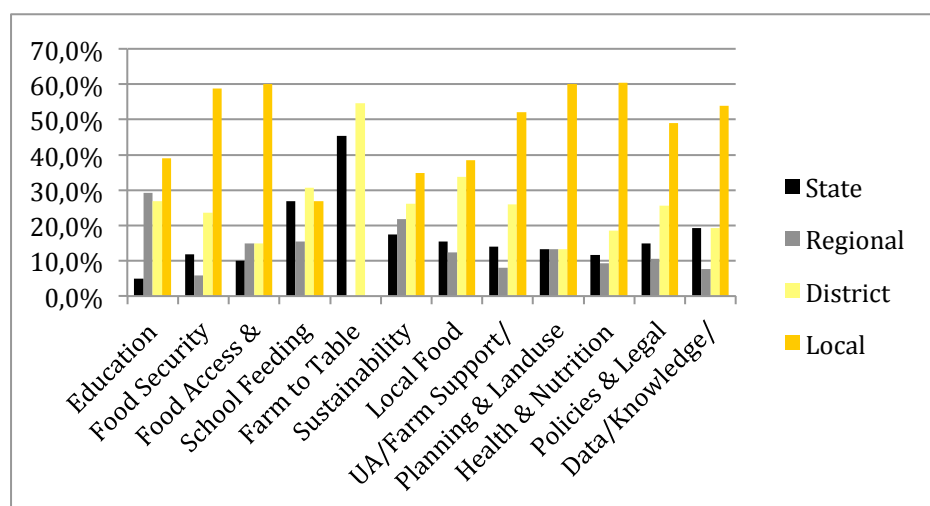


Figure 10.2: Area of focus of US FPCs by revised SA specific scale (Percentage n=179)

Figure 10.2 provides an overview of the areas of focus of US FPCs according to scale of engagement. As is clear, many of the FPCs have multiple areas of focus. The FPC model is one that provides the possibility of linking diverse interests and challenges to generate new, inter-connected sets of solutions.

One of the ongoing challenges for FPCs that have a direct local government connection is where to embed the council's leadership. It has been identified by individuals actively involved in FPCs that there needs to be a recognized institutional home for a Council and that this home needs to be strategically located to represent the key interests of the Council and to be in a position to yield convening authority (Rocha 2013, Cook 2013, Morales 2013, MacRae 2013). Figure 10.3 provides an overview of the bureaucratic location of a range of food policy programmes. As is evident, there is a strong clustering around sustainability reflecting both a dominant theme, and the integrative nature of sustainability departments, which provides an opportunity for cross-departmental connections to be made.

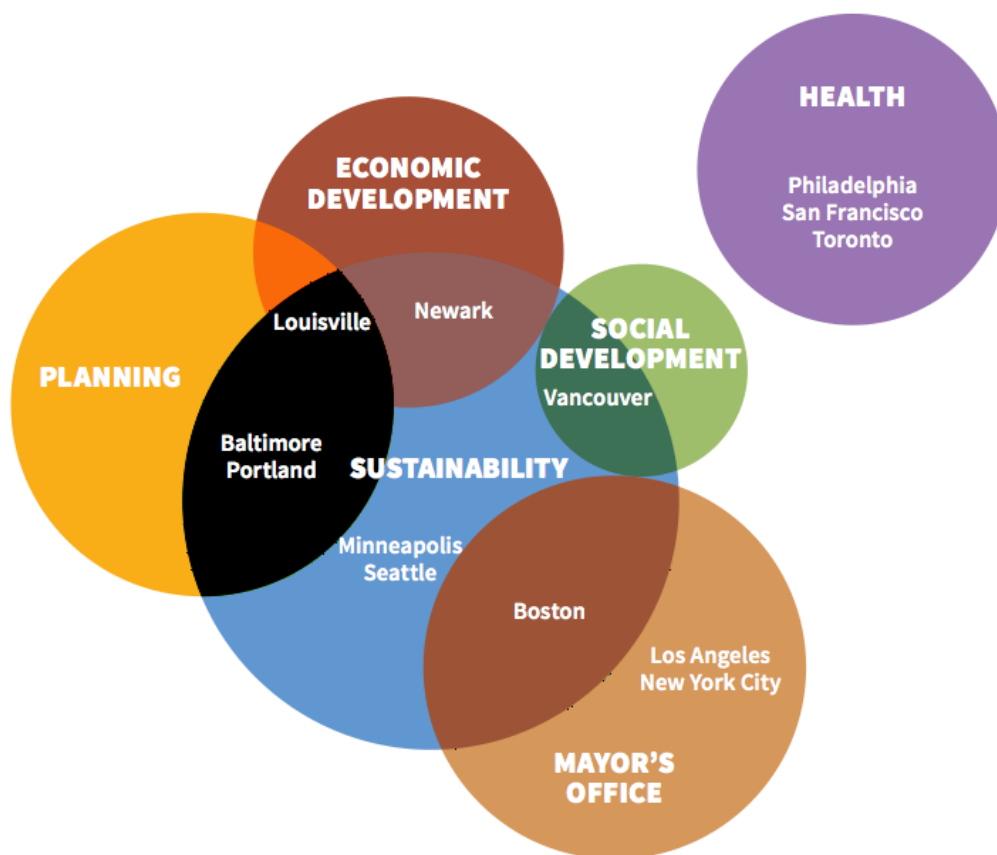


Figure 10.3 Overview of the bureaucratic location of food policy programmes (Source: Hatfield 2012, 16)

Europe and Australia

There is emerging food system governance movement in Europe and Australia, with leaders being Bristol, Brighton, Edinburgh and London in the UK, Utrecht, Lelystand, Groningen-Assen, Maastricht, and Rotterdam in the Netherlands, Malmo in Sweden, Tukums in Latvia, and Melbourne in Australia (Carey 2011, Moragues et al 2013, Dingemans 2012). Although less well-established than in the North American context, there is clear growth of food system structures in Europe and Australia.

This review has considered the trends drawn from the North American FPC review and those emerging elsewhere. When these FPCs were considered collectively, a selection of key operating principles can be deduced from the FPC approaches. These approaches are detailed in Table 10.3:

Table 6.3: Food policy council trends.

Theme	Action
Governance	Governance processes that draw on multiple actors that are both in and outside government.
Management	While many cities are directly involved in the management of the FPC, the majority of cities play a less direct role, using their convening authority to facilitate processes and actions as opposed to top down managerial roles within the FPCs or the broader food system.
Knowledge/Data	Recognition given to the knowledge and networks of multiple food systems actors and seek to facilitate the equal use and application of this knowledge. This knowledge recognises immediate issues but also long term trend considerations.
Remit	Direct focus given to contextual issues pertinent to the dynamics present within the specific FPC locality. How these contextual issues intersect with broader issues is viewed from the perspective of the FPC “looking out”.
Interdisciplinarity	Focus on connections and intersections between issues traditionally locked in distinct governance silos. How issues of health, education, planning and environment connect are dominant areas of focus.
Ideology	A key trend is an alignment with general considerations associated with sustainability. In many cities this is considered more critically with a more integrative approach to sustainability as opposed to a specific green focus.
Networked	All groups reflected a desire and willingness to engage with multiple food system actors (in general terms) but specifically with other cities and FPCs in order to share experiences, knowledge and challenges.

Strengths and weaknesses of Food Policy Councils

One of the greatest strength of the Food Policy Council is its capacity to bring multiple stakeholders together and generate responses to identified challenges drawing on public and private sector resources, as well as civil society engagement.

Additionally, as FPCs are not necessarily housed in government, it provides possible flexibility for Departments to engage outside of their strict line function and provides a space for dialogue to develop between Departments.

Finally, because they are not organs of state, and not owned by the City, there is little resource cost to the City.

However, the very strengths also provide challenges. The lack of ownership by the City may result in poor alignment of FPC activities and recommendations and City strategic objectives. Because of the voluntary nature of the FPC it is also difficult to use its recommendations to level funding for specific projects. Finally, in a starkly divided city like Cape Town, it may be difficult to generate a representative working group able to speak for the needs and interests of all residents of the city.

10.2.2 South American food governance approaches

The trends within South America reflect a somewhat different trajectory to those of the North American examples. One of the key areas of difference is the direct role played by city governments in these processes. Perhaps the best know of these is Belo Horizonte.

Belo Horizonte has received much attention, partly due to the role that this programme played in some of the overarching policy approaches adopted by the Lula government when it came to power in 2003.

When the Workers' Party (PT – *Partido dos Trabalhadores*) came to power in 1993, as the new city government of Belo Horizonte, they established the Secretariat for Food Policy and Supply (*Secretaria Municipal Adjunta de Abastecimento*—SMAAB). SMAAB initially sought to engage in the food challenge along three programmatic lines. The first encompassed policies geared to assist poor families and individuals at risk through supplementation of their food consumption needs. The second was directed at the private sector in the food trade, seeking to bring food to areas of the city previously neglected by commercial outlets. Attempts to increase food production and supply formed the third line of action (Rocha and Lessa, 2009, 390). As of 2009 programmes at SMAAB are described under six main programmatic areas of focus:

Subsidised Food Sales;

Food and Nutrition Assistance;

Supply and Regulation of Food Markets;

Support to Urban Agriculture;

Education for Food Consumption; and

Job and Income Generation (Rocha and Lessa, 2009: 391)

From most reports, the Belo Horizonte approach has been an unqualified success. Two distinct aspects are evident in the Belo Horizonte case. Firstly, at no time has the Belo Horizonte food and nutrition support programme cost the city more than 2 percent of the city operating budget (Göpel, 2009). This low cost to the city was enabled through the role played by the city in building partnerships and through the effective use of state funds channelled to the city-led projects and programmes. The second core trend was that the initiatives that were started in Belo Horizonte, informed by their success and ability to deliver on development imperatives, have informed state and then national policies, evident in the formation of the *Fome Zero* (Zero Hunger) strategy across Brazil.

A similar trend is evident in Bogota, Colombia. Challenges in Colombia are primarily the driven by insufficient access to food and poor food utilization. In the capital, Bogotá 33, 1 percent of the population is food insecure (ICBF 2006). Many of the vulnerable are made up of Internally Displaced People. Approximately 40 percent of Internally Displaced People have settled in urban areas with Bogotá receiving the largest number of these refugees; as of 2007, there were 150,012 IDPs in the city.

Bogotá has used legislative measures to provide the key legal framework to enable food security actions at the city scale. In 2007 the city passed the Food Security and Nutrition Public Policy for Bogotá which guaranteed the right to food. In 2008 the “Bogotá well nourished” programme (*Bogotá Bien Alimentada*) was included in the development plan of the government of Bogotá. The programme included a focus on food access, food availability, feeding practices and healthy lifestyles and a public health focus considering nutrition programmes and access to and utilisation of healthy environments. These objectives were facilitated through local committees of food and nutritional security that were supported by four projects:

Urban agriculture practices promotion

School feeding

Food assistance to vulnerable pregnant women

Food and nutrition security

The food and nutritional aspect of the programme was largely facilitated through a the city led initiative comprising over 310 community kitchens that offer a lunch-time meal to poor populations certified as beneficiaries by the city government. While the programme has not been without criticism, it has enabled greater food access and reported improvements in health and further beneficial improvements in education (SDIS, 2012). In a survey conducted within the city, 91 percent of those community kitchen users felt that the service had contributed to ensuring the realisation of their right to food (SDIS, 2012).

A key factor in the Bogota example is that the initiatives fed from the city scale to the national scale, informing national policy initiatives specific to food. In the case of Belo Horizonte in Brazil, the success of the city driven programme resulted in national policy shifts followed by resources and programmes being applied in other cities within Brazil. Both the South American city approaches emerged “from a municipal government’s innovative approaches rather than entrepreneurial responses to an unjust and unsustainable food system” (Rocha and Lessa, 2009: 398), as is the case for the development of food policy councils.

Strength and Weaknesses of the Latin American approach

The strong state ownership of food system governance in Brazil and Colombia has two important strengths. Firstly, it provides the possibility for the development of a coherent, interrelated set of projects linked to a single clear agenda. In the case of Belo Horizonte, this was evident in the efforts to link small-scale agriculture to markets and to public procurement, for example. This kind of connected approach would be less possible under the FPC approach. The second strength is that it ensures that projects are directly aligned to broader City strategic objectives.

However, this approach is not without its challenges. In a context of a lack of clear political mandate, there has been an ongoing challenge of leveraging resources to fund such a programme and of justifying its legitimacy. The second challenge is that successful food system governance is dependent on multiple stakeholders from the private sector, NGOs, civil society, and other spheres of government working together. Under the Latin American model, there is no clear scope for this.

10.3 Urban Food Strategy Formulation

The Food Policy Councils and the examples of food governance from South America provide a sense of the range of governance approaches that have been employed. This section provides a brief overview of Urban Food Strategies as a means to operationalise the ideas generated by the food system governance structures. The formulation of an Urban Food Strategy (UFS) has been identified as a useful tool to guide future planning and to build consensus.

A UFS is:

“[A] process consisting of how a city envisions change in its food system, and how it strives towards this change. UFS aim to place food on the urban agenda, capitalizing on efforts made by existing actors and creating synergistic effects by linking different stakeholder groups. Written milestones in this process can be charters, action plans or full strategies.... Ideally, UFS take a holistic approach to the food system of a city, considering horizontal and vertical dimensions” (Moragues et al 2013, 6).

The benefit of the UFS is that it provides the opportunity to “take a critical step back and think about things that people who are in implementing agencies can’t think about” (Wagner & Wu in Hatfield 2012). It also helps clearly define departmental role and responsibilities and embeds a cohesive vision among city agencies (Hatfield 2012).

This section focuses on the notion of Food Sensitive Planning and Urban Design (FSPUD) as an organizational strategy for food system and food security interventions (Donovan et al 2011). The FSPUD approach considers the physical and spatial implications of meeting food needs and actively seeks opportunities to connect meeting food needs to meeting other desired planning outcomes. Advocates of FSPUD argue that:

“FSPUD means thinking about ‘and’ opportunities rather than ‘or’. By planning and designing Food- sensitive places, we have the opportunity to create jobs, build communities and transform, for the better, the environmental sustainability of our settlements and the environmental welfare enjoyed by their inhabitants. Planners and designers can use Food to simultaneously address multiple objectives, creating diverse opportunities for people to meet their needs” (Donovan et al 2011, 13)

FSPUD principles

1. Support secure and equitable access to the Food necessary for a healthy and fulfilling life.
2. Make healthy and sustainable Food choices easy and convenient choices.
3. Encourage use of spaces and places to meet many diverse needs, reconciling Food production and exchange with housing, enjoyment of open spaces and recreational areas, urban cooling, skills and jobs, socialising and community celebration.³⁰
4. Provide opportunities for those who wish to participate in growing, exchanging, cooking and sharing Food.
5. Identify and invest in the safe use and re-use of urban resources (soil, water, nutrients, ‘waste’) that can support viable and sustainable Food production.
6. Protect and/or enhance urban and surrounding ecosystems and increase biodiversity (including, but not limited to, bees, open-pollinating fruit trees, native vegetation).
7. Ensure decisions reflect the long-term value and broader community benefits of access to productive land and experienced producers.
8. Encourage investment and innovation, through secure tenure and supportive operating environments for both community and commercial Food enterprises.
9. Increase resilience, by designing to keep options open for future use of space and resources.
10. Acknowledge and support diversity and sovereignty (the right to have informed choices) over what, how and where people produce and eat Food.

Figure 10.4 Principles underlying FSPUD (Donovan et al 2011, 12)

In order to embed the work of Food Policy Councils in local government and have the kind of cross-sectoral benefits described above, it is necessary to develop a UFS. The development of a Food Charter, which establishes the principles undergirding food system and food security interventions, has been demonstrated to be a powerful trigger and legitimator of longer-term food engagements. Food Charters have been the starting point for broader engagements in cities such as Toronto and Bristol (BCC 2010). This is the starting point of UFS development.

Moragues et al provide a guideline the process of UFS development. They advise the following steps:

1. *Stakeholder mapping*: Identify relevant actors. Understand their motivations and interests. What are the incentives and barriers for them to participate? What are the potential barriers to their engagement?

2. *Plan the process of participation:* Plan the interchange between broad participation of a wider audience (awareness building) and limited participation of strongly engaged stakeholders (working on the action fields). Clarify and communicate clearly on how the different inputs of the wider audience and the core group are used in the process. Keep the public informed.
3. *Involve an effective facilitator:* Chose methods of participation that best support the goals at each stage. Develop an integrative governance structure. Find mechanisms to mainstream the UFS into existing policies, budgets and practices of institutions.
4. *Assessment of current food system*
5. *Find joint visions and goals*
6. *Define an action plan and concrete actions:* What can be done to improve the current situation? Prioritize different actions. Identify main actors who can be involved. Identify available tools. Develop a step to simple steps to follow.

It is out of the establishment of a UFS that individual programmes and projects are able to be connected.

10.4 Specific Interventions

There are a very large number of urban food security interventions in cities around the world, which have been driven both by the state and NGOs and civil society. One of the most dynamic sets of interventions in Africa is those coordinated by the Mazingira Institute in Kenya. Within Africa, interventions by the local state have tended to focus exclusively on support – or at least permission – of urban agriculture (Mkwambisi et al 2011, Bersaglio & Kepe 2013). While these projects are of interest, the City of Cape Town is recognized to be a leader in the field of urban agriculture policy and planning in the region (Rogerson 2010, 2011). This section therefore provides brief sketches of projects from elsewhere which have been identified as having innovative approaches that connect different departments and mandates of City government or connect City government to the private or public sectors. Although most projects seek to cross food system stages, for the sake of legibility they have been ordered according projects primarily focused on Production, Processing and Trade, Retailing, Planning Interventions and Social Protection.

10.4.1 Production

There has been significant innovation in production. Projects are increasingly being designed to respond to a wider set of strategic imperatives of Cities, such as climate resilience and ecosystem service support.

ABLE Project, Wakefield, UK focuses on economic and ecological regeneration of a former landfill site using aquaponics (Donovan et al 2011, 37). This project demonstrates the role of food in rehabilitating urban space. Aquaponics provides one entry point into thinking about closed loop sustainability in the food system – although it is resource intensive to establish. Of importance in this case is the collaboration of the municipal government with local business interests to achieve a shared food system objective.

Amman, Jordan established an Urban Agriculture Bureau in 2005. In addition to supporting general urban agriculture, it has established 300 rooftop gardens and pioneers the safe use of re-use of grey-water in agriculture. They also developed a land

bank to better link landowners and potential producers (Dubbeling 2013, 8). The establishment of roof gardens is an area of interest for the City of Cape Town. Given the call for a land audit that emerged from the Khayelitsha Food Summit, the notion of a land bank may be of interest.

Bobo-Dioulasso, Burkino Faso uses an ecosystem service approach to design for “multifunctional and productive land use of urban greenways” and engages local communities and other spheres of government to protect urban greenspace (Dubbeling 2013, 6). The connecting of ecosystem services of land for urban agriculture is useful to give wider visibility to productive spaces; however, the assessment criteria need to be carefully considered – as the problems identified with Cape Town’s Agricultural Land Review illustrate.

Havana, Cuba is a well-known urban agriculture success story. The Provincial Physical Planning Directorate of Havana identified unused land areas and established a Provincial Commission to develop guidelines for the establishment of urban agriculture. It also developed and legalized new forms of marketing (Donovan et al 2010, 50). The land audit and the proactive establishment of urban agriculture marketing sites are important innovations.

Kathmandu, Nepal has a particular focus on establishing safe rooftop gardening, through collaborating with local NGOs, national research institutes and international organizations to design appropriate rooftop garden models and then training masons in construction and building techniques. Local legislation includes rooftop gardening in its building codes (Dubbeling 2013, 10). Lessons from this project are: the involvement of multiple stakeholders in project development; developing responses appropriate to local conditions and then developing mechanisms to integrate projects into broader city planning and implementation.

Rosario, Argentina acted on urban agriculture in the wake of an economic crisis. Although focused on urban agriculture as a nutrition intervention, the City also focuses on the use of gardens within the creation of multifunctional public spaces (Donovan et al 2011, 49). This approach reflects the importance of connection urban agriculture to the broader spatial planning agenda, and the use of urban agriculture to meet multiple community needs.

10.4.2 Processing and trade

The focus of this section is strategies employed to generate local food trade and local food production.

Belo Horizonte, Brazil has a wide range of food system interventions. There are a number of projects designed to create local trade opportunities for locally produced foods. The “Straight From The Country” programme provides municipal trading spaces for smallholder farmers. There is a similar programme for organic farmers. The aims of these are to create a distinct market for consumers and to increase the viability of local farming. Additionally, the Municipality procures from these farmers for school feeding and its Popular Restaurants.

Illinois passed the Local Food, Farm and Jobs Act in 2009, which legislated that 20% of all food and food products purchased by state agencies and state-owned facilities should, by 2020, be local farm and food produce (Donovan et al 2011, 45). Targeted procurement of local, small-scale production can increase the viability of smaller farmers and agro-processing companies.

Rotterdam, Holland developed its “Regional Food Missions”, which assesses local production and seeks to connect local producers with local buyers. It also facilitates neighbourhood markets and organizes a Harvest festival (Dubbeling 2013, 3). Given the increased interest in local food consumption (Section 3.5), there is a role for the City to play a role in the establishment of such a food festival in Cape Town, which pro-actively connects consumers to local producers beyond the high-income “lifestyle market” market segment. This food focus would enhance the branding of Cape Town.

10.4.3 Retailing

There have been a number of initiatives, mainly, but not exclusively, in the US to create healthier retail environments.

Healthy Food Zone Ordinances have been developed in many areas to address particular urban food retail concerns. The most common is the development of ordinances that prevent the location of fast food vendors or food carts selling unhealthy food from retailing near schools. Examples of this in the US include Palm Desert, CA, San Francisco, CA, Detroit, MI (CSPINET undated). There has also been a rapid uptake of ordinances with specific reference to retail near schools in the Philippines in Davoa, Valenzuela City, Kabayan and others. These ordinances are important as they suggest an important role for the City in designing food environments to meet health objectives. Food retail around schools presents a particular nutrition challenge in Cape Town.

Los Angeles City Council put a one-year ban on new fast food restaurants opening in one of the city’s poorest areas in order to give the City more time to attract more grocery store and fresh food stores to open for business (Donovan 2011, 55). This is interesting due to the temporary nature of the intervention.

New York City has developed a number of interventions, including the famous Soda Tax. Of particular interest to the Cape Town context is the Green Carts program, which provided special licenses to vendors who were allowed to sell only raw fruits and vegetables in an effort to increase the presence of healthy food on the streets. However, the project was over-regulated (as was the case in Toronto’s A la Carte programme, and although 1000 permits were available, only 350 have been taken up (Brown et al 2011). This is important, as preferential trade of healthier food near key transport sites is a potential food security intervention for the City. The New York case provides a cautionary tale of the balance between managing safety and over-regulation.

Pennsylvania has a statewide Fresh Food Financing Initiative, which provides loans and grants to retailers to attract fresh food retailers to underserved communities. By 2009 the project had brought 1.6m square feet of fresh food retail and 5000 new jobs to the State. The model is now being rolled out across the US (Donovan et al 2011, 56). Again, this provides a model for the incentivisation of healthy food through the recognition of the additional health burden incurred by the state if food retail is left entirely to market forces. Given the trends in food imports and food retail in South Africa, this arguably a necessity in South Africa.

Vending machine ordinances are a minor intervention which seeks to make healthier food more available. These have been developed in Los Angeles County, Chula Vista, CA, and King County, Washington (CSPINET undated). Given the near ubiquitous presence of the vending machine in places of work and in state-run institutions, and the absence of alternative sources of food in many working environments, encouraging healthier foods in vending machines could have a significant impact on the health of the working population.

10.4.4 Planning interventions

Kompogas is a private company that produces processing plants for the anaerobic digestion of bio waste (Donovan 2011, 39). While not strictly a planning intervention, it does provide a useful insight for the City. Having identified food waste as a sustainability problem (Section 3.9) and the concentration of food processors in particular locations in the city (Section 3.7), it is suggested that a focus on food waste processing into agricultural inputs or fuels would be a possible intervention that meets multiple City objectives.

Wanzhuang Eco City, China is a proposed development designed by Arup. The proposal is that the developers will retain farming land and thus be able to produce virtually all of the City's fruit and vegetable needs. Additionally, closed loop sustainability thinking is embedded in the design, for example, it has been calculated that the city will produce 36000m³ of treated waste water per day, which would meet the 30000 m³ required by the farmers (Donovan 2011, 42). Although this project is still in its design phase and is a master plan project, it provides insights into how food needs can be incorporated into broader planning and design imperatives.

Wodonga, Australia included "Food security sensitive" inclusions in its 2006 Municipal Strategic Statement (Donovan 2011, 52). Of particular interest is the focus on the development of walkable neighbourhood catchments and the rezoning of land to facilitate the development of more diverse shopping centres outside of the town centre. These new build and retrofit planning interventions could be employed to develop food security enhancing neighbourhoods.

10.4.5 Social protection

Bogota, Colombia and Belo Horizonte, Brazil both have well developed community dining room or Popular Restaurants that sell subsidized meals to ensure access to affordable nutritious food in the city.

Milwaukee initiated the Fondy Food Center which operates as a market for local producers. In recognition of the fact that farmers markets often locate in wealthier areas and out of the physical and economic access of low income households, they installed technology to accept food stamps as payment for fresh produce (Donovan et al 2011, 55). South Africa does not have a food stamp programme, but it does have a wide reaching social grants programme. At present social grants are disbursed at supermarkets, which privilege these markets. Social grant money is a major source of capital in low-income areas. It is beyond the scope of Municipal government, but greater thought should be given to how to ensure a greater proportion of the money is spent in local businesses, to encourage the circulation of capital within low-income areas.

10.4.5 Extended case studies

The brief case studies presented above demonstrate the range of projects and programmes that have been implemented to address food system and food security challenges. Because of difference in municipal structures and mandates, projects like these cannot be directly translated to the Cape Town context. However, potential points of interest to the City have been highlighted.

What follows here are two case studies of different kinds of projects that have been implemented (Seattle's Mapping Food Access Project and New York City's Green Cart

and Shop Healthy Program), and one that is under development (Toronto's Community Food Procurement Strategy).

Seattle's Mapping Food Access Project

One of the major challenges for the City is the paucity of data on which to base food system and food security decisions. The Mapping Food Access in the City of Seattle project has been selected as it provides a model for the City to consider in generating crucial information about the linkages between the food system and food security.

This project is part of Seattle's wider food security and food system programming, which is housed in the Office of Sustainability & Environment. The City has an overarching Food Action Plan that guides all food related projects.

Food systems planning is viewed as a cross-departmental focal point and something to be incorporated into the broader planning objectives of the City. The Office's website states that: "The City seeks out opportunities to incorporate food systems planning into our guiding policies. From changing land use codes to updating our Comprehensive Plan, there are many ways to positively enhance the food system."

Project content:

Seattle commissioned research to address the gap in understanding the spatial and economic determinants of food choice. The project was justified thus:

"While our health is influenced by personal decisions, it is also shaped by the places we live, work and play. Making healthy food choices can be difficult in neighborhoods with few food retailers that carry fresh groceries and other nutritious staples. Limited income and limited transportation choices can further compound some households' ability to access healthy food. By overlaying and examining income, food retail, land use, and transit, the maps identify areas in Seattle that have the most challenging environments for accessing healthy food" (Seattle Office of Sustainability & Environment, 2013, 1).

The project therefore focused on mapping

- a) Food Retail- Supermarkets, Farmers Markets and produce stands
- b) Income – Low income areas were identified and mapped
- c) Walkability – A quarter-mile street network buffer was used to show the viable walkability around each retail outlet
- d) Land use – Industrial areas were noted and excluded from the study, as these areas do not have residential development
- e) Transit services – Frequent transit lines were highlighted on the map
- f) Supplemental Food Programs – Programmes including Food Banks, meal programmes, summer meals programmes for school going children, and the City's P-Patch community gardens
- g) Obesity and overweight people – Average obesity rates by health reporting area

This mapping of exercise captured data on private sector and public sector food system components, and an assessment of the location of state and NGO programmes to mitigate food security, relative to where low income residents were located. The mapping of transit services also serves to lift the focus from a purely neighbourhood scale analysis of the spatial components of the food system.

This combined approach would be a valuable approach for the City of Cape Town to build on to better understand the connection between the structure of the food system

and other urban systems and the location of food insecure households. This would enable the City to target interventions at the community level, but also to generate an understanding of the City scale drivers of food insecurity.

Project co-ordination

Cities often lack resources and capacity to conduct in-depth research, particularly on issues that are not part of the core function of the City. For this reason, partnerships with research organizations are essential.

Seattle partnered with Urban Food Link, a local food security and food systems consultancy, to do this research. Partnerships with external researchers provide local government with access not only to expertise that may not be present within the Departments tasked to address food system and food security issues. Additionally, external partners, such as Urban Food Link, have further networks and links that can be drawn on to enhance the work of the City and promote dialogue with other cities. In the case of Urban Food Link, the organization is a member of the American Planning Association, BALLE (Business Alliance for Local Living Economies) and partners with a large number of other local governments, NGOs and educational institutions working on food issues.

There is considerable expertise on food security and food systems within the four tertiary institutions in the Western Cape. This expertise should be drawn on to address the numerous data gaps that remain in fully understanding the food system and food security.

(<http://www.urbanfoodlink.com/wp/wp-content/uploads/2013/10/City-of-Seattle-Food-Access-MappingFINAL.pdf>)

New York City's Green Carts and Shop Healthy Program

One of the critical challenges for the City of Cape Town is the relative accessibility and affordability of more and less healthy foods. The City has indicated that it is unwilling to consider the regulatory approach adopted in a number of cities with reference to the sale of less healthy foods around school environments. Two cases from New York City which aim to incentivise rather than regulate are therefore presented.

Green Carts

The Green Carts program was launched in 2008 as an effort to increase the accessibility of fresh fruit and vegetables in neighbourhoods identified as having limited access to healthy foods. The City allows for up to 1000 Green Carts. Green Cart vendors must have a valid permit from the City and can only sell fresh fruit and vegetables.

The programme was instituted due to concerns about the health impacts poor diets in the City and is therefore housed in the Department of Health, who issue permits and regulate practice.

In order to establish the programme, the Mayor had to pass a Local Law, Local Law 9. However, the City recognized that passing a by law and establishing the programme would not be sufficient to ensure its success and therefore enlisted the support of external stakeholders. Acción USA provides low-interest loans to vendors, and the Laurie M Tisch Illumination Fund has provided \$1.5m support. This support enables business support training to be provided through the Karp Foundation (Bornstein 2012).

However, despite these structures the programme has not been wholly successful. The impact on the consumption of fresh fruit and vegetables in low-income areas where Green Carts are located is not clear. Additionally, some 60% of the Green Cart vendors

who were permitted in 2008 did not renew their permits at the end of the two-year permitting period (Jahn & Shavitz 2012).

There have been many critiques of the application of the programme. It has been argued that the regulations about what can be sold from a Green Cart are too stringent. Green Cart vendors may only sell raw fruits and vegetables, they cannot sell cut, sliced, peeled or processed fruit and vegetables. Vendors have argued that if they were able to sell these products and products like nuts and water, they would be able to generate profits and remain economically viable. The average vendors earnings place them in the bottom seven percent of income earners in the US (Jahn & Shavitz 2012).

It has further been argued that the programme is too highly regulated and has conditions that are inappropriate to the reality of the trade. For example, vendors can only use official vending carts, and may not use folding tables that would be easy to transport and store (Browne et al 2011). In order to be permitted, vendors must demonstrate that they have storage in an authorized storage facility. However, there are very few such facilities in the neighbourhoods where vendors are permitted to trade. Finally, there is one location where vendors must have their carts inspected and there are complaints that this is an overly time consuming process and that the inspections are pedantic (Jahn & Shavitz 2012).

Shop Healthy NYC

The Healthy Bodegas program was launched in 2005, and rebranded as Shop Healthy NYC in 2012. The programme works with small corner stores (Bodegas) in low-income areas to encourage the stocking and promotion of more healthy foods. Bodegas have historically sold limited healthy foods as they have limited profit margins and shelf space and need to stock what they know will sell and not perish.

The programme recognises that the stocking of healthier foods is not sufficient to prompt a dietary shift, and so also works with community organizations and residents to raise nutritional awareness (NYC 2010).

The programme is funded by the NYC Center for Economic Opportunity, a unit of the Mayor's Office that designs and tests innovative anti-poverty programmes. Under the scheme stores aim to:

- Promote healthy food and beverages with Shop Healthy marketing materials
- Offer fruits and vegetables at the front of the store or the cash register
- Display water and low-calorie refrigerated drinks at eye-level
- Offer and promote a healthy sandwich or meal combo at the deli counter
- Stock low-sodium canned goods and canned fruit in 100% juice
- Stock at least two healthy snack items, and
- Remove all advertising from the entry door (NYC 2013)

Despite a series of successes, there are concerns about the long-term impact of such an initiative. "Though individual actions have met with success, they are, according to Baronberg [deputy director of the department's Physical Activity and Nutrition Program], easily dwarfed by multinational beverage and snack companies. "We put up healthy ads in the windows, and the next day we come back and they've been replaced," she said. "We just don't have the manpower or finances to compete with that. A bodega is just a small player in this very large issue of unhealthy foods being heavily marketed and being less expensive" (Bansal 2012).

Both the Green Carts and Shop Healthy NYC programmes illustrate the importance of partnerships with external stakeholders in increasing the viability of programmes,

including leveraging external funds and engaging with community groups. They both further illustrate the need for pre-emptive thinking about the barriers to success of programmes. In the case of the Green Carts Programme, over-regulation has undermined the success of the programme. In both cases, there is a need to interrogate whether the drivers of the pervasive food environment have been adequately considered. These are all potential lessons for the City of Cape Town.

City of Toronto's Community Food Procurement Project

The following text has been received directly from Brian Cook, of the City of Toronto's Public Health Department, and is included in full.

“The Toronto Food Strategy team at Toronto Public Health has coordinated research that identified many opportunities to enhance the availability of healthy foods in community programs serving low-income populations. The sector includes drop-ins, social housing, community health centres, food banks, community meal programs, multiservice community organizations, shelters, school nutrition programs and others. Most programs are unable to effectively support their clients' food needs, due in part to ongoing funding and resourcing constraints, but also because there is rarely a coordinated procurement strategy within the sector. Through better coordination, and by adding dedicated infrastructure to support distribution and logistics, these programs could have the ability to offer healthier diverse foods, and in some cases at reduced cost, while also supporting local food procurement. Food purchasing tends to occur on an individual program basis and go through conventional food service distributors, large-scale grocery stores and, in some instances, through local small food retail. This approach often leads to programs paying unnecessarily high costs and choosing less healthy foods.

The Community Food Procurement Project will address several gaps and challenges faced by community service agencies in Toronto. The project will create a real time e-commerce system that allows community agencies and student nutrition programs to procure locally grown or produced perishable food products direct from farmers, local growers and local food processors. Amalgamating the real time purchases of several agencies on an e-commerce system will enable larger bulk purchasing and a significant reduction in costs based on the volume purchased and reduced procurement time. At the same time, Ontario food producers would directly benefit from a new direct channel of sales.

The challenges in providing healthy meals to service agency clients centre around available food donations, the capacity to continue to serve increasing demand with fixed or low food budgets, and lack of access to fresh, perishable food delivered to service agencies on a daily basis or when needed. In addition, lack of knowledge and time to make supplier comparisons has resulted in food procurement practices that are not ideal in cost or quality. Existing distributors' service practices are not designed for the sector. Delivery practices are designed in many cases for large, well-staffed retail outlets rather than the service sector. The pilot project will deliver all the components necessary to allow for aggregated local food procurement and for evaluation and expansion to all public service agencies.

Providing a real time e-commerce system provides a part of the overall solution. An existing local hub consolidator, FreshTech Inc., acting as a Third Party

Logistics Provider (3PL) will take the bulk amalgamated food purchases and break down the purchases into consolidated orders and reship to the service agencies. The program will ensure one order at one delivery time that incorporates all of their needs. The project will also deliver the expertise and framework for helping agencies and school boards to develop best practices in food procurement and food contract pricing. Beyond the pilot program, community agencies and student nutrition programs will be provided an extensive documented framework for building out additional 3PL hub and consolidator facilities to support scaling of the community procurement program.” (Cook, pers comm 2014)

This programme has yet to be implemented, but it has been included to demonstrate the kind of partnerships that the City may be able to broker between private sector, state food security programmes and the often poorly connected NGO sector.

10.5 Evaluation of Approaches

There have been a plethora of programmes, policies, strategies and governance approaches, but it is not immediately obvious how these translate to the Cape Town context. The work presented in Section 6 has attempted to focus on the principles underlying food system and food security interventions, rather than the details of programmes, projects and policies per se, in recognition of the importance of local context as a determinant of project success.

Many of the documents of individual FPCs focus on the successes of programmes and strategic framing, it is important to note that even in the most well-known and long-established food governance programmes there are ongoing challenges, and that many successes have their basis on decade-long processes of engagement and consensus building (Morales 2013, Cooke 2013, Rocha 2013).

This section therefore identifies some of the barriers faced by food governance programmes elsewhere and describes some of the principles and practices that have been employed to overcome challenges.

10.5.1 Barriers to planning for food

The documents published by Food Policy Councils often focus on their strategic victories, but there are significant challenges to embedding food planning in the urban agenda. Donovan et al (2011) identify six crucial barriers to planning for food. Their discussion is included in full below:

“Awareness of issues and responsibilities. Everyone recognises that food is essential for life, and many planners understand that this has implications for how land is allocated. However, the scale and complexity of conventional food systems can obscure the effects of planning decisions on food supply. For example, it is difficult to see how the re-zoning of a small site from a farming use to an urban use will affect a global food system that spans several international markets. Consequently, it is understandable that planners and the community in general see planning for food as a global issue rather than a local one, and so

'outside their control'. As a result food issues can fall through the cracks as planners see addressing these issues as someone else's responsibility.

Political will. Planners typically advise or advocate for a course of action that will eventually be decided by an elected representative of the wider community. Ultimately these elected representatives are responsible for the way priorities are weighed up, and have to answer to their electorate for their decisions. If that electorate does not place a high priority on the need to plan for food, there may not be the political will to follow that through in their decisions, no matter what the planners advise.

This is particularly the case where opportunity costs are felt or have an immediate impact on the local area, but benefits accrue to the broader community or are realised in the future.

Time and financial constraints: Planners are typically under considerable pressure to prepare plans or process applications. In the private sector, clients will usually not pay more to allow planners to consider food issues, seeing them as unnecessary. In the public sector, planners have little extra capacity to consider additional issues to their traditional concerns.

Conflict with other priorities: Some planners feel that planning for Food, when it is considered at all, is a subset of sustainability. This means it is given a relatively low priority when weighing planning for Food with other worthy objectives of planning (e.g. accommodating all the urban uses needed to support our wellbeing). Furthermore, there are relatively few tools available to measure the impacts of planning decisions on food considerations, but several measures for other priorities (such as measuring the available land supply for housing). Elements with strong evidence and data available tend to receive a higher priority.

Policy vacuum. There is no **explicit** recognition of planning for food within the *Planning and Environment Act*, or the *State Planning Policy Framework*, which would strengthen the case for considering impacts of decisions on Food. However, Municipal Public Health and Wellbeing Plans do present opportunities for securing food systems and therefore potential for including consideration of Food.

Sphere of influence: Many decisions about land use and food production are currently beyond the control of planning – for example the mix of specific shops in a shopping centre, or the actual use of land zoned for farming. A planning scheme cannot require land zoned for farming to be used for agriculture; it can only prevent certain other uses and developments from taking place." (Donovan et al 2011, 9)

Although Donovan et al (2011) are writing in the Australian context, the same barriers have been identified in North America and Europe, and have resonance in the Cape Town context. Once these barriers are understood, it is possible to develop strategies to overcome them or work around them.

Awareness of issues and responsibilities can be built through identifying existing mandates and through internal communication strategies. Additionally, efforts can be made to explicitly connect food outcomes to existing projects and programmes.

Political will can be developed by identifying a political champion. Many food policy programmes began with the efforts of "a vocal, high-ranking official" who is able to raise the political profile of any food intervention (Hatfield 2012, 24). This individual may not pre-exist and needs to be nurtured through efforts within the city. Additionally, political

will is generated through outside influence, hence the need for external stakeholder engagement to develop a broader food consciousness. A Food Charter can be a powerful tool to ignite political will (Cook 2013).

Time and financial constraints can be reduced by aligning food programming with pre-existing priority areas and by starting small. The UFS creates a long-term strategic vision, but may appear too complex and costly to enact (Morales 2013). However, if small, doable projects are identified as starting points, the time and financial constraints may appear less daunting.

It is possible to reduce conflict with other priorities through adopting a FSPUD approach, which attempts to align food-based outcomes with broader city agendas. In the longer term it is important to raise the profile of food system governance as a means to achieve core City responsibilities. There will always be areas of conflicting interest. It is important to ensure that there is sufficient data to support the food system governance perspective.

At present there is an urban policy vacuum. It is vital therefore illustrate the impact of existing policies on the food system and food security. Although there is no clear mandate for City with regards to food security, the City has a responsibility under the constitution to work towards the progressive realization of the right to food.

Finally, although some aspects of the food system fall outside of the direct sphere of influence of the City, there are ways in which the City can influence the food system in these areas. This can be achieved through careful engagement with private sector stakeholders and civil society to “nudge” changes in area of the food system beyond the City’s control. Again, a Food Charter can play a role in raising the public profile of the City’s food governance plan and developing consensus around objectives.

Key recommendations that emerge from the literature and from interviews include:

Develop a Food Charter

Develop political will through garnering support from high-ranking officials

Develop a small, core group of people within and beyond the City to think hard and work together to develop food system and food security interventions

Develop an understanding of the priorities of departments and of how food can fit into their existing agendas

Develop an over-arching strategy, but start with small doable projects that connect at least two departments

11 Key Priority Areas for City

Key Summary Points

- The expanded understanding of food security as being linked to food systems is gaining increasing traction in South Africa. The City of Cape Town has an opportunity to establish itself as a leader and innovator in this field.
- Informed by experiences from elsewhere, the City's approach should be to build momentum through implementing a few "low-hanging fruit" projects that require more than one department to work together.
- The City's response cannot be project driven though, as this may hinder systemic thinking about and responses to the food security issue.
- It will therefore be necessary to draw on the research capacity of academic institutions in the Province, host a series of stakeholder engagements and develop a Food Charter in order to build a strategic vision within the City.
- The City needs to develop a food system governance structure, which has a strong, well-located champion to hold the process together. This may operate as a working group within the City's Transversal Management System.
- A coherent food system and food security strategy should be developed on the basis of the principles in the Food Charter.
- 33 recommendations have been made based on the findings of the report.
- The priority areas should be:
 - *The establishment of the conditions for food system governance (Items 1-5).*
 - *Re-assessment of Agricultural Land Review (Item 6).*
 - *Development of a coherent, integrated position on food retailing (Items 12, 16-19, 21)*
 - *Food processing should be incentivised as a growth industry (Item 15).*
 - *The City should advocate for more pro-poor food price monitoring (Item 23).*

11.1 Introduction

Informed by the analysis of the role of local government in food system and food security governance discussed in Chapter 2, the findings of the report on the state of the Food System and Food Security in the City presented in Chapters 3-9, and the lessons from elsewhere presented in Chapter 10, this final chapter provides a set of recommendations for the City.

The primary and secondary research on "good international practice" conducted for Chapter 10 all stressed the importance of process over focus on particular projects, and warned of the danger of developing a series of poorly connected projects. This

concluding chapter therefore provides some project recommendation but argues strongly that these must be approached in the context of the development of a set of guiding principles and governance structures. The chapter presents the process recommendations that have emerged from the experience of other cities seeking to address food system and food security problems and attempts to align them to existing City of Cape Town processes and structures.

The report recognizes that although many of the challenges of the food system manifest at the municipal scale, the City currently has no explicit mandate to address food insecurity and therefore no single budget line for food system governance and food security interventions. Nevertheless, the existing programmes and policies of the City already play a vital role in shaping the local food system, whether this has been formally acknowledged or not. This section therefore proposes practical ways in which food issues can be addressed more directly and thus become more visible in the strategies and policies of the City.

The City is committed to its five strategic focus areas

The Opportunity City

The Safe City

The Caring City

The Inclusive City

The Well-Run City.

The recommendations presented below align the development of a food governance focus with these over-arching objectives as well as the six 'energies' (Educating Cape, Enterprising Cape, Green Cape, Connecting Cape, Living Cape, Leading Cape) that guide the City and Province's vision for transitions leading up to 2040. It is further suggested that a focus on food presents the City with a unique opportunity to deliver on these strategic objectives.

The question of the connection of food security to broader food system issues is one that is increasingly on the political agenda. The SAHRC has held a series of workshops nationally on the Right to Food culminating in a national conference in March intended to help them define an appropriate way of engaging the issue after the election in 2014. This included a review of appropriate indicators for measuring the right to food with the Studies in Poverty and Inequality Initiative. The NGO, Section27 has been developing a set of responses to the Right to Food, whilst the HSRC held a workshop on Food Security Assessment in November 2013. Earlier in 2013, an Urban Food Security Summit was held in Khayelitsha with the support of the NPC and DAFF. In the context of rising political and civil society interest in food issues, the City has an opportunity to become a leader, nationally and internationally, in this field"

The City of Cape Town has already established itself as a regional leader in food security through the adoption of the Urban Agriculture Policy in 2007. Now that the debates on food security and food systems have shifted, the City has a real opportunity to be a "first responder" to this shifted debate and assume a position of leadership in the national and regional agenda.

11.2 Strategic Approach

The findings presented in Sections 3-9 suggest a number of points of intervention (such as interventions in waste management and interventions to increase youth participation

in urban agriculture) that can be utilized to develop a strategic approach for the City to engage food governance.

Informed by the findings of Chapter 10, and interviews with experts in the area, as well as the recognition that action on the ground is essential to demonstrate the City's commitment to addressing food security challenges, this report recommends building consensus on a vision and strategy around the implementation of a carefully selected and interrelated set of projects. The selection of these will require skilful engagement with stakeholders from across the food system, and an effective documentation and communication strategy. This is essential to ensure that these activities do not become isolated "showcase projects", but collectively serve to raise awareness, build capacity, and inform the integration of food security and food system issues into the City's strategies and operations.

11.2.1 Specific Interventions addressing Key Priority Areas

Developing an inspiring vision and strategy on food is best developed through action. A robust food governance system is essential to embed food system and food security issues in the City, but the concept may appear abstract and removed from the core business of many departments. If this is the case, momentum will be lost and food system and food security interventions will remain isolated and ad hoc. Experience from elsewhere suggests that consensus and momentum is built through identifying a set of small, doable projects, programmes or interventions that bring together different departments, and involve other stakeholders. Together, these activities should demonstrate the range of food system and food security issues in the city, and provide evidence that innovative approaches are available to address them. Through engagement in these activities, and witnessing their impact, citizens, City officials and politicians can be mobilized to support the development of a robust food governance system.

The report presents opportunities for the City at the end of each substantive chapter. These have been consolidated into Table 11.1. It is suggested that the City focus on a few "low-hanging fruit" projects, but ones that involve more than one department, in order to begin to build consensus on the principles underpinning food system and food security interventions.

For this reason, it is recommended that the following three projects be undertaken:

1) Launch a nutrition and food security awareness campaign

There is currently poor awareness and understanding of food and nutrition security amongst the general population. The development of a set of awareness raising and information tools would provide an opportunity for the departments and directorates identified as contributing directly or indirectly to food security to begin to develop consensus on food systems and food security. Ideally this would be run through the Mayor's Office in order to give it public presence.

2) Waste management in key food processing sites

The development of innovative food waste management strategies in areas where food processing is clustered provides the City to enhance the environmental sustainability of the food system. The deferment of waste from landfill and its conversion to agricultural inputs provides multiple benefits to the City and its residents. This project would involve the Health Directorate and

Environmental Resources Management in planning the interventions on site, and may involve the Urban Agriculture Unit in the use of the resource generated from the waste. This project would depend on partnerships with the private sector to develop innovative waste management tools, and possibly with urban agriculture NGOs in the distribution of the post-waste resource.

3) *Facilitation of City dialogue on planning of food retail environments.*

The mix of retail – in terms of formal and informal retail proximity and nutritional quality provided – has been found to be one of the most important food system factors in determining food and nutrition security. At present there has been no discussion of this at a policy level, and the departments working on formal and informal retail have little connection. It is essential to hold a high level discussion on the role of retail on food security and the role of spatial and economic planning in generating retail conditions that promote household food security.

There are two preconditions for the effective implementation of an action-learning approach to the development of a food system and food security strategy and governance system for the City. Firstly, it requires the development of a robust information and knowledge management system to inform project and programme design, monitor progress and capture lessons of experience. Secondly, it requires a carefully designed and facilitated process of engagement with stakeholders during all phases of the process.

11.2.2. Information, research, knowledge management, monitoring and evaluation

Throughout this report, the need for improved data, appropriate indicators and up-to-date research information has been highlighted. Without this it is difficult for the City to make decisions on governance of the food system and on food security interventions. This report therefore argues that the second (and iterative) step in the development of an appropriate set of responses to the challenges of the food system and food insecurity is information, research, knowledge management, and monitoring and evaluation.

The Western Cape has strong research capacity in the arena of food systems and food security, as evidenced by the recent announcement that an NRF Centre of Excellence on Food Security will be established at the University of the Western Cape. Other partners include UCT and Stellenbosch University. Utilizing this capacity to research key issues in the city's food system is highly recommended. Researchers should be involved in documenting experiences and outcomes of the activities proposed in Section 10.2.3, to ensure that lessons from these activities are widely shared and can inform the further development of policies and programmes.

In addition, it is recommended that the City engage with the HSRC and StatsSA to discuss a minimum set of food security indicators to be included in survey instruments to improve the availability of ward level data, and to ensure that important data on the food system are made available to the City.

It is recommended that the City test the development and implementation of Food Security Impact Assessment tools, for use in urban planning, including planning on retail zoning.

Regular, objective reporting on local and national food price trends, focusing on a basket of basic goods should be instituted. The City should advocate for more pro-poor food

price monitoring. Only with better data on the impact of food prices on the poor will the political will to address the problem develop in national government.

11.2.3 Engage with stakeholders

As discussed in Chapters 3-8, although the State plays a role in regulating the food system, many aspects of the food system are controlled by the private sector. Additionally, there are many NGOs, CBOs, FBOs and others engaged in the food system and food security. Additionally, the food system is not bounded by the municipal boundaries. There is therefore a need to develop productive working relationships with these external stakeholders, as identified in the Municipal Systems Act. Chapter 2 provides an overview of the key food system and food security stakeholders relevant to the City's role and function, and suggests an approach by which to engage them.

These processes need to be built on relationships of trust and therefore need to be carefully mediated. While the intention is to engage stakeholders from across the food system, the initial process may involve different stakeholder groups being convened around particular issues. Involvement in specific activities will pave the way for greater collaboration and citizen engagement in the development of a Food System and Food Security charter.

The Cape Higher Education Consortium (CHEC) has an existing food security expertise and network. This organization aims to connect academic, public sector institutions and business and could therefore play an important role in facilitating the stakeholder process. Furthermore, the Southern Africa Food Lab may also play an important role in creating collaborative dialogue and strategic interventions in the food system.

11.2.4 Development of a Food System and Food Security Charter

The establishment of a Charter that presents the principles upon which the City understands and responds to the constitutional Right to Food should be a medium term goal. This report makes explicit the connections between food system and food security governance objectives and the guiding principles of the City – in this case the “Five Cities” approach embedded in the IDP.

Food Charters present a vision for a future set of food system and food security outcomes, and have been an extremely valuable tool in a number of cities. They establish a set of principles and objectives on which decisions about food can be based. As this report has established in Chapter 2, there is no single department within local government mandated to address food insecurity, it is therefore essential to build consensus. Furthermore, the food system is shaped by many stakeholders within and beyond the State and there are a large number of agencies working to address food insecurity. One of the ongoing challenges has been that these groups have not had a common understanding of the problem or a shared agenda. The Charter provides a means to build such an understanding. Food Charters therefore provide a reference point for managing food system issues on a system-wide basis.

They have been found to be particularly useful in building consensus amongst disparate stakeholders within municipal government and beyond. They provide an opportunity to generate public debate and awareness of municipal activities, and to connect civil society groupings on issues of food.

Food Charters have little to no cost to the City, but provide a mechanism to raise awareness, build consensus and motivate for funding to support programmes linked to

the Charter's principles. The Food Charter has been identified as a particularly useful tool by the City of Toronto. A link to their Charter is provided here: http://www.foodsecuritynews.com/presentations/Toroto_Food_Charter.pdf

Although the Food Charter should be a collaborate document agreed to by the various City departments, civil society and other stakeholders, this report suggests that a "straw dog" Charter be developed from the principles embedded in this report through the conceptual framework.

These principles should be:

- Champion the constitutional right to food and nutrition security, to ensure that all residents are able to access sufficient affordable, nutritious, safe and culturally-appropriate food
- Generate food system conditions that enable households to meet their food needs independent on state or NGO sector welfare.
- Generation of an urban food system that is reliable, sustainable and transparent
- Advocate for advocate for income, employment, housing, and transportation policies that support secure and dignified access to the food people need
- Ongoing dialogue with Provincial and National Government and State-owned entities on policies and programmes that impact the City's food security.
- Pro-active engagement with private sector (formal and informal) to provide better physical and economic access to affordable, healthy foods
- Partnership with civil society organisations to mutually support each other to achieve food security for all.

11.2.5 Identify a City "Champion" and Build Consensus

The challenges of the food system and food security are complex and cross many departmental jurisdictions, spatial scales and stakeholder groupings. In order to respond to the challenges and work towards principles established in a Food System Charter, there is a need for multiple stakeholders to be able to work together. As indicated above, an action-learning initiative can provide a context for such engagement. Experience from food governance interventions elsewhere has found that processes requiring the engagement of many actors and organizations are more effective if there is a Champion within the City to drive the overall process. In other words, there needs to be someone who "wakes up and worries about the food issues." According to the findings of Chapter 10, this process needs to be owned by an individual and a Department. This individual and department need to have authority and convening power to drive the wider food agenda.

In addition to a champion, there needs to be a concerted effort to build consensus on food system and food security issues and priorities in the City. The development of the Charter and its alignment to broader City objectives can play a major role in this. Additionally, this consensus must be built through increased knowledge and understand of food system and food security issues within the City. This can be achieved through a process of workshops, trainings and site visits.

The City has a set of mechanisms that can facilitate such a process. Under the City's Transversal Management System approach, the City has two clusters, the Economics and the Social Cluster, each of which have a number of inter-departmental working groups. These are coordinated by the Strategic Planning Unit, which was formed in 2012 to act as a strategic coordination point for the City.

A Food Systems and Food Security Working Group overseen by a member of the Strategic Planning Unit may provide many of the pre-conditions described above. There are however concerns about the location of working groups within either the Economics or Social cluster. At the heart of this report is the assertion that food security (which would ordinarily fall under the social cluster) is the outworking of food system (and other system) problems (which would ordinarily fall under the economics cluster). As Chapter 2 argues, virtually all departments in the City have a direct or indirect role in ensuring food security. The Food System and Food Security Working Group would need to work across clusters. Additionally, careful consideration is necessary about the ultimate “ownership” of responsibility for food security. As the experience at National government has illustrated, location of strategy in a particular departmental home can lead to a narrowing of implementation frame.

11.2.6 Community Engagement

Section 7.2.3 calls for engagement with stakeholders. The community engagement here is a second round of stakeholder engagement. A Food Charter and a Food System Strategy needs to be owned by City’s residents and requires public participation.

The City does have a set of public participation processes, including processes driven through sub-Council. Based on the professional experiences of the consultancy team, this report argues that food security requires a slightly different set of processes.

Unlike other rights and services, there is little understanding of the right to food and food security. The extensive nature of the problem means that many do not view inadequate diets as food insecurity. The majority of food insecure residents of the City do not know that there is a right to food and that the State is constitutionally mandated to progressively realise this right. What understanding of food security there is, is informed by the productionist paradigm critiqued in Chapters 1 and 2. As a result, from multiple experiences of the consultancy team, when community members articulate the need for food security interventions, the interventions inevitably focus on household food production. There is therefore a need for better information for residents on food security, its causes and the range of strategies available to address it. There is therefore a role for Community Services to facilitate such an education process through public libraries, as well as for the City’s communications team to engage through community radio and other means.

A second concern is the representivity of participants through sub-council processes. In previous experience, there is often a strong presence of local Development Forums, which tend to have a particular view of the food system, which may be at odds with the needs of the poorest residents of those sub-councils. For example, the Development Forums may have a negative perception of informal trade, as symbolic of under-development. However, as Chapter 7 illustrates, they are essential to the food security of the urban poor. There is therefore a need for careful consideration of the consultative process and whose agency it enhances, and whose it may diminish.

11.2.7 Develop a Food System Strategy

Following the iterative processes described above, it will then be possible to develop a Food System Strategy that will be able to guide the City’s long term engagement with its food system and food security.

11.3 Address urgent issues immediately

As indicated above, this study proposes an action-learning approach towards establishing effective food governance mechanisms in the City. In addition to the action programme, information and knowledge management activities and stakeholder engagement recommended, and the governance system activities, there are a number of urgent issues that need to be addressed immediately.

- 1) The establishment of the conditions for food system governance (Items 1-5). This is essential if the City is to develop coherent, effective strategies to address food insecurity and to work towards a pro-poor food system. It is also essential to build collaborative partnerships.
- 2) Re-assessment of Agricultural Land Review (Item 6). This is important as it allows the City to interrogate the implicit and explicit value systems shaping public and private sector decision making within the food system.
- 3) Development of a coherent, integrated position on food retailing (Items 12, 16-19, 21). At present formal and informal food retail are not viewed as being part of a single food system feeding the city. Decisions about retail development are made independent of consideration of food security impacts. Retail is the main source of food for the urban poor. It is essential that the retail environment provide low-income households with access to affordable, nutritious, safe food.
- 4) Food processing should be incentivised as a growth industry (Item 15). The food industry already provides many jobs. SMMEs in particular should be supported.
- 5) The City should advocate for more pro-poor food price monitoring (Item 23). Only with better data on the impact of food prices on the poor will the political will to address the problem in national government.

The full list of recommendations made in the report is provided in Table 11.1 below. They are classified according to level of priority, resource implication for the City, Responsible City unit, and addition partnerships required.

Table 11.1 Full list of recommendations

	Level of Priority	Resource Implications	Responsible Unit	Other partners
Establishing conditions for food system governance				
1. Develop a food charter	✓✓✓	✓	Proposed Food System working group	
2. Data collection: City	✓✓✓	✓✓	Proposed Food System working group to direct	Partnership with universities
3. Data acquisition: Private sector and other organs of state	✓✓✓	✓	Proposed Food System working group	StatsSA, SAHRC, private sector
4. Training of municipal officials and politicians	✓✓	✓	UAU to lead	Ryerson University, City of Toronto, Mazingira Institute, UCT
5. Launch of nutrition and food security awareness campaign	✓✓	✓✓	Proposed Food System working group	Community Services
Specific interventions				
6. Re-assessment of the Agricultural Land Review (Ch4)		✓✓	SPUD	WC-DoA
7. Reconnect agriculture to food security in IDP (Ch4)	✓✓	✓	SPUD	
8. Formulate a productive land management plan and management mechanism (Ch4)	✓	✓✓	Food System Working Group, SPUD	WC-DoA
9. Greater focus on overcoming youth barriers to urban agriculture (Ch5)	✓✓	✓✓	UAU	Social Development
10. Improved access to markets for urban agriculture (Ch5)	✓✓	✓✓	UAU	ECONOMIC DEVELOPMENT, Food Control Programme
11. Audit of land for urban agriculture	✓	✓✓	UAU	SPUD, P&DM, ERM

(Ch5)

12. Creation of an enabling environment for informal traders (Ch6&7)	✓✓✓	✓✓	Informal Trade Unit	Other departments	EESP
13. CTFPM be acknowledged as food hub (Ch6)	✓	✓	EESP to lead strategic planning		
14. Food processing incentivised as a growth sector (Ch7)	✓✓✓	✓✓	Economic cluster	DTI, DAFF	
15. Develop strategies to connect small producers to small producers and to market opportunities (3.7)	✓✓	✓✓	ECONOMIC DEVELOPMENT		
16. Study on retail mix and food pricing in supermarkets and malls (Ch7)	✓✓	✓✓	Proposed Food System working group	Partnership with universities	
17. High level discussion on impact of shopping malls and retail mix on food security (Ch7)	✓✓✓	✓✓	Proposed Food System working group	EESP	
18. Specific focus on increasing sale of safe, healthy in informal traders near transport hubs (Ch7)	✓✓✓	✓✓	Informal Trading Unit	Food Programme	Control
19. Encourage designers to design low-cost, low-tech solutions to the food spoilage problem (Ch7)	✓	✓	Utility Services	Designers and waste management companies	
20. Food system sustainability to be incorporated into the City's wider sustainability strategies (Ch7)	✓✓	✓	ERM		
21. Food waste to be recognised as a waste category within the City's waste management planning, Specific strategies to be		✓	ERM, Utility Services	Retailers, Processors, private sector waste management companies	

developed to aid the diversion of food waste from retail and food processing

22.	Advocate national government for pro-poor price monitoring (Ch8)	✓✓✓	✓	ECONOMIC DEVELOPMENT	StatsSA and NAMC
23.	Develop food price monitoring programme that specifically focuses on formal and informal food retail prices in low income areas (Ch8&9)	✓✓	✓✓	No clear line of responsibility	Commissioned studies by universities
24.	Advertise basket of basic good prices (Ch8)	✓	✓	No clear line of responsibility	
25.	Ongoing monitoring of incidence of food insecurity (Ch9)	✓✓	✓✓	Strategic Information Analysis and Research, proposed food system working group	University partnerships
26.	Nutrition education appropriate to residential circumstances (Ch9)	✓	✓	Community Services	Provincial Department of Health
27.	Incentivise retail of healthy foods in and near schools (Ch9)	✓✓	✓	Health Directorate	P&BDM, ECONOMIC DEVELOPMENT
28.	Investigate structural barriers to breastfeeding	✓	✓	Community Services	Provincial Department of Health
29.	Food security initiatives to target areas and specific groups within areas (Ch9)	✓✓	✓✓	Social Development	Provincial Social Development
30.	Partner with NGOs to provide mechanisms for less exploitative loans (Ch9)	✓✓✓	✓	Social Development	NGO Sector
31.	Disaster Management to partner with NGOs to facilitate long-term disaster recovery (Ch9)	✓	✓	Disaster Management	NGO sector

11.4 Action Plan

Objective

To enhance food security in Cape Town through the effective governance of the food system and targeted interventions to alleviate household food insecurity.

Pre-amble

A healthy and robust food system based on principles of reliability, sustainability and transparency are essential to the progressive realisation of the constitutional Right to Food.

Although the City has no clear, direct mandate to address food security as it has been framed by within the Integrated Food Security Strategy, it is clear that there is a need for the City to act to mitigate the effects of food insecurity that manifest in the City.

The City, acting within its existing mandate, plays a number of important roles in determining the structure of the urban food system, which directly impacts food security. In addition, the City, through its various social protection and economic development programmes, already plays a direct role in addressing food insecurity.

The City's role in the food system is not well acknowledged, as the food system has never been the central focus of the work of any of the departments involved. Likewise, the policies, programmes and initiatives that seek to address food insecurity or poverty, lack a common food security objective.

The following action plan, there seeks to establish a base from which the City can generate a food system responsive to the needs of its residents, and better target food insecure households. It is recognised that such an integrated approach can only succeed if all Departments and Units involved are committed to process. The focus of this Action Plan therefore is on generating consensus and a platform from which to build longer-term engagement in the food system in the interest of food security.

Action Plan for First Year

This Action Plan focuses specifically on the first year of the Food Action Plan. It is acknowledged that the City's ability to leverage resources, and political and public sector interest, is uncertain. It is therefore important to maintain a degree of flexibility in planning, but ensure that all City responses are aligned to the principles underlying the Action Plan. The plan described below therefore establishes the fundamental structures that will provide longevity for the City's Food System Strategy.

1) Training of officials

There is currently limited understanding of food security and its connection to the food system. Although the work of many departments impact food security in Cape Town, this is not well acknowledged. It is therefore essential to engage in a process of training of officials in order to generate a common understanding of the problem and to develop consensus around the City's strategy to address it.

It is recommended that the Food System and Food Security Study be used as a resource to build training materials. There is an opportunity to partner with the City of Toronto, Nairobi, Ryerson University, Mazingira Institute and UCT to develop case studies and other training materials.

Responsibility: This has already been initiated by the Urban Agriculture Unit

2) Establishment of Food System and Food Security Working Group

Food security in the City has tended to focus on urban agriculture and depended on the urban agriculture unit as its main implementing department. However, the effective governance of the food system and food security is dependent on the work of many departments, across both the social and economic cluster.

For this reason it is essential that the City establish a Food System and Food Security Working Group according to the City's Transversal Management Approach in order to create maximum interaction across departments and to provide a "voice" for food security in the City.

Ideally, the convenorship of this working group would have dedicated City funds that could be used to attract external funding from international donors to support this work.

This working group would oversee the action plan, identify and leverage funds for projects/initiatives, convene dialogues on areas of critical need and represent the City's interests in discussion with the private sector, civil society, and Provincial and National Government. The working group will also, in consultation with local universities as necessary, develop a food system strategy for the City.

Responsibility: SPU

3) Develop a Food System and Food Security Charter

As discussed in Section 11.2.4, a Charter is a tool that has been used to build consensus within and beyond City institutions. Although the principles underlying this study should be used to provide a template for the Charter, it is important that this be a collaborate project, drawing on both City and civil society organisations' input.

A draft Charter should be developed by the Working Group and then circulated for discussion as part of the Municipal training, and then be presented at a stakeholder workshop including representatives from key NGOs, formal and informal retailer groups and food producers. This document will give legitimacy and direction to the City's Food System Strategy.

Responsibility: Food System and Food Security Working Group

4) Pilot project

In order to maintain momentum, it is essential to start an initiative that brings together more than one department. Section 11.2.1 of the report suggested three possible starting projects: Nutrition and food security awareness campaign, Waste management in key food processing sites, and Facilitation of City dialogue on planning food retail environments. Given the need for tangible outcomes, it is recommended that the waste management project be the first area of focus. This project would bring together multiple departments and have tangible outcomes. The project would work to develop a food waste management strategy, develop partnerships with waste management

companies to develop innovative food waste management strategies, and partner with local NGOs and agriculture to distribute the inputs generated from food waste.

Responsibility: Overseen by Food System and Food Security Working Group.

Planning into the Future

This action plan does not provide a prescriptive path for the City after the first year, as it is believed that the process undertaken in the first year will identify the areas of focus that are most likely to gain traction for the City. It is expected that the activities of the first year will drive the nature of the Food System Strategy.

Section 11.3 of the report identifies critical areas that require attention by the City. It is strongly recommended that these be the areas of focus of the Working Group going forward. Table 11.1 provides an overview of all the recommendations made in the Food System and Food Security Study report, with level of priority, resource implication, lead department, and other partners identified. These should guide the City's long term food system planning.

There is a need for ongoing data collection on levels of food insecurity to be able to assess the outcome of the food system and food security initiatives, as well as to enable the City to target its food security mitigation projects. It is recommended that Food Security and Food System Assessments be carried out in partnership with local universities at least every five years, and that smaller samples be drawn between major samples.

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Chapter 10

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Personal Communications

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Appendices

Appendix A - Stakeholder Groups

Appendix B – Report of the stakeholder mapping workshop

Appendix C – Detailed review of data sets reviewed regarding food flows

Appendix D – Further technical details of food security indicators

APPENDIX A1: Legend

CODES	
STAKEHOLDER GROUPS/SECTORS	
Businesses (BUS) (red colouring)	
BUS-RET	Retailers
BUS-WHO	Wholesalers
BUS-MAN	Manufacturers and processors
BUS-HOS	Hospitality: Hotels, restaurant and caterers
BUS-FIN	Financial services
BUS-CON	Consulting companies
BUS-TRA	Trading companies
BUS-LOG	Logistic companies
BUS-AGR	Chemical companies and plant protection services
BUS-PRO	Producer (organisations)
Not-for-profit organisations (NPO) (green colouring)	
NPO-MBS	Member-oriented service organisations
NPO-CSP	Cross-sector partnerships
NPO-NGO	Non-governmental organisations
NPO-REL	Religious organisations
Government (GOV) (blue colouring)	
GOV-LOC	Local (municipal) government
GOV-PRO	Provincial government
GOV-NAT	National government
Research (yellow colouring)	
RES-UNI	Universities
RES-ORG	Other research organisations
SCOPE OF ACTION	
NAT	National
PRO	Provincial
CPT	Cape Town
LOC	Localised: Specific wardens, communities, suburbs and townships

Appendix A2: Stakeholder Categories

Sector	Scope	Organisation	Contact person	Telephone	Email address	What the organisation does
BUS	NAT	Consumer Goods Council	Linda Brink		lb@cgcsa.co.za	consumer council
BUS-RET	NAT	Checkers Shoprite Group	Brian Weyers???	0219 8042 53	bweyers@shoprite.co.za	Fresh Food Division
BUS-RET	NAT	Pick n Pay Group	Andre Nel	0216 58 1117	anel@pnp.co.za	large retailer
BUS-RET	NAT	Spar Group				large retailer
BUS-RET	NAT	Woolworths	Johan Feirrerera	0214 0791 11	johanfeirrerera@woolworths.co.za	large retailer
			Justin Smith	0214 0791 11	justinsmith@woolworths.co.za	
BUS-RET	NAT	Fruit & Veg City				
BUS-RET	CPT	Somali Retailers Association	Abdi Ahmed Aden (spokesperson)			Non-profit. Part of a greater network of Somalis within SA; semi-formal support network of traders; No contact details online.
BUS-RET	NAT	Somali Association of South Africa	Abdi Kader	0847 7556 68		
BUS-RET	LOC	Zanokhanyo Retailers Association				Mentioned in several online news articles, e.g. http://groundup.org.za/content/local-businesses-move-against-somali-shops-khayelitsha . No further information or contact details online
BUS-WHO	CPT	Cape Town Fresh Produce Market	Wally Reid	0828002087 / 0215312018		
BUS-WHO	NAT	Cash & Carry				
BUS-WHO	NAT	Mass Mart				
BUS-MAN	NAT	Pioneer Foods	David Howard Ellen Odendaal			
BUS-MAN	NAT	BM Food Manufacturers				
BUS-MAN	NAT	Unilever Food Solutions				
BUS-MAN	NAT	Food Pods		0214 4296 00		Urban agriculture
BUS-MAN	NAT	Tiger Brands	Bongiwe Njobe?	0118 4044 59	bongiwenjobe@tigerbrands.com	
BUS-MAN	NAT	Nampak Packaging - input?	Johan Visser	0215 9058 39	johan.visser@nampak.com	
				0828 0523 43		
BUS-HOS	NAT	Federated Hospitality Association of South Africa (FEDHASA)	Rema Wiese	0827 7208 58	rema@fedhasa.co.za	
BUS-HOS	NAT	Fedics	Thila Miller	0215 9583 00	trajaruthnam@fedics.co.za	http://www.fedics.co.za/
BUS-FIN	NAT	Old Mutual	Mandisa			

Appendix A2: Stakeholder Categories

BUS-FIN	NAT	Investment Group Nedbank	Zungu Cindy Morgan	0214 1230 44	cindymor@nedbank.co.za	
BUS-FIN	NAT	Rand Merchant Bank	Lwazi Magayana	0727 0543 80	lwazi.magayana@rmb.co.za	
BUS-FIN	NAT	ABSA	Wendy Engel	0825 6262 50	wendy.engel@absa.co.za	
BUS-FIN	NAT	Tshikululu Social Investments	Graeme Wilkinson			
BUS-CON	NAT	Omega Investment Research	Dr Denis Worrall	0216 8978 81 or 0832 2892 14	denisw@omegaiinvest.co.za	
BUS-CON	CPT	Touching the Earth Lightly	Stephen Lamb		stephen@touchingtheearthlightly.com	Urban rooftop gardening
BUS-CON	NAT	Sustainable Livelihoods Foundation		0217 6251 77		Did project with UWC on spazas and seem to be continuing this work with project on informal micro-enterprise on Cape Flats
BUS-CON	NAT	Jeffares & Green (Pty) Ltd	Sally Anne Engledow	0215 3209 40	EngledowS@jgi.co.za	J&G is large engineering concern - Sally Anne specialises in Waste Management
BUS-CON	NAT	SetPlan Spatial and Urban Planners	Neville van der Westhuizen	0218 5442 60	neville@setplan.com	Did Cape Town Agricultural Plan and PHA Plan
BUS-CON	CPT	Meshfields	Anna Cowen		anna@meshfields.com	
BUS-CON	NAT	Pleiad Foundation	Kenneth Carden	8344 1974 9	kenneth@cape-energy.co.za	
BUS-CON	CPT	Agricultural Consultant - Independent	Faizel Daniels	0824 9594 43	faizal.daniels@gmail.com	Agricultural Consultant (Previously worked with Province)
BUS-CON	NAT	Mthente Research & Consulting Services		0216 7405 04		has done work on informal traders in Cape Town
BUS-CON	NAT	De Wit Sustainable Options	Martin De Wit	2198 2786 2	martin@sustainableoptions.co.za	
BUS-TRA	NAT	CapeSpan (Pty) Ltd	Angelo Petersen	0219 1729 93	izettecollins@capespain.co.za	
BUS-TRA	NAT	African Sources	Barbara Court	0218 5618 84 or 0833 8301 74	barbara@african-sources.com	
BUS-TRA	NAT	Fresh Produce Exporters' Forum (FPEF)	Junette Davids	0215 2604 74	sandra@fpf.co.za	
			Stuart Symington	0826 8559 84	stuart@fpf.co.za	
			Sandra Baetsen	0215 2604 74	sandra@fpf.co.za	
BUS-TRA	PRO	Western Cape Informal Traders Coalition	Riedewaan Charles	0839 6563 24		
BUS-TRA	LOC	United Khayelitsha Informal Traders	Themba Mgobozi			

Appendix A2: Stakeholder Categories

BUS-TRA	LOC	Association Concerned Hawkers and Traders Association (CHATA), Mitchell's Plain				
BUS-TRA	LOC	Mitchells Plain Town Center Merchants Association (MPTCMA)	Dr MC Roomaney	0213 9281 30		
BUS-TRA	LOC	Elsies River Informal Traders Association	Imraahn Ismail- Mukaddam	0833 5795 37	imukaddam@cap etowntv.org	
BUS-TRA	LOC	Ntlazane Traders Association (Khayelitsha)	Mr Takayi	0737 7718 66		
BUS-TRA	LOC	Station Stairs Traders Association (Khayelitsha)	Mr Tshoko	083 685 8997		
BUS-TRA	LOC	Mitchells Plain Traders Umbrella Body	Kenny Brinkhuis	0213 7613 45		
BUS-LOG	NAT	VDV Transport	Charl Kruger	0823 2003 42	charl@vdvtransport ort.co.za	Long distance transport company - specialising in refrigerated cargo, fresh fruit, dairy
			Cornel van der Vyver	0219 8103 00		
			GP Bothma	0823 2130 67	gp@vdvtransport .co.za	
BUS-LOG	NAT	SA Fresh Produce Traceability Project	Gwynne Foster	0825 7842 01	g.foster@mweb. co.za	
BUS-AGR	NAT	Khoisan Chemicals	Henry Cornett	0215 3558 66	tahindus@telko msa.net	Agricultural inputs
BUS-AGR	NAT	Viking	Kobus Hartman			Agricultural inputs
BUS-AGR	NAT	ProBokashi Pty Ltd	Rupert van der Merwe			non-chemical agricultural inputs
BUS-PRO	PRO	Agri Wes Kaap	Carl Opperman		carl@awk.co.za	Producer organisation
BUS-PRO	NAT	SA Poultry Association	Kevin Lovell	0836 7638 30	hendrien@sapou ltry.co.za	Producer organisation
BUS-PRO	NAT	National Emerging Red Meat Producers' Organisation	Langelihle Simela		fsd@nerpo.org.z a	Producer organisation
BUS-PRO	NAT	Milk Producers' Organisation	Philip Blanckenb erg	0219 7117 52	philip@jhblanck. co.za	Producer organisation; www.mpo.co.za/wester n-cape.html
BUS-PRO	PRO	Western Cape Pork Producers' Association	Johan Bothma	0218 6038 00	johan@awk.co.z a	Producer organisation
BUS-PRO	LOC	Phillippi Farmers' Forum	Nomonde Kweza	0735 0973 43	nurturesoil@gma il.com	Producer forum
BUS-PRO	LOC	Food and Farming for the Cape Flats/ Schaapkraal Emerging Farmer's Association	Nazeer Sondag	0727 2434 65	nasonday@gmail .com	Activism around Phillipi Horticultural Area.
BUS-PRO	LOC	Hortgro		0218 7929 00		www.hortgro.co.za ; umbrella group for horticultural producers
NPO-MBS	NAT	COSATU	Patrick Craven	0113 3949 11 or 0828 2174 56	patrick@cosatu. org.za	trade union

Appendix A2: Stakeholder Categories

NPO-MBS	NAT	South African National Consumer Union	Lilibeth Moolman	0124 6030 02 or 0829 6376 76	lilmoolman@abs.amaail.co.za	
NPO-MBS	NAT	National Consumer Forum (NCF)				
NPO-CSP	CPT	Cape Town Partnership	Zarina Nteta		zarina@capetownpartnership.co.za	Organising urban agric workshop for end August
NPO-CSP	PRO	Western Cape Economic Development Partnership Sustainability initiative of South Africa (SIZA)	Christian Gable		christian@wcedp.co.za	launched the Future of Ariculture and the Rural Economy (FARE) process with WC-DAFF
NPO-CSP	NAT		Collenn Chennells		chennell@iafrica.com	Ethical trade initiative of WC fruit industry
NPO-NGO	CPT	Abalimi Bezekhaya	Rob Small	0213 7116 53	rob@farmgarden.trust.org	Small farmer training/support/market ing
NPO-NGO	CPT	Soil for Life	Louise Vaughan	0217 9449 82	louise@soilforlife.co.za	Small farmer training/support. Home gardens
NPO-NGO	CPT	SEED	Leigh Brown	0213 9153 16	leigh@seed.org.za	Permaculture in schools and beyond
NPO-NGO	PRO	Peninsula School Feeding		0214 4760 20		School feeding
NPO-NGO	CPT	Food Tents	Shaun Cairns	0214 4296 00 or 0765 5826 41	shaun@foodtents.co.za	
NPO-NGO	CPT	Ikamva labantu				Food gardens, infant feeding
NPO-NGO	NAT	Stop Hunger Now	David Jacobs			Meal distribution, disaster response
NPO-NGO	NAT	Black Sash	Nkosikhulu Nyembezi		nyembezi@black.sash.org.za	General activism, bread price fixing
NPO-NGO	LOC	Oranjezicht City Farm	Sheryl	083 628 3426		Raising awareness of food issues in city
NPO-NGO	CPT	Violence Prevention through Urban Upgrading (VPUU)	Don Shay		dons Shay@mweb.co.za	
NPO-NGO	NAT	WWF	Inge Kotze	0837 1214 52	ikotze@wwf.org.za	Sustainable agriculture manager
NPO-NGO	NAT	Conservation South Africa Green Choice	Heidi Hawkins		hhawkins@conservation.org	Sustainable agriculture and biodiversity
NPO-NGO	NAT	SANBI	John Donaldson		j.donaldson@sanbi.org.za	BIOTA SA steering committee
NPO-NGO	PRO	CapeNature	Andrew Turner	0218 6680 31	aaturner@capenature.co.za	
NPO-NGO	NAT	Oxfam GB	Canny Geyer	0716 8038 35	cgeyer@oxfam.org.uk	
NPO-NGO	PRO	Women on Farms	Liezl Wales		cooperatives@wfp.org.za	
NPO-NGO	NAT	Solidarity	Melinda Wolstenholme	0113 9494 82	melinda@solidarity.co.za	
NPO-NGO	NAT	Trust for Community Outreach and Education	Mercia Andrews	0216 8530 33 or 0823 6834	merciam@tcoe.org.za	

Appendix A2: Stakeholder Categories

				29		
NPO-NGO	PRO	Western Cape Rehabilitation Centre	Alta Barnard-Bull			Dietician
NPO-NGO	NAT	Biowatch	David Vogelsang	0833 2577 92	davidfig@iafrica.com	
NPO-NGO	LOC	Khayalagunya Human Development	Pascal Mosia	0737 5108 85	moms@anazi.co.za	Operates in Gugulethu
NPO-NGO	NAT	Fair Trade Africa	Nokutula Mhene			
NPO-NGO	NAT	FoodBank	Andy Du Plessis, MD	021-5315 670	Andy@foodbank.org.za	
NPO-NGO	LOC	The Sozo Foundation	Kate Ellis	0218 2555 29/7	admin@thesozofoundation.org.za	Trains and supports individuals and groups involved in urban agriculture
NPO-NGO	NAT	Beautiful Gate South Africa	Vaughan Stannard	021 370 2500	vaughans@beautifulgate.org	Home for children with food garden
NPO-NGO	LOC	Choices Centre	Carrie Stephens	021 852 6454	choicessw@gmail.com	Crisis Pregnancy Centre with food garden
NPO-NGO	LOC	Community in Action	Danie Heyns	021 914 3280	djh@telkomsa.net	Cook and distribute food to children
NPO-NGO	LOC	Legacy Community Development	Louise/Irma	021 889 9591	louise@sg.org.za	Community development - large food garden is one of their main projects
NPO-NGO		Homeless Project	Mziyanda Mphikwa	0213 8753 11		Provides tools and inputs for urban cultivators.
NPO-NGO	NAT	Triple Trust Organisation		0216 8960 00	tto@tto.org.za	Seem to have a spaza market project and a database of spaza shops
NPO-NGO	CPT	New World Foundation	Kimendhri Constant-Pillay	0217 0111 50	[via webpage] http://www.newworldfoundation.org.za/contact-us/	Various empowerment projects aimed at children, youth, women and men. Working in collaboration with Soil for Life, teach Vrygrond Women's Group cultivation methods.
NPO-NGO	CPT	Future Cape Town	Rashiq Fataa	0213 6186 31		Media; awareness raising
NPO-NGO	LOC	Baphumelele	Rosie Mashale	0213 6186 31	[via webpage] http://www.baphumelele.org.za/contact-us/	Numerous projects dealing with children at risk. Rosie's Bakery is one of their projects, it includes a soup kitchen sourcing some ingredients from their own garden.
NPO-NGO	CPT	Informal Settlement Network, Cape Town		0216 8994 08		association of urban poor
NPO-NGO	LOC	Community Organisation Resource Centre		0216 8994 08	sdi@courc.co.za	NGO that supports community-based organisations
NPO-NGO	NAT	Siyakhana Initiative for Food Security and Ecological Health	Flo Kroll	7250 1075 6	flo@siyakhana.org	now in Cape town
NPO-NGO	NAT	People Against Suffering, Oppression and Poverty (PASSOP)	Braam Hanekom	0843 1917 64	braam@passop.co.za	community-based organisation lobbying for the rights of asylum seekers, refugees and immigrants

Appendix A2: Stakeholder Categories

NPO-NGO	NAT	The Surplus People Project		0214 4856 05	spp@spp.org.za	Advocacy organisation for pro poor agrarian reform and food sovereignty
NPO-NGO	LOC	Green Communities	Kim De Bruin	0823 7888 75		Worked with the City of Cape Town to plant home gardens at a new housing development in Witsand in 2009.
NPO-NGO	LOC	Philisa Abafazi Bethu	Lucinda Evans	021 701 4717	lucinda@philisaa-bafazi.org	Home for women with a food garden
NPO-REL	CPT	Living Hope	Richard Lundie	0217 8525 97	richard@livingway.co.za	Living Way, one of their programmes, teaches agricultural skills
NPO-REL	CPT	Sobambisana Community Development	Darlene de Jager	0213 8855 07	sobambisana@gmail.com	Situated in Crossroads
NPO-REL	NAT	Catholic Welfare and Development	Pauline Ford	0214 2520 95	info@cwd.org.za	Runs soup kitchens feeding up to 5000 people per day
NPO-REL		Home of Compassion Ministries	Kobus/Charles	021 955 3455	homeofcompassion@mweb.co.za	Feeding scheme
NPO-REL	NAT	Economic Justice Network	Rev. Malcolm Damon	0214 2495 63	mpd@ejn.org.za	
NPO-REL	CPT	Diocese of Cape Town Environmental Group	Revd Canon Dr. Rachel Mash	0214 6515 57	rmash@mweb.co.za	Coordinator of the Anglican Church of Southern Africa's Environmental Network
GOV-LOC	CPT	City of Cape Town Economic Development	Paul Williamson		paul.williamson@capetown.gov.za	
GOV-LOC	CPT	City of Cape Town Urban Design, Strategy & Planning	Cedric Daniels		cedric.daniels2@capetown.gov.za	
GOV-LOC	CPT	City of Cape Town Department of Environmental Health	Elroy Plaatjies		elroy.plaatjies@capetown.gov.za	
GOV-LOC	CPT	City of Cape Town Department of Government & Interface	Kate Miszewski		katharine.miszewski@capetown.gov.za	Tasked with implementing trading plan at Khayelitsha Station
GOV-LOC	CPT	City of Cape Town Department of Transport, Roads & Stormwater	Melani Ohlson		melani.ohlson@capetown.gov.za	
GOV-LOC	CPT	City of Cape Town Urban Agriculture	Stanley Visser	0845 5457 85/0 21 5501 201	Stanley.visser@capetown.gov.za	
GOV-LOC	CPT	City of Cape Town Economic, Environment & Spatial Planning Directorate	Cathy Stone (Director: Spatial Planning & Urban Design)	0214 0094 10	catherine.Stone@capetown.gov.za	
GOV-LOC	CPT	City of Cape Town	Saul Roux		saul.roux@capetown.gov.za	Also UCT PhD student - did some interesting work on carbon miles awhile back
GOV-LOC	CPT	City of Cape Town - Social Development and Early Childhood Development Directorate, CoCT	Delycia Forbes	0214 1740 83	Delycia.Forbes@capetown.gov.za	Director: Programme Development and Implementation
GOV-LOC	CPT	City of Cape Town - Dept Health CoCT	Carmen Beukes	0217 9468 70	Carmen.Beukes@capetown.gov.za	Co-ordinator: Nutrition

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GOV-LOC	CPT	City of Cape Town - Social and Early Childhood Development	Ivan Bromfield	0214 4403 82	Ivan.Bromfield@capetown.gov.za	Director: Social and Early Childhood Development
GOV-LOC	CPT	City of Cape Town - Dept Safety and Security	Rudolf Wiltshire	0219 0017 19	Rudolf.Wiltshire@capetown.gov.za	Chief: Law Enforcement and Specialised Services
GOV-LOC	CPT	City of Cape Town - Social Development Dept.	Nomfundo Mdingi	0214 4402 00	Nomfundo.Mdingi@capetown.gov.za	
GOV-LOC	CPT	City of Cape Town - District Spatial Planning Branch Spatial Planning & Urban Design Dept	Kier Hennessey	0217 1080 49	Kier.Hennessey@capetown.gov.za	Principal Spatial Planner Southern District & Cape Flats District
GOV-PRO	PRO	Western Cape Provincial Government Directorate Nutrition	Hilary Goeiman		hgoeiman@pgwc.gov.za	Director Nutrition
GOV-PRO	PRO	Western Cape Provincial Government	Helen Davies	0214 8351 26	Helen.Davies@westerncape.gov.za	Director: Climate Change and Biodiversity
GOV-PRO	PRO	Western Cape Provincial Government Elsenburg	Francis Steyn	0218 0850 90	franciss@elsenburg.com	LandCare Manager
			Dudley Adolph	0218 0850 13 or 0784 5965 08	DudleyA@elsenburg.com	Chief Director: Farmer Support and Development
			Dirk Troskie (Dr)	0218 0851 91	DirkT@elsenburg.com	Specialist Advisor: Agricultural Economics
			Mogale Sebopetsa	0218 0851 03	mogales@elsenburg.com	Acting Chief Director: Farmer support & development
			Ilse Trautman (Dr)	0218 0850 12	IlseT@elsenburg.com	Director: Technology Research and Development Services
			Phumlani Sphiwo Mentani			
			Douglas Chitepo	0218 0851 03	DouglasC@elsenburg.com	Director: Food Security
GOV-PRO	PRO	National Dept. Rural Development and Land Reform	Sunday Ogunronbi	0123 1293 71	sogunronbi@ruraldevelopment.gov.za	Executive Manager: Spatial Planning & Information
GOV-PRO	PRO	Western Cape Provincial Government	Bart Willems (Dr Meds)	0844 3237 13	bartwillemsza@yahoo.com	Public Health Registrar, Directorate Health Impact Assessment
GOV-PRO	PRO	WESGRO	Nils Flaatten	0214 8786 15 or 0824 0920 20	nils@wesgro.co.za	
GOV-NAT	NAT	Office of the Consumer Protector (DTI)	Ebrahim Mohamed	0123 9495 00	ebimo@thedti.gov.za	
GOV-NAT	NAT	PRASA	Henry Masimla	0215 0716 63	hmasimla@prasa.com	State-owned passenger rail agency
RES-UNI		University of Cape Town	Dr. Jane Battersby-Lennard		jane.battersby.lennard@gmail.com	AFSUN, CCT FS project leader
RES-UNI		University of Cape Town	Ralph Hamann	0835 2030 85	ralph.hamann@sb.uct.ac.za	Cross-sector collaboration in food; CSR in agriculture;

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RES-UNI		University of the Western Cape	Prof Andries Du Toit	8362 6774 0	adutoit@plaas.org.za	PLAAS
RES-UNI		University of the Western Cape	Liezl Cornelissen			Human Ecology
RES-UNI		CPUT	Larry Dolley			
RES-UNI		Stellenbosch University	Julia Harper	072 5350 204	jrs@sun.ac.za	Food Security Initiative
RES-UNI		Stellenbosch University	Michael-John Freeborough		mfree@sun.ac.za	Manager, Faculty of AgriSciences
RES-ORG	NAT	CSIR	Esbeth Van Dyk		fevandyk@csiro.za	Principal supply chain analyst, specialising in agricultural supply chains and agro-logistics.
RES-ORG	NAT	Africa Centre	Tambu Ndlovu	0214 1833 36	tambun@afriacentre.net	Doing food security research incl people's food retail behaviours in townships
RES-ORG	NAT	Human Sciences Research Council	Peter Jacobs	0832 8887 45	pjacobs@hsrca.ac.za	
Counted:						
BUS	1					
BUS-RET	8					
BUS-WHO	3					
BUS-MAN	6					
BUS-HOS	2					
BUS-FIN	5					
BUS-CON	9					
BUS-TRA	11					
BUS-LOG	3					
BUS-AGR	3					
BUS-PRO	8					
NPO-MBS	3					
NPO-CSP	3					
NPO-NGO	40					
NPO-REL	6					
GOV-LOC	14					
GOV-PRO	6					
GOV-NAT	2					
RES-ORG	3					
RES-UNI	4					
<i>Total</i>	<i>140</i>					

Appendix A3: Supply Chain Categories

Chain stage	Sector	Organisation	Contact person	Telephone	Email address	What the organisation does
BUS	NAT	Consumer Goods Council	Linda Brink		lb@cgcsa.co.za	consumer council
BUS-RET	NAT	Checkers Shoprite Group	Brian Weyers???	0219804253	bweyers@shoprite.co.za	Fresh Food Division
BUS-RET	NAT	Pick n Pay Group	Andre Nel	021658 1117	anel@pnp.co.za	large retailer
BUS-RET	NAT	Spar Group				large retailer
BUS-RET	NAT	Woolworths	Johan Feirrerera	0214079111	johanfeirrerera@woolworths.co.za	large retailer
BUS-RET	NAT	Fruit & Veg City	Justin Smith	0214079111	justinsmith@woolworths.co.za	
BUS-RET	CPT	Somali Retailers Association	Abdi Ahmed Aden (spokesperson)			Non-profit. Part of a greater network of Somalis within SA; semi-formal support network of traders; No contact details online.
BUS-RET	NAT	Somali Association of South Africa	Abdi Kader	0847755668		
BUS-RET	LOC	Zanokhanyo Retailers Association				Mentioned in several online news articles, e.g. http://groundup.org.za/content/local-businesses-move-against-somali-shops-khayelitsha . No further information or contact details online
BUS-WHO	CPT	Cape Town Fresh Produce Market	Wally Reid	0828002087 / 0215312018		
BUS-WHO	NAT	Cash & Carry				
BUS-WHO	NAT	Mass Mart				
BUS-MAN	NAT	Pioneer Foods	David Howard Ellen Odendaal			
BUS-MAN	NAT	BM Food Manufacturers				
BUS-MAN	NAT	Unilever Food Solutions				
BUS-MAN	NAT	Food Pods		0214429600		Urban agriculture
BUS-MAN	NAT	Tiger Brands	Bongiwe Njobe?	0118404459	bongiwenjobe@tigerbrands.com	
BUS-MAN	NAT	Nampak Packaging - input?	Johan Visser	0215905839 or 0828052343	johan.visser@za.nampak.com	
FIN	BUS-FIN	Old Mutual Investment Group	Mandisa Zungu			
FIN	BUS-FIN	Nedbank	Cindy Morgan	0214123044	cindymor@nedbank.co.za	
FIN	BUS-FIN	Rand Merchant Bank	Lwazi Magayana	0727054380	lwazi.magayana@rmb.co.za	
FIN	BUS-FIN	ABSA	Wendy Engel	0825626250	wendy.engel@absa.co.za	
BUS-TRA	NAT	CapeSpan (Pty) Ltd	Angelo Petersen	0219172993	izette.collins@capspan.co.z	

Appendix A3: Supply Chain Categories

BUS-TRA	NAT	African Sources	Barbara Court	0218561884 or 0833830174	barbara@african-sources.com	a
BUS-TRA	NAT	Fresh Produce Exporters' Forum (FPEF)	Junette Davids	0215260474	sandra@fpf.co.za	
BUS-TRA	PRO	Western Cape Informal Traders Coalition	Stuart Symington	0826855984	stuart@fpf.co.za	
BUS-TRA	LOC	United Khayelitsha Informal Traders Association	Themba Mgobozi			
BUS-TRA	LOC	Concerned Hawkers and Traders Association (CHATA), Mitchell's Plain	Dr MC Roomaney	0213928130		
BUS-TRA	LOC	Mitchells Plain Merchants Association (MPTCMA)	Imraahn Ismail-Mukaddam	0833579537	imukaddam@capetowntv.org	
BUS-TRA	LOC	Elsies River Informal Traders Association	Mr Takayi	0737771866		
BUS-TRA	LOC	Ntlazane Traders Association (Khayelitsha)	Mr Tshoko	083 685 8997		
BUS-TRA	LOC	Station Stairs Traders Association (Khayelitsha)	Kenny Brinkhuis	0213761345		
BUS-LOG	NAT	VDV Transport	Charl Kruger	0823200342	charl@vdvtransport.co.za	Long distance transport company - specialising in refrigerated cargo, fresh fruit, dairy
BUS-LOG	NAT	SA Fresh Produce Traceability Project	Cornel van der Vyver GP Bothma	0219810300 0823213067	gp@vdvtransport.co.za g.foster@mweb.co.za	
BUS-AGR	NAT	Khoisan Chemicals	Henry Cornett	0215355866	tahindus@telkomsa.net	Agricultural inputs
BUS-AGR	NAT	Viking	Kobus Hartman			Agricultural inputs non-chemical
BUS-AGR	NAT	ProBokashi Pty Ltd	Rupert van der Merwe			agricultural inputs
BUS-PRO	PRO	Agri Wes Kaap	Carl Opperman		carl@awk.co.za	Producer organisation
BUS-PRO	NAT	SA Poultry Association	Kevin Lovell	0836763830	hendrien@sapoultry.co.za	Producer organisation
BUS-PRO	NAT	National Emerging Red Meat Producers' Organisation	Langelihle Simela		fsd@nerpo.org.za	Producer organisation

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BUS-PRO	NAT	Milk Producers' Organisation	Philip Blanckenberg	0219711752	philip@jhblanck.co.za	Producer organisation; www.mpo.co.za/western-cape.html
BUS-PRO	PRO	Western Cape Pork Producers' Association	Johan Bothma	0218603800	johan@awk.co.za	Producer organisation
BUS-PRO	LOC	Phillippi Farmers' Forum	Nomonde Kweza	0735097343	nurturesoil@gmail.com	Producer forum
BUS-PRO	LOC	Food and Farming for the Cape Flats/ Schaapkraal Emerging Farmer's Association	Nazeer Sondag	0727243465	nasonday@gmail.com	Activism around Phillippi Horticultural Area.
BUS-PRO	LOC	Hortgro		0218792900		www.hortgro.co.za ; umbrella group for horticultural producers
NPO-MBS	NAT	COSATU	Patrick Craven	0113394911 or 0828217456	patrick@cosatu.org.za	trade union
NPO-MBS	NAT	South African National Consumer Union	Lillibeth Moolman	0124603002 or 0829637676	lilmoolman@absamail.co.za	
NPO-MBS	NAT	National Consumer Forum (NCF)				
NPO-CSP	CPT	Cape Town Partnership	Zarina Nteta		zarina@capetownpartnership.co.za	Organising urban agric workshop for end August launched the Future of Ariculture and the Rural Economy (FARE) process with WC-DAFF
NPO-CSP	PRO	Western Cape Economic Development Partnership Sustainability initiative of South Africa (SIZA)	Christian Gable		christian@wcedp.co.za	Ethical trade initiative of WC fruit industry
NPO-CSP	NAT		Collenn Chennells		chennell@iafrica.com	
NPO-NGO	CPT	Abalimi Bezekhaya	Rob Small	0213711653	rob@farmgardentrust.org	Small farmer training/support/marketing
NPO-NGO	CPT	Soil for Life	Louise Vaughan	0217944982	louise@soilforlife.co.za	Small farmer training/support. Home gardens
NPO-NGO	CPT	SEED	Leigh Brown	0213915316	leigh@seed.org.za	Permaculture in schools and beyond
NPO-NGO	PRO	Peninsula School Feeding		0214476020		School feeding
NPO-NGO	CPT	Food Tents	Shaun Cairns	0214429600 or 0765582641	shaun@foodtents.co.za	
NPO-NGO	CPT	Ikamva labantu				Food gardens, infant feeding
NPO-NGO	NAT	Stop Hunger Now	David Jacobs			Meal distribution, disaster response
NPO-NGO	NAT	Black Sash	Nkosikhulule Nyembezi		nyembezi@blacksash.org.za	General activism, bread price fixing
NPO-NGO	LOC	Oranjezicht City Farm	Sheryl	083 628 3426		Raising awareness of food issues in city
NPO-NGO	CPT	Violence Prevention through Urban Upgrading (VPUU)	Don Shay		donshay@mweb.co.za	
NPO-NGO	NAT	WWF	Inge Kotze	0837121452	ikotze@wwf.org.za	Sustainable agriculture manager

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NPO-NGO	NAT	Conservation South Africa Green Choice	Heidi Hawkins		hhawkins@conservation.org	Sustainable agriculture and biodiversity
NPO-NGO	NAT	SANBI	John Donaldson		j.donaldson@sanbi.org.za	BIOTA SA steering committee
NPO-NGO	PRO	CapeNature	Andrew Turner	0218668031	aaturner@capenature.co.za	
NPO-NGO	NAT	Oxfam GB	Canny Geyer	0716803835	cgeyer@oxfam.org.uk	
NPO-NGO	PRO	Women on Farms	Liezl Wales		cooperatives@wfp.org.za	
NPO-NGO	NAT	Solidarity	Melinda Wolstenholme	0113949482	melinda@solidariteit.co.za	
NPO-NGO	NAT	Trust for Community Outreach and Education	Mercia Andrews	0216853033 or 0823683429	mercia@tcoe.org.za	
NPO-NGO	PRO	Western Cape Rehabilitation Centre	Alta Barnard-Bull			Dietician
NPO-NGO	NAT	Biowatch	David Vogelsang	0833257792	davidfig@iafrica.com	
NPO-NGO	LOC	Khayalagunya Human Development	Pascal Mosia	0737510885	moms@anazi.co.za	Operates in Gugulethu
NPO-NGO	NAT	Fair Trade Africa	Nokutula Mhene			
NPO-NGO	NAT	FoodBank	Andy Du Plessis, MD	021-5315670	Andy@foodbank.org.za	
NPO-NGO	LOC	The Sozo Foundation	Kate Ellis	0218255529 /7	admin@thesozofoundation.org.za	Trains and supports individuals and groups involved in urban agriculture
NPO-NGO	NAT	Beautiful Gate South Africa	Vaughan Stannard	021 370 2500	vaughans@beautifulgate.org	Home for children with food garden
NPO-NGO	LOC	Choices Centre	Carrie Stephens	021 852 6454	choicessw@gmail.com	Crisis Pregnancy Centre with food garden
NPO-NGO	LOC	Community in Action	Danie Heyns	021 914 3280	djh@telkomsa.net	Cook and distribute food to children
NPO-NGO	LOC	Legacy Community Development	Louise/Irma	021 889 9591	louise@sg.org.za	Community development - large food garden is one of their main projects
NPO-NGO		Homeless Project	Mziyanda Mphikwa	0213875311		Provides tools and inputs for urban cultivators.
NPO-NGO	NAT	Triple Trust Organisation		0216896000	tto@tto.org.za	Seem to have a spaza market project and a database of spaza shops
NPO-NGO	CPT	New World Foundation	Kimendhri Constant-Pillay	0217011150	[via webpage] http://www.newworldfoundation.org.za/contact-us/	Various empowerment projects aimed at children, youth, women and men. Working in collaboration with Soil for Life, teach Vrygrond Women's Group cultivation methods.
NPO-NGO	CPT	Future Cape Town	Rashiq Fataa	0213618631		Media; awareness raising
NPO-NGO	LOC	Baphumelele	Rosie Mashale	0213618631	[via webpage] http://www.baphumelele.org.za/contact-us/	Numerous projects dealing with children at risk. Rosie's Bakery is one of their projects, it

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NPO-NGO	CPT	Informal Settlement Network, Cape Town		0216899408			includes a soup kitchen sourcing some ingredients from their own garden. association of urban poor
NPO-NGO	LOC	Community Organisation Resource Centre Siyakhana Initiative for Food Security and Ecological Health		0216899408		sdi@courc.co.za	NGO that supports community-based organisations
NPO-NGO	NAT	People Against Suffering, Oppression and Poverty (PASSOP)	Flo Kroll Braam Hanekom	725010756 0843191764		flo@siyakhana.org	now in Cape town community-based organisation lobbying for the rights of asylum seekers, refugees and immigrants
NPO-NGO	NAT	The Surplus People Project		0214485605		braam@passop.co.za	Advocacy organisation for pro poor agrarian reform and food sovereignty
NPO-NGO NPO-NGO	NAT LOC	Green Communities	Kim De Bruin	0823788875		spp@spp.org.za	Worked with the City of Cape Town to plant home gardens at a new housing development in Witsand in 2009.
NPO-NGO	LOC	Philisa Abafazi Bethu	Lucinda Evans	021 701 4717		lucinda@philisaabafazi.org	Home for women with a food garden
NPO-REL	CPT	Living Hope	Richard Lundie	0217852597		richard@livingway.co.za	Living Way, one of their programmes, teaches agricultural skills
NPO-REL	CPT	Sobambisana Community Development	Darlene de Jager	0213885507		sobambisana@gmail.com	Situated in Crossroads
NPO-REL	NAT	Catholic Welfare and Development	Pauline Ford	0214252095		info@cwd.org.za	Runs soup kitchens feeding up to 5000 people per day
NPO-REL		Home of Compassion Ministries	Kobus/Charles	021 955 3455		homeofcompassion@web.co.za	Feeding scheme
NPO-REL	NAT	Economic Justice Network	Rev. Malcolm Damon	0214249563		mpd@ejn.org.za	
NPO-REL	CPT	Diocese of Cape Town Environmental Group	Revd Canon Dr. Rachel Mash	0214651557		rmash@mweb.co.za	Coordinator of the Anglican Church of Southern Africa's Environmental Network
GOV-LOC	CPT	City of Cape Town Economic Development	Paul Williamson			paul.williamson@capetown.gov.za	
GOV-LOC	CPT	City of Cape Town Urban Design, Strategy & Planning	Cedric Daniels			cedric.daniels2@capetown.gov.za	
GOV-LOC	CPT	City of Cape Town Department of Environmental Health	Elroy Plaatjies			elroy.plaatjies@capetown.gov.za	
GOV-LOC GOV-LOC	CPT	City of Cape Town	Kate Miszewski			katharine.miszewski@capetown.gov.za	Tasked with implementing

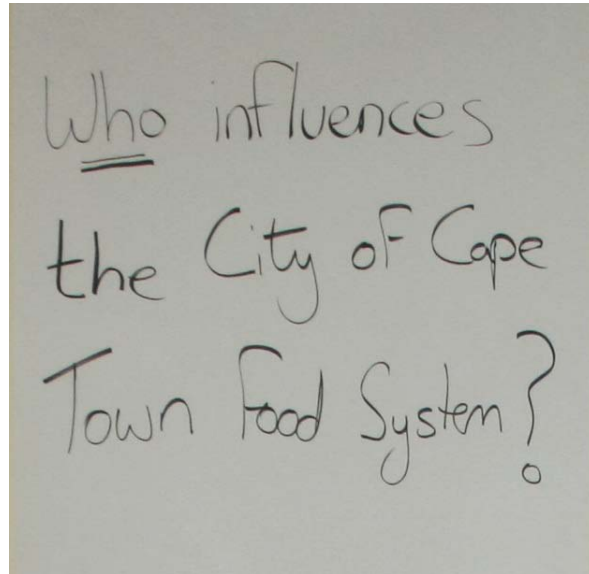
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		Department of Government & Interface				trading plan at Khayelitsha Station
	CPT	City of Cape Town	Melani Ohlson			melani.ohlson@capetown.gov.za
GOV-LOC		Department of Transport, Roads & Stormwater				
	CPT	City of Cape Town Urban Agriculture	Stanley Visser	0845545785 /021 5501201		Stanley.visser@capetown.gov.za
GOV-LOC		City of Cape Town	Cathy Stone	0214009410		catherine.Stone@capetown.gov.za
GOV-LOC		Economic, Environment & Spatial Planning Directorate	(Director: Spatial Planning & Urban Design)			
	CPT	City of Cape Town	Saul Roux			saul.roux@capetown.gov.za
GOV-LOC		City of Cape Town - Social Development and Early Childhood Development Directorate, CoCT	Delycia Forbes	0214174083		Also UCT PhD student - did some interesting work on carbon miles awhile back Director: Programme Development and Implementation
GOV-LOC		City of Cape Town - Dept Health CoCT	Carmen Beukes	0217946870		Co-ordinator: Nutrition
GOV-LOC		City of Cape Town - Social and Early Childhood Development	Ivan Bromfield	0214440382		Director: Social and Early Childhood Development
GOV-LOC		City of Cape Town - Dept Safety and Security	Rudolf Wiltshire	0219001719		Chief: Law Enforcement and Specialised Services
GOV-LOC		City of Cape Town - Social Development Dept.	Nomfundo Mdingi	0214440200		Nomfundo.Mdingi@capetown.gov.za
GOV-LOC		City of Cape Town - District Spatial Planning Branch Spatial Planning & Urban Design Dept	Kier Hennessey	0217108049		Principal Spatial Planner Southern District & Cape Flats District
GOV-PRO	PRO	Western Cape Provincial Government Directorate Nutrition	Hilary Goeiman			hgoeiman@pgwc.gov.za Director Nutrition
GOV-PRO	PRO	Western Cape Provincial Government	Helen Davies	0214835126		Helen.Davies@westerncape.gov.za Director: Climate Change and Biodiversity
GOV-PRO	PRO	Western Cape Provincial Government	Francis Steyn	0218085090		franciss@elsenburg.com LandCare Manager
GOV-PRO	PRO	Elsenburg	Dudley Adolph	0218085013 or 0784596508		DudleyA@elsenburg.com Chief Director: Farmer Support and Development
			Dirk Troskie (Dr)	0218085191		DirkT@elsenburg.com Specialist Advisor: Agricultural Economics

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			Mogale Sebopetsa	0218085103	mogales@elsenburg.com	Acting Chief Director: Farmer support & development
			Ilse Trautmann (Dr)	0218085012	IlseT@elsenburg.com	Director: Technology Research and Development Services
			Phumlani Sphiwo Mentani Douglas Chitepo Sunday Ogunronbi	0218085103 0123129371	DouglasC@elsenburg.com sogunronbi@ruraldevelopment.gov.za	Director: Food Security Executive Manager: Spatial Planning & Information
GOV-PRO GOV-PRO	PRO PRO	National Dept. Rural Development and Land Reform Western Cape Provincial Government	Bart Willems (Dr Meds)	0844323713	bartwillemsza@yahoo.com	Public Health Registrar, Directorate Health Impact Assessment
GOV-PRO	PRO	WESGRO	Nils Flaatten	0214878615 or 0824092020	nils@wesgro.co.za	
GOV-NAT GOV-NAT	NAT NAT	Office of the Consumer Protector (DTI) PRASA	Ebrahim Mohamed Henry Masimla	0123949500 0215071663	ebimo@thedti.gov.za hmasimla@prasa.com	State-owned passenger rail agency
RES-UNI		University of Cape Town	Dr. Jane Battersby-Lennard		jane.battersby.lennard@gmail.com	AFSUN, CCT FS project leader
RES-UNI		University of Cape Town	Ralph Hamann	0835203085	ralph.hamann@gsb.t.ac.za	Cross-sector collaboration in food; CSR in agriculture; PLAAS
RES-UNI		University of the Western Cape	Prof Andries Du Toit	836267740	adutoit@plaas.org.za	
RES-UNI		University of the Western Cape	Liezl Cornelissen			Human Ecology
RES-UNI		CPUT	Larry Dolley			
RES-UNI		Stellenbosch University	Julia Harper	072 5350204	jrs@sun.ac.za	Food Security Initiative
RES-UNI		Stellenbosch University	Michael-John Freeborough		mfree@sun.ac.za	Manager, Faculty of AgriSciences
RES-ORG	NAT	CSIR	Esbeth Van Dyk		fevandyk@csir.co.za	Principal supply chain analyst, specialising in agricultural supply chains and agrolistics.
RES-ORG	NAT	Africa Centre	Tambu Ndlovu	0214183336	tambun@afriacentre.net	Doing food security research incl people's food retail behaviours in townships
RES-ORG	NAT	Human Sciences Research Council	Peter Jacobs	0832888745	pjacobs@hsrc.ac.za	

APPENDIX B
Stakeholder Analysis of Cape Town's Food System



Verena Bitzer, Scott Drimie and Milla McLachlan

Preliminary report 29 September 2013

(Please do not quote)

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1. Background and objectives

This report forms part of a larger study commissioned by the City of Cape Town and undertaken by a team of researchers from the University of Cape Town and Stellenbosch University. The following report covers Module 5 “Stakeholder Analysis”.

The aim of the stakeholder analysis is to identify key stakeholders, map current and potential interactions among stakeholders, delineate stakeholder mandates, and lay the foundations for potential models of on-going engagement of key stakeholders in food system governance and food security actions. This report gives an account of the activities undertaken to date and the resulting preliminary outcomes.

2. Defining stakeholders

The term ‘stakeholder’ is both a powerful one (Phillips et al., 2003) and an imprecise one that is defined and interpreted in multiple and sometimes contradictory ways. The classical definition put forward by Freeman (2010, p. 46) considers stakeholders as groups or individuals who can affect or are affected by the achievement of the activities of an organisation. Hence, stakeholders are defined according to their relationship with a focal organisation. These relationships can be unidirectional, from either side, or bidirectional. Excluded from this notion of stakeholders are those who cannot affect the activities of an organisation (no power) and those who are not affected by it (no claim or relationship) (Mitchell et al., 1997).

Extended to the purpose of this study, this translates into a definition of stakeholders as any actor or organisation influencing or influenced by the City of Cape Town’s food system. Although the application of the municipal boundaries achieves a clear geographical demarcation, focusing only on this demarcation will be essentially misleading in terms of identifying key stakeholders. This is because the City of Cape Town has permeable boundaries, and some key stakeholders are based outside the city limits. As such, one must be explicit about the geographical demarcation of the system at all times as there are essentially systems within systems, which makes easy delineation impossible.

Stakeholders are often classified in types such as governments, communities, consumers, NGOs, and supply chain partners (Donaldson and Preston, 1995). We follow this line of argumentation and commence with a broad notion of stakeholder categories, including representatives from government at all levels, the private sector (including both formal and informal sector actors), civil society organisations and research.

3. Initial identification and categorisation of stakeholders

We initiated the stakeholder analysis by identifying and collecting details of stakeholders with the help of those actors and organisations that previously established similar databases or were in contact with a wide variety of food stakeholders. Networks that we made use of included the African Food Security Urban Network (AFSUN) based at UCT, the Stellenbosch University Food Security Initiative (FSI), and the Southern Africa Food Lab (SAFL). Whilst this implies that the reach of the database is contingent upon existing information, it provided a useful point of departure to collect a wide variety of inputs from different, complementary sources.

We then reviewed the database to check for possible gaps and biases. Particularly the issue of informal stakeholders, such as hawkers, street vendors and traders, proved to be a fundamental challenge in that they are clearly important stakeholders (both affecting and being affected by food supply into the City); yet, they largely lack formal, i.e. registered, structures and collective organisations. The informal sector is also highly dispersed and dynamic, with high start-up and failure rates and often run on individual and 'survivalist' modes (Charman et al., 2012). This made it difficult to identify specific individual stakeholders (or organisations) rather than merely listing them as a general category of 'informal traders'. Through additional research, including internet searches and document analysis, we identified a number of more or less formal collective organisations which represent at least some segments of this highly varied and multi-faceted stakeholder group.

Any new insights were listed in the database and again cross-checked among the researchers involved. This resulted in a current database listing 133 organisations and institutes as stakeholders, organised around a simple categorisation differentiated across stakeholder *groups*, *locality* and *position* in (or around) the food chain.

Categorisation 1: Stakeholder groups

Group	Sub-group	Code
<i>Businesses (formal and informal)</i>	Retailers	BUS-RET
	Wholesalers and markets	BUS-WHO
	Food manufacturers and processors	BUS-MAN
	Hotels, restaurants and caterers	BUS-HOT
	Financial service providers	BUS-FIN
	Consulting companies	BUS-CON
	Trading companies	BUS-TRA
	Logistic companies and cold chain services	BUS-LOG
	Agro-chemical businesses and plant protection services	BUS-AGR
	<i>Not-for-profit organisations</i>	Member-based service organisations
Non-governmental organisations		NPO-NGO
Cross-sector partnerships		NPO-CSP
Religious and faith-based organisations		NPO-REL
<i>Government</i>	Local and municipal government	GOV-LOC
	Provincial government	GOV-PRO
	National government	GOV-NAT
<i>Research</i>	Universities	RES-UNI
	Research institutes and other organisations	RES-ORG

Categorisation 2: Locality

- Wards
- Municipal
- Provincial
- National
- International

Categorisation 3: Position in (or around) the food chain

In the chain: economic actors

- Input providers
- Producers

- Processors and manufacturers
- Transport companies and logistical service providers
- Wholesalers
- Retailers
- Food service providers (including restaurants, home deliveries, etc.)
- Consumers
- Waste, recycling and disposal service providers

Around the chain: influencers & supporters

- Policy-makers
- NGOs and community organisations (including school feeding schemes, Food Bank, etc.)
- Financial service providers
- Researchers

- Media
- International actors (e.g. international NGOs and advocacy groups, research organisations)
-
-

This database – while far from completed – serves several purposes. Firstly, it provides an overview of the stakeholders that are in different ways engaged in the food system of Cape Town. Secondly, it offers a point of departure to categorise the various stakeholders. Whilst we commenced with the three types of categorisations mentioned above, many more options would be possible and could provide value, depending on the objective of the exercise. For instance, another way of categorising stakeholders would be to look at their activities in the food system. Group 1 could encompass all those actors who are involved in selling and buying food; Group 2 could include all those actors who provide services to Group 1; and Group 3 could comprise those actors who influence Group 1 and Group 2 through regulation, lobbying or advocacy. Finally, the database comprises a large number of researchers focusing on issues of food security, food supply, production, and consumption. This reveals the considerable technical expertise in universities and other research institutions in the City region which can assist the City in their future engagement with issues of food system governance and food security.

4. Engaging with stakeholders: mapping workshop

To do justice to the complexity of Cape Town's food system, we convened a workshop to incorporate the voices of different stakeholder groups, and build our collective understanding of the roles and relationships among these groups. Drawing on the database and our increasing understanding as project leaders, we compiled a list of 35 key stakeholders from the main stakeholder groups mentioned above. These stakeholders were identified based on their important knowledge on the different dimensions of the City's food system. They were then contacted and invited to participate in a stakeholder mapping workshop to map the existing and potential interactions between stakeholders in the Cape Town food system. The stakeholders were encouraged to participate not as representatives of their individual organisations, but rather as knowledge-holders of their respective stakeholder groups.

The workshop was held on 17 September 2013 and was based on the Net Mapping approach (Aberman et al., 2010), which entails that small groups of participants jointly discuss and identify the network of individuals and organisations engaged in the food system, the interactions between them, emphasising dimensions of exchange, voice, power and authority, and the mandates that various agents have. Hence, 'simple' questions that were addressed during the workshop included: 1) What actors are involved in the food system?; 2) how are they linked?; and 3) what kind of influence do they have?

The workshop highlighted that the question about relationships among stakeholders is particularly critical in determining the role of different stakeholders in the overall food system. Relationships can be varied, such as relationships of authority (power), influence (claim), interest (voice), and exchange (of products or services). A detailed report of this interactive and participatory process can be found in the appendix.

5. Preliminary outcomes and future steps

Perhaps the most important outcome of the study so far is the recognition that the food system of the City of Cape Town is highly complex. This became apparent during the initial establishment of the database (seeking to identify stakeholders and stakeholder categories) and was reconfirmed during the stakeholder mapping workshop (aiming to identify not only stakeholders but also their relations and their influence in the food system).

This complexity entails three main dimensions. First, complexity shows in *uncertainty*. Stakeholder analysis deals with the question of "who and what really counts" (Mitchell et al., 1997). Yet, while this may sound straightforward, it is far from simple. We have identified some stakeholders, but certainly not all. Second, complexity is reflected in the *different perspectives* held by stakeholders of who the main stakeholders are and what linkages they have with each other. Different stories emerged during the stakeholder mapping workshop, offering different answers to "who and what really counts". As an example, one group identified property developers and their influence on local government and retailers, as a centrally important stakeholders. This group is often not recognised as a key player in the food system. Finally, complexity is manifest in the *dynamic character* of stakeholders. While this report and our database draw a picture of today's stakeholders, tomorrow's stakeholders may already be completely different. Stakeholders change, their relationships change and their influence on the food system also change. It follows that a stakeholder analysis should be a continuous, iterative process that is based on a clear reflection of the guiding questions as they pertain to specific areas within the food system or components within it.

Taking these three elements into account, we will now proceed to develop the outputs of the stakeholder mapping workshop in an interactive process to develop a "model" to facilitate on-going engagement of identified key stakeholders in food system governance and food security action. This process will demonstrate how the City can generate on-going dialogue through different forums to develop a sustainable food system. Inputs and suggestions from the City would be welcomed.

We will furthermore work to extend the stakeholder database. As mentioned earlier, the database is a living document. Due to the dynamic and complex character of the stakeholder system it needs to be regularly updated.

References

Aberman, N.-A., Schiffer, E., Johnson, M. and Oboh, V., 2010. Mapping the Policy Process in Nigeria. Examining the linkages between Research and Policy. International Food Policy Research Institute discussion paper 01000, July 2010. Development Strategy and Governance Division Poverty; Health, and Nutrition Division. IFPRI, New York.

Charman, A., Petersen, L. and Piper, L., 2012. From local survivalism to foreign entrepreneurship: the transformation of the spaza sector in Delft, Cape Town. *Transformation* 78, 47-73.

Freeman, R.E., 2010. *Strategic Management: A Stakeholder Approach*. Cambridge University Press, Cambridge.

Mitchell, R.K., Agle, B.R. and Wood, D.J., 1997. Toward a Theory of Stakeholder Identification and Salience: Defining the Principle of Who and What Really Counts. *The Academy of Management Review* 22(4), 853-886.

Phillips, R., Freeman, R.E. and Wicks, A.C., 2003. What stakeholder theory is not. *Business Ethics Quarterly* 13(4), 479-502.

Appendix. Report of the stakeholder mapping workshop

Location: Tygerberg Campus, Stellenbosch University
Date: 17 September 2013
Organisers: Milla McLachlan, Stellenbosch University
Scott Drimie, Stellenbosch University
Verena Bitzer, Graduate School of Business, University of Cape Town

Summary

The workshop was organised in the context of the Food Systems Study by the University of Cape Town and Stellenbosch University. The objective was to identify key stakeholders, map current and potential interactions and linkages among stakeholders and to identify stakeholder mandates. With the use of a stakeholder list that traversed the contours of the Cape Town food system, the organising team invited persons with important knowledge of the different dimensions of the food system. The main purpose of the workshop was to initiate a mapping process, rather than having a representative stakeholder meeting. Through this it aimed to demonstrate the value of multistakeholder engagement in building a shared understanding of the system, given the many players, their different interests, and the range of factors influencing the processes and outcomes of the food system.

At the beginning of the workshop, the participants were asked to introduce themselves and indicate their position in or relation to the food system (see figure 1):

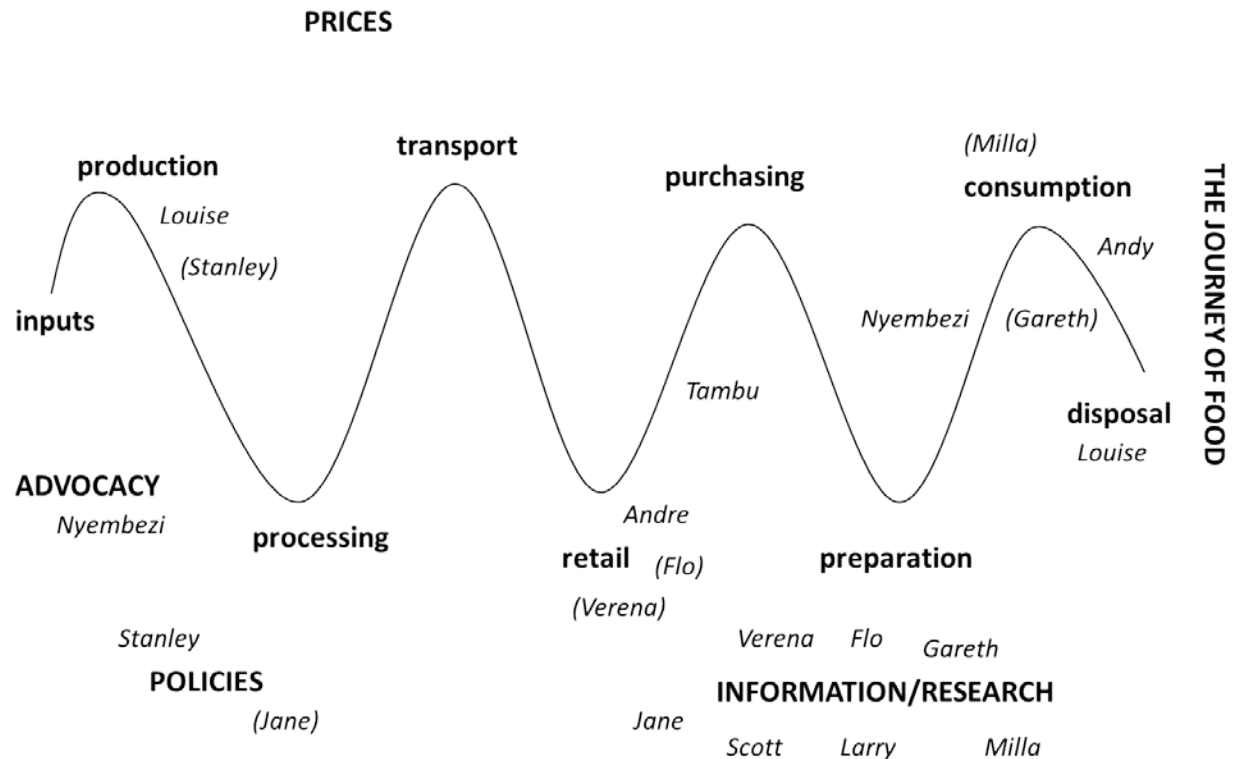


Figure 1. The food system and the participants of the stakeholder meeting

This was followed by a short introduction by Mr Stanley Visser of the *City of Cape Town's* Economic and Human Development Unit to explain the motives for the City to commission a study on its food system. Cape Town has seen high growth rates in population, especially in townships where up to 80% of the people are food insecure. At the same time, 25% of Cape Town's inhabitants are living in poverty. This indicates a direct link between poverty and food insecurity. The City thus needs to know who should be influenced to make the food system work better and eventually get to a position where the City can reduce the number of food insecure people. From the production side, there are already some urban agriculture initiatives, especially in the Philippi agricultural area. However, there needs to be a better understanding of the whole system, from production to consumption. The City is aware that it has a role to play in all aspects, but it lacks a clear understanding of what role it can play and how to do so. This leads to two main questions from the perspective of the City of Cape Town. Firstly, what is the food system in Cape Town and what does it look like? Secondly, what are the critical elements in the food system that the City needs to address directly?

To initiate the workshop, Scott Drimie introduced the key question that was going to be discussed during the workshop: **Who influences the City of Cape Town's food system?** ("Who" refers to individuals and organizations in terms of relevancy). Influence was defined as the *ability of one actor to affect change or produce a particular outcome even when faced with resistance*. During the discussion, this translated into two main questions: 1) *Who are the important actors?* 2) *Who can organise change?*

With regard to the first question, a wide array of stakeholders was identified by the workshop participants (see figure 2).

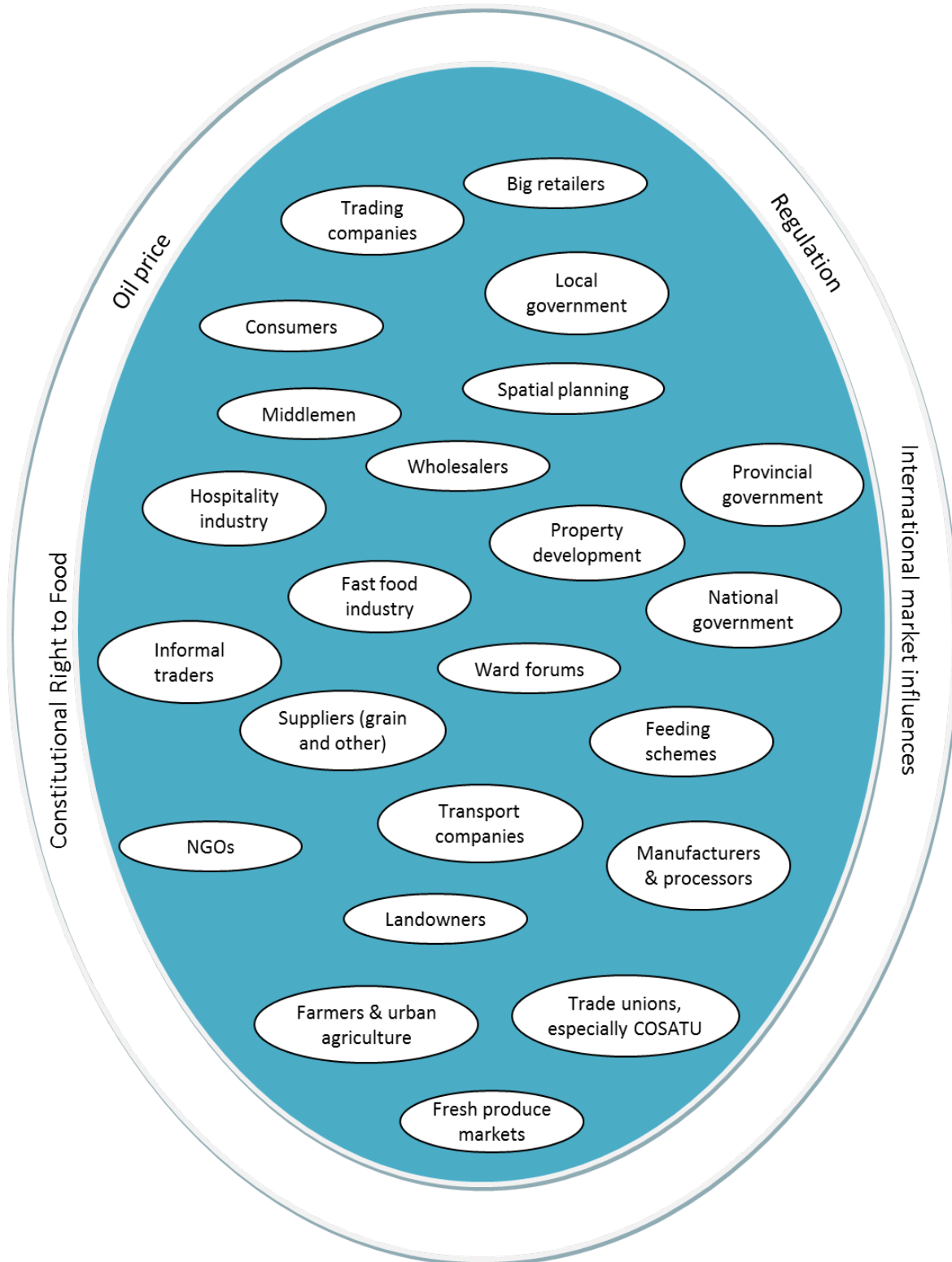


Figure 2. Some of the key stakeholders identified during the workshop

Within this discussion, a number of points received specific attention. Firstly, the government/state was clearly identified as a critical actor, but it proved challenging to further delineate this role. There was general agreement that the state has a role of a provider, especially when it comes to ensuring the constitutional right to food, which has not yet been fully understood. However, when it comes to government, there are a variety of levels to consider, from international to very local, which are all intertwined. Mr Visser added that food security is a collective government responsibility, not just a challenge that should be responded to at the local level. Nonetheless, the question remained which level of government and which departments of government are particularly critical for food security. This also depends on what aspects of food security are looked at. For instance, with regard to establishing new flows of food supply into the City, whether it is by selling or processing food, the departments of health and land use planning/management were identified as being among the main governmental actors. However, for other aspects of food security different departments are responsible, making the issues of public responsibility and enforcement of legislation highly intricate. Mr Visser also highlighted the dilemmas local government can face for example in its respective roles as facilitator of a developmental city, and enforcer of public health regulations.

Secondly, the role of the informal sector for food security was discussed. In townships, food is largely traded through informal traders who purchase the food from large wholesalers and other, often informal, suppliers. However, this does not imply that these traders are entirely unorganised. There are strong social networks and emerging coalitions of informal traders. These emerging coalitions can become important role players in the city's food system and constitute an entry point for engagements between the traders, city officials and other role players.

Thirdly, civil society was identified as playing a crucial role in food security, most importantly with regard to its function as a 'safety net'. Yet, beyond feeding schemes and 'emergency' help, civil society is also critical for its advocacy work around the topics of social development, urban poverty, inequality, childhood development and agriculture. Within these broad topics the exact role of civil society with regard to food security and governance is more difficult to pinpoint. On the one hand, this has to do with the difficulty of identifying clear linkages of their activities to the City's food system, as most of their activities appear to have rather indirect connections to food security (which can also be seen by the fact that the word 'food' hardly ever appears in official documentation of their activities). Hence, workshop participants suggested that there is little direct engagement in food by civil society. On the other hand, the difficulty of specifying the role of civil society pertains to their unclear (perceived or actual) leverage in the food system. The representative of the retail sector suggested that compared to trade unions, NGOs cannot organise strikes to disrupt a business, rendering them "toothless" and disregarded by business.

The second part of the discussion revolved around the question of who can actually organise change, which relates to the first question ('who are the stakeholders?'), but simultaneously goes beyond the issue of relevancy and touches upon aspects of capacity and agency. Again, the government was mentioned as a key actor who can play a role by supporting certain types of initiatives, such as urban agriculture. In this context, Mr Visser drew attention to the paradigm shift currently under way in government, which is slowly moving away from a control approach to a more facilitating role of change.

This approach also embraces knowledge institutes, particularly tertiary education institutions, and multi-stakeholder initiatives, such as the Southern Africa Food Lab, as valuable resources for change initiatives.

Among the main challenges with regard to pursuing options for change are firstly the complexity of the overall food system and secondly the competing visions of the stakeholders involved. Concerning the overall systems' complexity, participants of the workshop mentioned that the 'network' of food security is larger than just food, but pertains to a multiplicity of economic, social and environmental issues. Hence, food security exceeds the perspective of the City's food system. Moreover, the system is dynamic, implying that whilst some patterns may endure over time, other critical issues will shift and alter, making it difficult to adequately respond and engage in problem-solving.

With regard to the competing visions of the stakeholders involved, an NGO representative highlighted the difficulty of achieving the necessary alignment between stakeholders who have different and at times opposing interests and ideas. For instance, even among NGOs, there is no agreement on which type of production system is appropriate for food security, such organic agriculture, industrial agriculture or permaculture. This carries the risk of deadlocks and conflictual situations. In turn, this raises the question of how the different stakeholder groups can be brought together to constructively identify and discuss options for change. It also highlights the concern as to who has legitimate convening power.

Overall, the discussion served to make sense of some of the actors involved in food security, but was in no way comprehensive. The broad stakeholder groups were categorised as follows:

1. *Government*: From international (multilateral), national, and provincial to municipal and ward councils. Elected part of government and executive part of government.
2. *Civil society*: Difference between advocacy groups and service groups, although they are often linked.
3. *Private sector*: Very different roles for the big formal system and the smaller informal system (although not necessarily smaller if aggregated). There is the private sector that is directly in the food system, but there are companies with a large influence even if they are outcome (e.g. petrol companies; property developers and financial institutions)
4. *Knowledge management*: This includes universities, research institutes and the media. The notion of information (provision) is key.

There was no agreement as to where to put consumers. Possibly as a fifth category? After this discussion, the workshop participants were then asked to identify the relationships between the different stakeholders. Scott proposed to identify the following relationships:

1. *Lines of responsibility/command*. One of the dominant forms of relationships is about authority and command. For instance, local government is charged with enforcing a set of norms that are coming from the national government.
2. *Flow of money/funds*. This indicates relationships based on market transactions, e.g. money for products or services, but also entails flow of funds, subsidies and donations.

3. *Flow of information.*
4. *Direction of voice.* This includes advocacy and lobbying functions with the purpose of exerting influence on a particular organisation.

The workshop participants were split into two groups to conduct a stakeholder net-mapping exercise. Interestingly, the groups took two completely different perspectives. Group 1 focused mostly on issues of voice, with emphasis on civil society, different government departments (spatial planning, land use management, health, and ward councils), and private sector actors (e.g. retailers, property developers, land owners) (see picture 1).



Picture 1. Net-mapping of Group 1

Group 2 started from the aspect of money flows, commencing with the connections between different private sector actors (retailers, food processors, food service industry, Cape Town fresh produce market, wholesalers, commercial farmers, seed and agribusiness), which are embedded in connections of authority and command from various government departments (DAFF; Health and Safety; Western Cape Department of Health; Land Use). The issue of voice was highly debated, particularly with regard to the question of whether or not consumers carry any voice over retailers as the centre of the formal food value chain (see picture 2).



Picture 2. Net-mapping of Group 2

It was concluded that the stakeholder mapping workshop was helpful to get a variety of (non-representative) perspective on some of the key stakeholders in Cape Town’s food system and identify a number of linkages between them. However, there was also agreement that the food system is highly complex, posing a formidable governance challenge. As Milla adequately summarised, “we haven’t even begun to scratch the surface of it.” Further discussion and analysis of the roles and relationships of key stakeholder groups and organizations is necessary to inform the development of a food system governance model that would work in the context of the City of Cape Town.

Workshop participants

	Name	Organisation	Contact details
1.	Milla McLachlan (organiser)	Stellenbosch University	072 457 9007; millam@sun.ac.za
2.	Scott Drimie (organiser)	Stellenbosch University	083 290 3620; scottdrimie@mweb.co.za
3.	Verena Bitzer (organiser)	GSB/UCT	073 575 6559; verena.bitzer@gsb.uct.ac.za
4.	Nyembezi Nkosikhulule	(NGO)	082 429 4719; nyembezi.nkosikhulule@gmail.com
5.	Tambu Ndlovu	Africa Centre	072 480 3838; tambun@africacentre.net
6.	Stanley Visser	City of Cape Town	021 550 1201; Stanley.Visser@capetown.gov.za
7.	Jane Battersby	UCT	071 877 9016; jane.battersby.lennard@gmail.com
8.	Gareth Haysom	UCT	082 782 9955; gareth.haysom@uct.ac.za
9.	Andre Nel	Pick n Pay	021 658 1000; anel@pnp.co.za
10.	Larry Dolley	CPUT	082 200 6895; dolleyl@cput.ac.za
11.	Louise Vaughan	Soil for Life	071 152 2775; louise@soilforlife.co.za
12.	Andy Du Plessis	Foodbank SA	021 531 7890; Andy@foodbank.org.za

Impressions from the workshop



Appendix C: Detailed review of the data sets reviewed and offers comment on the scale, relevance and measurement of the data.

Data Source	Years of Available Data	(Value/ Weight etc.)	Scale	Relevance	References/ Data Source	Comments
General Data						
The Department of Agriculture, Forestry and Fisheries (DAFF)	2001-2013	Number of livestock + fish + fresh produce Weight	National Provincial	Medium	http://www.daff.gov.za/docs/statsinfo/Ab2012.pdf http://www.nda.agric.za/docs/statinfo/Ab2012.pdf	This department publishes agricultural abstracts which reflect information gleaned from agricultural census data (2002 & 2007) and most data available via the agricultural abstracts is based on these two censuses. Production information for fresh produce, nuts and fodder was extracted from this source. There is some time-series data (grains) which extends over the period 2001-2013, and on comparison, this data proved to be identical with information maintained by SAGIS. However, most of the available information in the agricultural census is nation-wide. Local production, imports + consumption
Department of trade and Industry (DTI)	2001-2013		National Provincial	Low	http://www.thedti.gov.za/publications.jsp?year=&submit=hemeid= http://tradestats.thedi.gov.za/ReportFolders/reportFolders.aspx?sCS_referer=&sCS_ChosenLang=en	This type of data is not collected or maintained by the DTI. Based on the interview by Siyakana - DTI referred to Quantec database which reflects economic value of produce. Liaisons at the DTI expressed misgivings about the source and accuracy of Quantec information. This source reflects the monetary value of produce, and utilises a variety of categories which differs greatly from what was required for this research. Information includes R value of provincial imports and exports for the period from 2001-2013.

Appendix C: Detailed review of the data sets reviewed and offers comment on the scale, relevance and measurement of the data.

National Agricultural Marketing Council (NAMC)	2008-2013	National Provincial	Medium	http://www.namc.co.za/pages/public-reports/research-reports/all-reports and others at same website	Detailed Commodity Product Studies 2006-2013. Detailed value chain studies for some commodities like dairy. RSA fruit trade flows 2008-2013 with data on Global and South Africa citrus production and South Africa's citrus export and domestic market sales.
Grains					
South African Grain Information System (SAGIS)	2000-2013	National Provincial	Medium	http://www.sagis.org.za/ and others at same website	SAGIS was able to provide detailed database information on all major grains and oil-producing seeds like canola, sunflower, and groundnuts. This included production import and export data for the period of 2002-2013
Grain SA (GSA)	2001-2013 (SAGIS data)	National	Low	http://www.grain.co.za/	Based on the interview by Siyakana with the stakeholder in the GSA, it was indicated that even estimating consumption would be difficult as there is no data that distinguishes what amounts are exported in the form of processed foods, animal feeds, nor what is supplied to retailers and where it is distributed to. GSA referred to the Agricultural Abstracts and to SAGIS. Commodity food price outlook (ABSA) A lot of information in Afrikaans only
South African Agricultural Processors' Association	Not available				This organisation collected and disseminated data until 2009 when it was stopped due to concerns raised by the competition commission. SAAPA was however not willing to release the information as it had The organisation committed to not disseminate historical data that they currently hold due to the

Appendix C: Detailed review of the data sets reviewed and offers comment on the scale, relevance and measurement of the data.

(SAAPA)							mandate given to them by the competition commission not to provide the data.
Animal Feed Manufacturers' Association (AFMA)	2001-2013 (SAGIS data)	(same as SAGIS)	National Provincial	Low	http://www.afma.co.za/Industry/Information.htm		This organisation has national-level data on feed sales as well as some data on provincial level. However, They referred to SAGIS as the best source for this information, which is where they derive their data from also
Fresh Produce							
Fresh Produce Exporters' Forum (FPEF)	2011-2013		National		http://www.fpefc.co.za/		Based on work done by Siyakana 99% of fresh produce is exported via ports of Cape Town or Durban. Some exported by road freight into Africa, but that's informal. FPEF don't keep records. They work on the official export certificates (issued from importing country). Forum only keeps records on national level. Durban and Cape Town exports 99% of 2,5 million tonnes of fresh fruit each year.
The Horticultural Knowledge Group (HORTGRO)	2012-2013	Rand value Weight Hectares under cultivation Shipping costs	International National Provincial Local	Medium	http://www.hortgro.co.za/		Current key deciduous fruit statistics. Their supply chain and market research information is not shared publically. Good illustrated maps showing the Geographical Spread of fruit production in RSA.
Cape Town	2004-	Product	Local	High	billy@altiusholdin		CTFPM believe their Data for Cape Town market is estimated to

Appendix C: Detailed review of the data sets reviewed and offers comment on the scale, relevance and measurement of the data.

Fresh Produce Market (CTFPM)	2013	Turnover Tonnage Rand per tonne Top 100 buyers + suppliers	National, Provincial, Local	High?	gs.com, eric@ctmarket.co.za	represent about 80% of the fresh produce in CT. (Based on work done by Siyakana Joburg market commands 42% national market share, and Pretoria 20%).
Fresh Produce Importers Association (FPIA)				High?	Website: http://www.fpia.co.za	Forthcoming – awaiting follow up email response from Marianna Theyse (General Manager – FRIA) info@fpia.co.za . “we do not have much information on the statistics relating to volumes, especially wrt to imported consignments that enters via other ports and then are redirected/ distributed to the Western Cape. Also, our members do not constitute all importers in SA. Furthermore, we focus only on fresh fruit and vegetables. I will have to ask members to disclose more detail and some may not be willing to as they consider it confidential information e.g. volumes provided to retailers under contract etc. I can however, give you an idea of which countries and what products are being imported by members; also problems at ports of entry that relates to sanitary and phytosanitary issues etc.”
Red Meat						
Red Meat Research and Development (RMRD)	N/A					This organisation does not maintain databases on the kind of information relevant to this research Carina Haasbroek (Secretary RMRD SA) referred the research to Dr Ilse Trautmänn (Chief Director: Research and Technology Development Services Department of Agriculture - Western Cape Government). E-mail ilset@elsenburg.com . Awaiting a

Appendix C: Detailed review of the data sets reviewed and offers comment on the scale, relevance and measurement of the data.

Red Meat Producers Organisation (RMPO)	2013		National	Low	<p>durrfam@mmweb.co.za, louiswessels16@gmail.com, joan@awk.co.za</p>	<p>Awaiting response</p>
Association of Meat Importers and Exporters of South Africa (AMIESA)			National	Low		<p>Awaiting email reply: This organisation has records of Imports into South Africa. No official statistics are maintained of imports from the Southern African common customs union (South Africa, Botswana, Swaziland, Lesotho, Namibia), only from overseas and for exports from South Africa.</p> <p>No provincial information is collected by this organisation.</p>
South African Feedlot Association (SAFA)			National	Low		<p>Awaiting email reply: A large percentage of cattle come from elsewhere in the country. Based on work done by Siyakana - Government has no system to record and report livestock numbers. The most accurate information is kept by abattoirs. There is a dynamic trade of livestock across the country based on price of livestock and required class. Transport costs are added to cost of livestock and thus passed on to the consumer. Information on livestock origin or destination is not maintained as abattoirs are not interested in where the livestock comes from and have no legal requirement to record this information. A national animal traceability system is currently being mooted.</p>
Red Meat Levy Admin (RMLA)	2007-2013	No. On the hoof	Provincial	Medium	<p>http://www.levyadmin.co.za/levy-results-a-statistics.html</p>	<p>A levy is charged on each head of livestock slaughtered at an abattoir and for this reason, data is kept on the heads of livestock slaughtered. Slaughter figures published on a monthly basis. No information is recorded on the source or destination of cattle.</p>

Appendix C: Detailed review of the data sets reviewed and offers comment on the scale, relevance and measurement of the data.

									Data available includes heads of cattle, sheep and pigs slaughtered in WP from 2007-2013. No tonnage is recorded, and this information had to be estimated based on average slaughter weights. Much of this livestock is imported into the province.
Poultry									
South African Poultry Association (SAPA)	2010-2013	Number of birds Number of Eggs Distribution of Chickens	National, Provincial	Low	http://www.sapoultry.co.za/statistics_general.php , Magda@sapoultry.co.za				This organisation maintains accurate information on chicken production of layers and broilers for 2010-2013. This information reflected numbers of birds. Mass was estimated based on average weights of birds. Egg production. Awaiting further email correspondence.
Dairy									
National Milk Distributors Association (NMDA)				Low					Import and export data is SA-wide. This organisation has no information about how much comes into and out of CT. Based on work done by Siyakana more than half of national milk is consumed in Gauteng. CT is a net importer of milk. SA is a net exporter. There are only a few processors and producers in CT.
Milk Producers Organisation	2004-2013	No. Of Milk producers, Milk production density, Milk Production	National, Provincial	Medium	http://www.mpo.co.za/downloads/LACTO_DATA_mei13.pdf				Awaiting email response from philip@jhblanck.co.za (MPO Chairman Western Cape). Lacto data Vol 16 May 2013 good national and provincial statistics on the primary and secondary milk producers' industry as well as dairy price trends.

Appendix C: Detailed review of the data sets reviewed and offers comment on the scale, relevance and measurement of the data.

Milk South Africa	2010-2012	(Litres) Rand value, Litres, % change year on year	National	Low	http://www.milksa.co.za/sites/default/files/BIPSSM041%20Dairy%20DIGITS%20September%202012_0.pdf	
<u>Supermarkets</u>						
Woolworths						No reply
Shoprite				none	www.shopriteholdings.co.za/ Bongiwe Paka Customer Relations Shoprite Checkers (Pty) Ltd Email: consumer@checkers.co.za	Bongiwe Paka Customer Relations referred the research to their www.shopriteholdings.co.za/ for information. Not relevant.
Pick 'N Pay		Fresh Produce Purchase from Cape Town Fresh Produce Market (CTFPM)			Cape Town Fresh Produce Market (CTFPM)	No reply
Fruit and Veg City		Fresh Produce Purchase from Cape Town		Medium	Cape Town Fresh Produce Market	No reply

Appendix C: Detailed review of the data sets reviewed and offers comment on the scale, relevance and measurement of the data.

		Fresh Produce Market (CTFPM)		(CTFPM)	Incomplete information
Review of literature and datasets to inform flows research (Source: Compiled by N Simpson, 2013)					

Appendix D: Further technical details of food security indicators

Household Food Insecurity Access Scale (HFIAS)

Table D1: Question and computation of HFIAS Score

No	Question	Response Options	Code
1	In the past four weeks, did you worry that your household would not have enough food?	0 = No (skip to Q2) 1 = Yes	... ___
1a	How often did this happen?	1 = Rarely (once or twice in the past four weeks) 2 = Sometimes (three to ten times in the past four weeks) 3 = Often (more than ten times in the past four weeks)	... ___
2	In the past four weeks, were you or any household member not able to eat the kinds of foods you preferred because of a lack of resources?	0 = No (skip to Q3) 1 = Yes	... ___
2a	How often did this happen?	1 = Rarely (once or twice in the past four weeks) 2 = Sometimes (three to ten times in the past four weeks) 3 = Often (more than ten times in the past four weeks)	... ___
3	In the past four weeks, did you or any household member have to eat a limited variety of foods due to a lack of resources?	0 = No (skip to Q4) 1 = Yes	... ___
3a	How often did this happen?	1 = Rarely (once or twice in the past four weeks) 2 = Sometimes (three to ten times in the past four weeks) 3 = Often (more than ten times in the past four weeks)	... ___
4	In the past four weeks, did you or any household member have to eat some foods that you really did not want to eat because of a lack of resources to obtain other types of food?	0 = No (skip to Q5) 1 = Yes	... ___
4a	How often did this happen?	1 = Rarely (once or twice in the past four weeks) 2 = Sometimes (three to ten times in the past four weeks)	... ___

Appendix D: Technical Details of Household-Scale Food Security Indicator Tools

		3 = Often (more than ten times in the past four weeks)	
5	In the past four weeks, did you or any household member have to eat a smaller meal than you felt you needed because there was not enough food?	0 = No (skip to Q6) 1 = Yes	... ___
5a	How often did this happen?	1 = Rarely (once or twice in the past four weeks) 2 = Sometimes (three to ten times in the past four weeks) 3 = Often (more than ten times in the past four weeks)	... ___
6	In the past four weeks, did you or any other household member have to eat fewer meals in a day because there was not enough food?	0 = No (skip to Q7) 1 = Yes	... ___
6a	How often did this happen?	1 = Rarely (once or twice in the past four weeks) 2 = Sometimes (three to ten times in the past four weeks) 3 = Often (more than ten times in the past four weeks)	... ___
7	In the past four weeks, was there ever no food to eat of any kind in your household because of lack of resources to get food?	0 = No (skip to Q8) 1 = Yes	... ___
7a	How often did this happen?	1 = Rarely (once or twice in the past four weeks) 2 = Sometimes (three to ten times in the past four weeks) 3 = Often (more than ten times in the past four weeks)	... ___
8	In the past four weeks, did you or any household member go to sleep at night hungry because there was not enough food?	0 = No (skip to Q9) 1 = Yes	... ___
8a	How often did this happen?	1 = Rarely (once or twice in the past four weeks) 2 = Sometimes (three to ten times in the past four weeks) 3 = Often (more than ten times in the past four weeks)	... ___
9	In the past four weeks, did you or any household member go a whole day and night without eating	0 = No	... ___

Appendix D: Technical Details of Household-Scale Food Security Indicator Tools

	anything because there was not enough food?	1 = Yes	
9a	How often did this happen?	1 = Rarely (once or twice in the past four weeks) 2 = Sometimes (three to ten times in the past four weeks) 3 = Often (more than ten times in the past four weeks)	... ___

Source: Coates, Swindale and Bilinsky, 2007

Were a household has not experienced a given condition, the code for the question is 0 and where some degree of experience has been recorded, the code ranges from 1-3. Hence a household that has not experienced any of the proffered food security reactions will record a score of zero. On the other hand, a household experiencing all the conditions at the highest frequency (3 = often) will have a cumulative raw score of 27 (i.e. 3x9). When calculated, the HFIAS score ranges from a minimum of 0 to a maximum of 27, where the higher scores denote greater food insecurity and lower scores denote less food insecurity. The indicator, which is the average household food insecurity access score (HFIAS), is then calculated by the formula below:

$$\text{Average HFIAS Score} = (\text{sum of HFIAS scores in the sample}) / (\text{number of HFIAS scores (i.e. number of households) in the sample})$$

Household Food Insecurity Access Prevalence: HFIAP

Using the responses generated in Table D1, the following approach can be used to assign responses to four food security categories: Food Secure, Mildly Food Insecure, Moderately Food Insecure and Severely Food Insecure.

Table D2: Computing responses to assign categories (Source: Coates, Swindale, Bilinsky 2007)

	Calculate the Household Food Insecurity Access category for each household. 1 = Food Secure, 2=Mildly Food Insecure Access, 3=Moderately Food Insecure Access, 4=Severely Food Insecure Access
HFIAS category	<p>HFIAS category = 1 if [(Q1a=0 or Q1a=1) and Q2=0 and Q3=0 and Q4=0 and Q5=0 and Q6=0 and Q7=0 and Q8=0 and Q9=0]</p> <p>HFIAS category = 2 if [(Q1a=2 or Q1a=3 or Q2a=1 or Q2a=2 or Q2a=3 or Q3a=1 or Q4a=1) and Q5=0 and Q6=0 and Q7=0 and Q8=0 and Q9=0]</p> <p>HFIAS category = 3 if [(Q3a=2 or Q3a=3 or Q4a=2 or Q4a=3 or Q5a=1 or Q5a=2 or Q6a=1 or Q6a=2) and Q7=0 and Q8=0 and Q9=0]</p> <p>HFIAS category = 4 if [Q5a=3 or Q6a=3 or Q7a=1 or Q7a=2 or Q7a=3 or Q8a=1 or Q8a=2 or Q8a=3 or Q9a=1 or Q9a=2 or Q9a=3]</p>

Appendix D: Technical Details of Household-Scale Food Security Indicator Tools

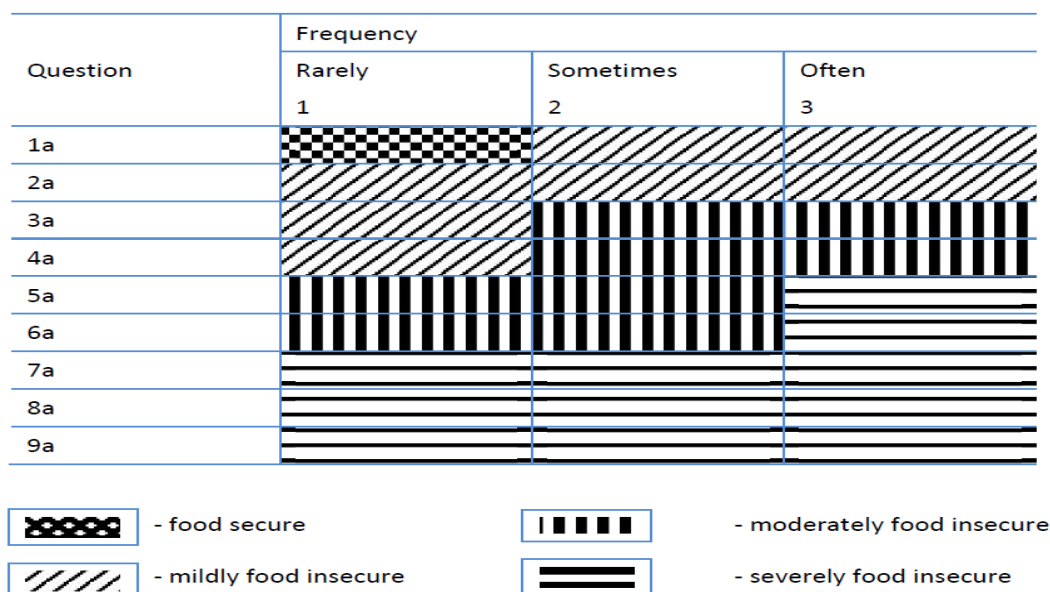


Figure D:1: Categories of food (in) security

Having calculated the food security status of individual households, the next step is to calculate an overall HFIAP indicator, which is calculated as follows:

HFIA Prevalence = (Number of households with HFIA category *100)/(Total number of households in survey)

Months of Adequate Household Food Provisioning: MAHFP

Table D3: Calculating the MAHFP

Questions and filters	Coding categories	Skip
<p>1. Now I would like to ask you about your household's food supply during different months of the year. When responding to these questions, please think back over the last 12 months, from now to the same time last year. Were there months, in the past 12 months, in which you did not have enough food to meet your family's needs?</p> <p>PLACE A 1 IN THE BOX IF THE RESPONDENT ANSWERS YES. PLACE A 0 IN THE BOX IF THE RESPONSE IS NO.</p>	__	IF NO, END HERE
<p>2. If yes, which were the months in the past 12 months during which you did not have enough food to meet your family's needs?</p> <p>THIS INCLUDES ANY KIND OF FOOD FROM ANY SOURCE, SUCH AS OWN PRODUCTION, PURCHASE OR EXCHANGE, FOOD AID, OR BORROWING.</p> <p>DO NOT READ THE LIST OF MONTHS ALOUD. PLACE A 1 IN THE BOX IF THE RESPONDENT IDENTIFIES THAT MONTH AS ONE IN WHICH THE HOUSHOLD DID NOT HAVE ENOUGH FOOD TO MEET THEIR NEEDS. IF THE RESPONDENT DOES NOT IDENTIFY THAT MONTH,</p>		

Appendix D: Technical Details of Household-Scale Food Security Indicator Tools

PLACE A 0 IN THE BOX. USE A SEASONAL CALENDAR IF NEEDED TO HELP RESPONDENT REMEMBER THE DIFFERENT MONTHS. PROBE TO MAKE SURE THE RESPONDENT HAS THOUGHT ABOUT THE ENTIRE PAST 12 MONTHS.		
A January	A __	
B December	B __	
C November	C __	
D October	D __	
E September	E __	
F August	F __	
G July	G __	
H June	H __	
I May	I __	
J April	J __	
K March	K __	
L February	L __	

Source: Bilinsky & Swindale 2010

Household Dietary Diversity Score: HDDS

Table D4: Dietary diversity tool with 12 food groups

Questions and filters	Coding categories
1 Now I would like to ask you about the types of foods that you or anyone else in your household ate yesterday during the day and at night.	READ THE LIST OF FOODS. PLACE A ONE IN THE BOX IF ANYONE IN THE HOUSEHOLD ATE THE FOOD IN QUESTION, PLACE A ZERO IN THE BOX IF NO ONE IN THE HOUSEHOLD ATE THE FOOD.
A Any [INSERT ANY LOCAL FOODS, E.G. UGALI, NSHIMA], bread, rice noodles, biscuits, or any other foods made from millet, sorghum, maize, rice, wheat, or [INSERT ANY OTHER LOCALLY AVAILABLE GRAIN]?	A __
B Any potatoes, yams, manioc, cassava or any other foods made from roots or tubers?	B __
C Any vegetables?	C __
D Any fruits?	D __
E Any beef, pork, lamb, goat, rabbit wild game, chicken, duck, or other birds, liver, kidney, heart, or other organ meats?	E __
F Any eggs?	F __
G Any fresh or dried fish or shellfish? __
H Any foods made from beans, peas, lentils, or nuts?	H __
I Any cheese, yogurt, milk or other milk products?	I __
J Any foods made with oil, fat, or butter?	J __
K Any sugar or honey?	K __
L Any other foods, such as condiments, coffee, tea?	L __

Source: Swindale & Bilinsky 2006



REPORT TO COUNCIL

DATE

1. **ITEM NUMBER :** To be inserted by Executive Support

2. **SUBJECT**

REPORT ON THE FOOD SYSTEM AND FOOD SECURITY STUDY 2014

ONDERWERP

VERSLAG OOR DIE 2014-STUDIE OOR VOEDSELSTELSELS EN -SEKERHEID

ISIHLOKO

**INGXELO EMALUNGA NOPHANDO OLUNGENKQUBO YOKUTYA
NOKHUSELEKO KWAKO LWANGO-2014**

3. **STRATEGIC INTENT**

- Opportunity City
- Safe City
- Caring City
- Inclusive City
- Well-run City

4. **PURPOSE**

To inform Council about the Food System and Food Security Study commissioned by the City of Cape Town.

5. **FOR NOTING BY / FOR DECISION BY**

- This report is for noting only/information only.

6. **EXECUTIVE SUMMARY**

City Manager's Office
11 DEC 2014
Name: <i>C. Joubert</i>
Signature: <i>11.33</i>

The City of Cape Town commissioned a Food System Study in order to understand of the complex food system in Cape Town and the City's role in this system. Although the research was not able to provide a full picture of the food systems in Cape Town due to methodological and data gathering problems, the study provides some useful research that allows us to understand some of the issues relating to the food system in Cape Town.

7. RECOMMENDATIONS

It is recommended that Council note the report.

AANBEVELINGS

Hierdie verslag is slegs vir kennisname/inligting.

ISINDULULO

Le ngxelo yeyokuba iqatshelwe okanye kufunyanwe ulwazi kuphela.

8. DISCUSSION/CONTENTS

As part of the City's commitment to a Caring and Inclusive City, the City commissioned the Food System Study in order to obtain a better understanding of the various elements, inter-dependencies and challenges of the Cape Town's food systems, and to obtain a detailed understanding of the extent and depth of urban food insecurity and the drivers/triggers thereof, as well as how relevant actors should respond to it.

Even though food security is a National and Provincial competence, the City identified the need to engage with the food system in a holistic manner and to explore what role the City should play in the food system. The food system study is the first of its kind undertaken by metropolitan municipality in South Africa.

Whilst the study includes important contextual research, it has several limitations. This is due, in part, to difficulties in accessing data, especially from private companies involved in food retail which make up the bulk of the food supply system. The lack of data meant that the study needed to rely on various assumptions in order to draw conclusions. As such, while it is informative background research, it will need to be considered with a number of other data sources, research and contextual factors not least of which are the forces of urbanization and the fact that food security, which has a bearing on food systems, is not a local government competency.

8.1. Constitutional and Policy Implications

None.

8.2. Sustainability Implications

Does the activity in this report have any sustainability implications for the City? No Yes

8.3. Legal Implications

None.

8.4. Staff Implications

Does your report impact on staff resources, budget, grading, remuneration, allowances, designation, job description, location or your organisational structure?

No

Yes

8.5. Risk Implications

None.


8.6. Other Services Consulted

None.

ANNEXURES

The full Food System and Food Security Study is available on request.

FOR FURTHER DETAILS CONTACT:

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E-MAIL ADDRESS	Kathryn.Schneider@capetown.gov.za
DIRECTORATE	Strategic Policy Unit
FILE REF NO	
SIGNATURE : DIRECTOR CRAIG KESSON	

A. G. Ras

Acting CITY MANAGER
Achmat Ebrahim

Comment:

NAME GERHARD RAS

DATE 11/12/14

↳ (A woman)

LEGAL COMPLIANCE

REPORT COMPLIANT WITH THE PROVISIONS OF COUNCIL'S DELEGATIONS, POLICIES, BY-LAWS AND ALL LEGISLATION RELATING TO THE MATTER UNDER CONSIDERATION.

NON-COMPLIANT

NAME ALICE WILSON

TEL

DATE 11/12/14

Comment:

legally compliant based on the contents of the report

C. Skinholt

ACTING

EXECUTIVE DIRECTOR: COMPLIANCE AND
AUXILIARY SERVICES (ED: CAS)

DATE

11/12/2014

SUPPORTED FOR ONWARD SUBMISSION
TO MAYOR / MAYCO / COUNCIL

NOT SUPPORTED

REFERRED BACK

COMMENT:

P. de Lille

EXECUTIVE MAYOR

SUPPORTED FOR ONWARD SUBMISSION
TO MAYCO / COUNCIL

PC RECOMMENDATION

RECOMMENDATION AS CONTAINED IN
ORIGINAL REPORT

ALTERNATIVE RECOMMENDATION TO
BE REFLECTED BELOW

APPROVED I.T.O. DELEGATED
AUTHORITY

NOTED

REFUSED

REFERRED BACK

COMMENT:

DATE

18.12.2014

