

# **Why is food insecurity a problem in a country that produces enough food: South Africa?**

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Submitted to David Leonard, PhD

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## **AFFIDAVIT**

I hereby affirm that this Master's Thesis represents my own written work and that I have used no sources and aids other than those indicated. All passages quoted from publications or paraphrased from these sources are properly cited and attributed.

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## ABSTRACT

Food insecurity (FI) has traditionally been considered a rural problem and policy solutions have typically targeted these regions – particularly focusing on increasing production. However, increasing levels of urbanization driven largely by environmental factors are increasing the prevalence of FI in urban areas as many move to bigger cities seeking opportunity. Moreover, it is increasingly recognized that the *availability* of food is only one dimension of the FI challenge, and that issues of *access* and *utility* must be addressed to achieve food security. A holistic and solution-driven approach must therefore consider urban food systems in all their complexity.

This research focuses on Cape Town, South Africa's second-largest metropolis, which grew from 3.5 million inhabitants in 2009 to 4.4 million in 2019. Despite being among the more affluent regions in South Africa, the number of hungry and malnourished people has risen with the increasing population. Motivated by the desire to address this humanitarian crisis, the study adopts a qualitative approach involving expert interviews with a diversity of stakeholders to better understand 1) how FI manifests in Cape Town, 2) the main drivers, 3) potential solutions, and 4) the appropriateness of existing policies.

Despite South Africa's Constitution recognizing a right to food, and the existence of numerous plans and strategies at various governance levels, their effectiveness in mitigating FI has been hindered by policy incoherence and implementation failures. Policies continue to emphasize production, even though South Africa produces more than enough food to feed its people. Less is being done to address *accessibility*, which is closely related to one's economic status and hindered by the practices of increasingly dominant private enterprises in the formal food industry. In the absence of governmental controls, pricing strategies (and even price-fixing) leave many unable to buy enough calories to support an active and healthy lifestyle and drive many more towards cheaper, nutrient-poor, and calorie-rich foods. Poverty also affects physical access to adequate and high-quality food through limited access to efficient transportation, refrigeration, storage space, and cooking facilities. Alongside these factors, limited education and nutritional knowledge also reduce the effective *utilization* of the food that is accessible.

The expert testimony corroborates findings from the literature that the physical availability of food is not the issue in Cape Town, and that the policy focus on production is misguided – reflecting an economic growth paradigm. Health-centric perspectives suggest more action targeted at ensuring accessibility by ameliorating poverty and promoting inclusive and sustainable urban food systems. This implies greater regulation of the increasingly centralized and corporatized formal food sector.

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## **LIST OF ABBREVIATIONS**

CoCT – City of Cape Town  
CoGTA – Cooperative Governance & Traditional Affairs  
DAFF – Department of Agriculture, Forestry and Fisheries  
DD – Dietary Diversity  
DRDLR - Department of Rural Development and Land Reform  
DSD – Department of Social Development  
FAO – Food and Agricultural association  
FBDG – Food Based Dietary Guidelines  
FI – Food insecurity  
FPM - Fresh Produce Market  
FS – Food security  
GATT - Global Agreement of Trade and Tariffs  
GHI – Global hunger index  
GHS - General Household Survey  
GVA – Gross Value Added  
IFSS - The Integrated Food Security Strategy  
IPCC - Intergovernmental Panel on Climate Change  
MAM - Moderate acute malnutrition  
NCD – Non-Communicable diseases.  
NDP – National Development Plan  
NSNP - National School Nutrition Programme  
RDA – Recommended Daily Allowance  
SA – South Africa  
SDGs – Sustainable developmental goals  
SRD – Social Relief of Distress  
StatsSA – Statistics South Africa  
UNDP - United Nations Development programme  
WCG - Western Cape Government  
WCG –Western Cape Government  
WFP – World Food programme  
WFP – World Food Programme  
WHO – World health organization  
WTO – World Trade Organisation

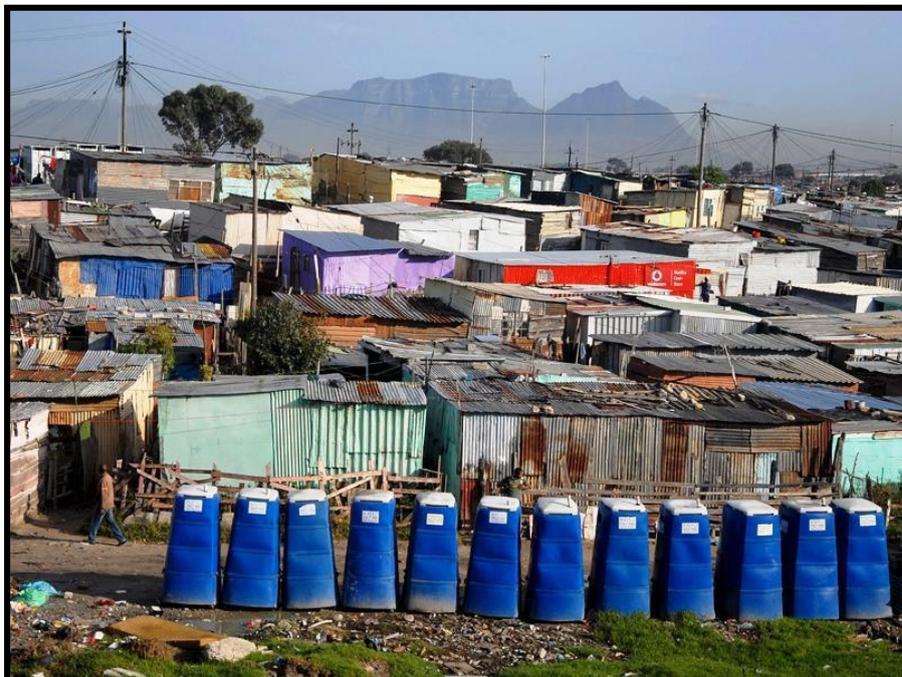
## 1.1 INTRODUCTION

Poverty and hunger are merely two of the most urgent global problems (FAO, IFAD & WFP, 2015; FAO, IFAD, UNICEF, WFP & WHO., 2021). Real hunger can be described as the “uncomfortable or painful physical sensation caused by insufficient dietary energy consumption” (FAO, 2020, p. 255). The answer to global hunger seems straightforward on the surface. As thought in the 1940s, simply increase food production (Hendriks, 2015). As one investigates the issue further, it becomes evident that poverty is the fundamental cause of hunger and food insecurity (FI). Hunger is a component of FI, and this study will define hunger as an inadequate calorie intake and malnutrition as an inadequate micronutrient intake. In 1996 the World Food Summit in Rome declared to “... eradicate hunger in all countries, with an immediate view to reducing the number of undernourished people to half their present level no later than 2015” (FAO, IFAD & WFP, 2015, p.4). In support of the World Food Summits’ goals, the member states of the United Nations formulated The First Millennium Development Goal in 2000: “cutting by half the proportion of people who suffer from hunger by 2015” (FAO, IFAD & WFP, 2015, p.4). The United Nations General Assembly adopted the 2030 Agenda for Sustainable Development on October 17, 2015. (UN General Assembly, 2015). The First Sustainable Developmental Goal was to “End poverty in all its forms everywhere”, and the second was “End hunger, achieve food security and improved nutrition and promote sustainable agriculture” (General assembly, 2015, p.14), with target 2.1 being: “ensuring access to safe, nutritious and sufficient food for all people all year round” and target 2.2 being: “eradicating all forms of malnutrition” (FAO, IFAD, UNICEF, WFP and WHO. 2021, p.vi). The United Nations said in 2021 that the world was not on schedule to eradicate poverty, hunger, and malnutrition by 2030. In 2020 alone, 720-811 million people suffered from hunger, after a static prevalence from 2014 to 2019 of 8.4% of the world's population. The Covid 19 pandemic left 9.9% of people without food and hungry, nearly 118 million more than in 2019. (FAO, IFAD, UNICEF, WFP and WHO. 2021). However, these numbers represent a worldwide overview of the problem, while this study will concentrate on South Africa and Cape Town, one of the country's capitals. After Johannesburg, Cape Town is one of the most developed cities in South Africa, and it has witnessed a major migration of rural job seekers. According to Cooperative Governance & Traditional Affairs of SA (2020), Cape Town's population increased from 3.5 million to 4.4 million from 2009 to 2019 as a result of migration (see figure 7). Unemployment and FI also increased during this period. As a result of the Covid 19 lockdown

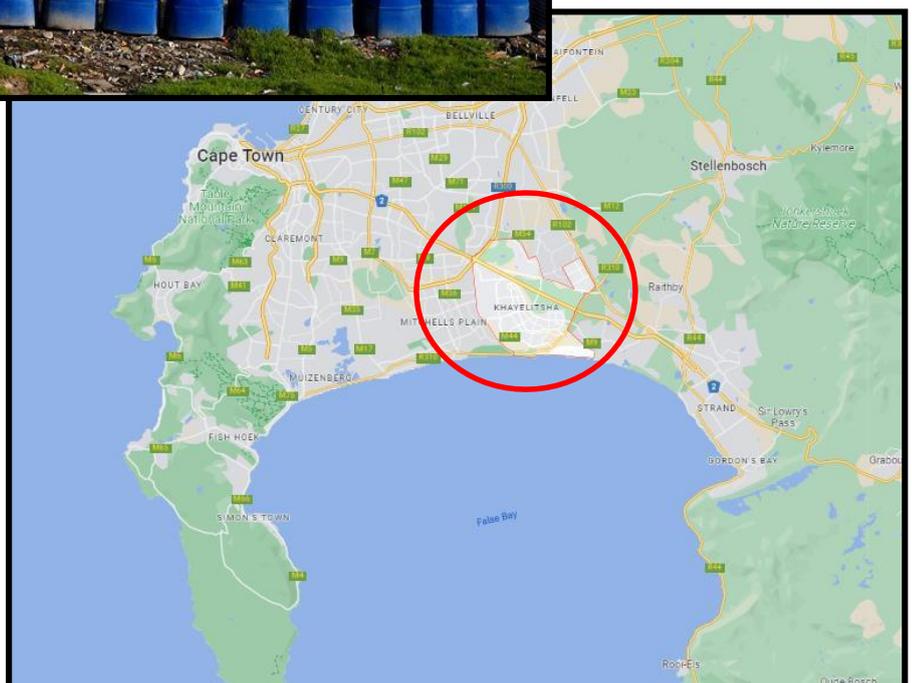
measures, 32.6% (statsSA, 2021) of Cape Town residents were jobless (11.1 percent higher than in 2018). (CoGTA, 2020). This paper will thus address and analyse FI in Cape Town.

Food insecurity is a global and national issue. Insecurity has mostly been seen as a rural problem. The majority of frameworks, policies, and programs intended to tackle FI fail to include urban residents or address FI in urban settings (Battersby, 2019). Due to the historical arrangement of the Mother city, the majority of persons seeking work, notably the poor and those from rural areas, reside on the fringes of the Cape Flats. Mitchells Plain, Khayelitsha, Langa, and Guguleto are the four largest townships (informal settlements) in the Cape flats (capetownattractions, 2022). (See image 1 and 2).

Khayelitsha with Table Mountain in the background:



(Image 1:  
Khayelitsha  
township (Feni,  
2019) & Google  
maps screenshot  
(2022)



Mitchells Plain:



Image 2: Top left: Housing structures in Mitchells Plain (Author, 2022), top right: Spies (2014) & Google maps screenshot (2022)

These urban food networks are comprised of Spaza stores, vendors, hawkers, and food stalls (see image 4, 5 & 6), and they are very sensitive to the requirements of their clients (Haysom & Crush, 2017). They mostly offer meats and takeout meals, chips, cold beverages, candies, (very little) fruit and vegetables, and clients may also purchase food on credit (Haysom & Crush, 2017; Battersby, 2012).

Informal food sector:



Image 3: The inside of a spaza shop (Meyer, 2020)

Image 4: Outside of a spaza shop (Du Toit, 2020)



Image 5: Street vendors selling meat and take away foods (Burke, 2019)

The problem, however, is that the formal urban food system is dominated by a small number of huge firms that are solely responsible for establishing market prices (Tsegay & Rusare, 2014). The informal sector relies heavily on the formal sector, and informal merchants have limited access to manufacturers, warehouses, and producers (Haysom & Crush, 2017). Indicating that the impoverished must pay the same or more as middle- and upper-class consumers. Nonetheless, informal dealers have the benefit of purchasing in bulk and dividing it into smaller packages. This does not imply that items are cheaper, since they are essentially identical to those found in supermarkets. However, buyers do not have to depend on costly taxi (see image 6) prices and/or travel time to reach supermarkets (Haysom & Crush, 2017).

Taxi busses are the main mode of transport for low income citizens.



Image 6: Taxi rank in an poor urban settlement with food stalls on the sidewalk (Samson, 2019)

Food security (FS) is recognized as an international, national, and local concern. Regrettably, urban FI has been largely ignored on international and national agendas. After South Africa's political transition in 1994, FI became a policy focus, leading to the development of the Integrated Food Security Strategy in 2000 (DoA, 2002). This approach attempted to harmonize several provincial and national FS programs. Its primary objective is to provide steady access to safe and nutritious food at the national, provincial, and municipal levels, with a strong emphasis on initiatives for reducing poverty (DoA, 2002). However, this strategy has been criticized in the literature for ignoring crucial components of FI prevention. South Africa adopted The Food and Nutrition Security Policy in 2012, which recognizes urban FI as a key concern. The strategy specifies that a Food and Nutrition Security Council would be established under the Vice President,

but to date, neither the council nor its mission have been established. The National Development Plan is a strategy for transforming South Africa into a prosperous nation by 2030. Its key objectives are to empower individuals via economic development and employment, enhance living circumstances, and emphasize financial independence as a national concern. The literature criticizes the strategy for being too broad and for isolating remedies to the causes of FI. The National Food Security and Nutrition Plan of 2018-2023, which seeks to alleviate urban food poverty, still lacks a council of advisors. In 2016, the province of Western Cape established a food and nutrition security strategy framework, an all-encompassing document addressing the problem and solutions to urban FI. The framework is nonetheless still in draft form and has not yet been implemented. South Africa likewise lacks a policy on urban FI, 28 years after FI became a national priority and the advent of democracy (Battersby, 2019). This paper will examine the efficacy of existing plans, strategies, frameworks, and policies in reducing FI, as well as the causes and impacts of policy incoherence.

It is a well-known reality that no one entity can fight the problem of FI. Therefore, stakeholder participation is of the utmost importance. This paper also examines how policies and strategies include the significance of stakeholders and the present role actors in addressing the problem. According to the literature, there are three FS coalitions: the economic coalition, the FS and agriculture coalition, and the health coalition. All three coalitions have divergent perspectives on the problem's sources and remedies, resulting in mismatched policies and solutions.

The economic coalition concerned with growth and employment is currently in the lead and in line with the National Development Plan, the FS and agricultural coalitions identify the issue as one of availability and agricultural production, and the health coalition frames the issue as low utility rates of food, inadequate knowledge on healthy diets, and the private sector's control over the food environment. Due to divergent perspectives on FS, this research examines the perspectives of three stakeholders. The academic realm, the governmental realm, and civil society. Their viewpoints will be compared, and it will be determined if the proposed solutions to the problem are uniform.

## **1.2 RESEARCH PROBLEM AND OBJECTIVES**

Until recently, international FS agendas focused primarily on agricultural production to address FI, which was thought to be a rural problem (Battersby, 2019; WCG, 2016). However, more recent analyses of urban FI indicate that it is not a result of food shortage but food access and affordability in suitable locations (Thow et al., 2018; Haysom & Crush, 2017, Battersby & Wat-

son, 2019, Adeniyi et al., 2021). Furthermore, the challenge is to change the way cities consider and address FI because urban agriculture and supermarket expansion are inadequate responses to complex issues (Battersby & Watson, 2019; Adeniyi et al., 2021). Considering that urban FI is a relatively new concept, it is essential to understand how it manifests itself within urban contexts. The challenge for planners is to understand how urban FI manifests itself spatially and to consider what municipal policy measures are needed to ensure food is accessible to all residents in all areas of Cape Town. In the context of Cape Town, there are high levels of FI, but there is a lack of municipal responses to effectively address this problem (Adeniyi et al., 2021; Battersby & Watson, 2019). There is also a significant mismatch between private stakeholders and government interventions, even though most governmental plans and strategies explicitly mention the importance of the inclusion of stakeholders (Thow et al., 2018). Furthermore, rapid urbanisation has become an increasing problem/phenomenon placing pressure on urban food systems regarding food availability in suitable locations and access in terms of physical and financial means (Battersby & Watson, 2019; Battersby, 2014). Another topic covered in this paper is the distinguishment between hunger and malnutrition, as both are critical aspects of FI (UNDP, 2012). Hunger is driven by the poor physical intake of food and malnutrition is a result of coping strategies taken to combat hunger, and the second is the vast availability of cheaper but unhealthy substitutions controlled by profit-driven big players in the food industry (Hendriks, 2015; WCG, 2016; Beer et al., 2021). The latter relates to policy incoherence and a mismatch of the various views of stakeholders on FI (Battersby, 2014; Battersby & Watson, 2019; Thow et al., 2018).

In summary, the objectives include:

- Drivers of FI: Urbanisation, unemployment, lack of education, poor institutional frameworks and safety nets.
- Policy and legislative issues and incoherence.
- Lack of efficient and adequate solutions due to a mismatch in stakeholders' views and interventions.

### 1.3 STRUCTURE OF THESIS

Chapter 1: This paper consists of six chapters. The first as discussed above gives an introduction to the problem of FI, its drivers and aspects involved to facilitate solutions. It also briefly outlines the study region

Chapter 2: The second chapter gives an overview and context. This chapter will examine the relevant literature on the topic of urban FI. Beginning with an overview of the ideas and definitions of urban FI, the paper will then illustrate how the understanding of FI has evolved over the decades. FI is characterized at the international, national, and local levels. It visually depicts and explores the coping methods and consequences of FI. Increasing numbers of FI are associated with urbanization, weather trends, food price fluctuations, violence, and war. Availability, accessibility, utility, and sustainability are then explored. An elaboration on food policy and legislation with a thorough analysis, and evaluation of national and municipal policies and frameworks are provided followed by critique on these food-related policies, since they fail to acknowledge the increasing urban food crisis.

Chapter 3: Chapter three discusses the qualitative research methodology of this paper. It describes how the primary (interviews) and secondary (desktop research) data was collected, developed, transcribed, and analysed. This section shows how questionnaires were created using the layout of the literature review as template. This section also explored how to compare real-world responses with those found in the literature. Similarities and divergent perspectives are discussed.

Chapter 4: Results and discussion. This section will examine the primary data source responses and compare them to the secondary data. Contrasting and corroborating perspectives are highlighted in order to develop conclusions on the causes, solutions, and impediments to FS. This chapter finishes with six suggested solutions to fight FI in Cape Town's disadvantaged metropolitan districts.

Chapter 5: This chapter wraps up the investigation by discussing the findings and the corresponding literature. Furthermore, it highlights the need of greater study to acquire a deeper understanding of the numerous aspects that play a part in FI.

Chapter 6: Bibliography

## 2 LITERATURE REVIEW

The author resides in Cape Town, one of South Africa's capital cities and is a registered Dietician with special interest in community nutrition and policy. The Western Cape (WC) province has a robust private service sector, a developed (but much room for growth) manufacturing base, the capital becoming a leading financial hub in Africa, and competence to some extent in research and development (with four international universities regionally and the collaboration of agricultural schools with the Department of Agriculture and wide cell phone reception (apart from power surges). Furthermore, the largest industries in the WC are sound labour absorbers making the WC more attractive to employers, which also stimulates rapid urbanisation (CoGTA, 2020; City of CT, 2022). Furthermore, the WC has fewer backlogs from initiated projects funded by the government than the rest of SA, and finally, the WC is one of the most popular tourist attractions in the country (CoGTA, 2020). Thus, the Cape Town Metropolitan area was the unit of analysis for this research. The institutional frameworks and policies relating to FS in South Africa (SA) and the local area were analysed to understand better the existing relationships between the lack of institutional action and urban FI. Even though several plans and frameworks exist, there is no single policy to preserve and protect urban food systems in Cape Town (Battersby, 2014; Battersby & Watson, 2019). Cape Town has been included in many urban food system studies, especially in the poor urban areas. Thus the literature review could be done extensively as access to relevant information is readily available.

### 2.1 FOOD INSECURITY

#### 2.1.1 Definitions and background

The term Food Security initially gained attention in the early 1940s and the concept is now broadly applied in many humanitarian emergency and development policies and programs (Hendriks, 2015). To be food secure on the household level, a person must always have access to safe, nutritious, and adequate food to live an active and healthy lifestyle (Hendriks, 2015; De Beer et al., 2020; Adenyini *et al.*, 2021). According to de Beer et al. (2020) the International Food Policy Research Institute found that all countries face public health issues because of some form of malnutrition. The United Nations Development Program (UNDP) stated in 2012 that a country could only be classified as food secure if availability, accessibility, utilisation, and sustainability criterion are met (De Beer et al., 2020). Another form of malnutrition, obesity, is also on the rise globally and in some cases is caused by poor nutrition in early childhood (FAO, 2020; De Beer et al., 2020). It is also the leading cause of non-communicable diseases (NCDs) such as diabetes

and cardiovascular diseases (De Beer et al., 2020). It was estimated that 8.9% (690 million people) of the global population suffered some form of malnutrition (underweight, overweight, stunting, blindness, illness, micronutrient deficiencies etc.) due to FI since 2000 (FAO, 2020). It is important to note that FI does not merely refer to having insufficient food to eat but also relates to the right foods in the right quantities and variety (UNDP, 2012).

Household food and nutrition security has received worldwide attention since a report by the Food and Agriculture Organization (FAO) was published in 2018, alarming that the world is not on track to eradicate hunger nor poverty by 2030 as envisioned by the Sustainable Developmental Goals (SDGs) (StatsSA, 2019; FAO, 2020). Food insecurity affects people's health in numerous ways but the nutritional status of children and women (especially pregnant and lactating mothers) is especially problematic in its prevalence and effects. Between 2000 and 2019, child stunting decreased by one third, but this positive curve is impeded and worsened by persistent and worsening FI issues (CFS, 2020). It is no secret that FI is of global concern (De Beer, 2020; Stats SA, 2019; FAO, 2020; CFS, 2020; Ngamu & Chari, 2020).

Thomas Malthus warned in the late 1700s that the world would run out of food due to human population growth being exponential and food production arithmetic (Malthus & Williams, 1798). Exponential growth is characterised by increasing magnitudes of annual additions to a stock or population, while arithmetic growth implies constant annual increases (Encyclopedia.com, 2022). The relationship of population growth and FS is well studied and documented (Szabo, 2015) but initial inquiries did not fully take technological advances such as birth control, commercial farming techniques (Galor & Weil, 2000) and globalisation into consideration (Szabo, 2015). Szabo (2015), however, argues that urbanisation may pressurise the food system further. The UN (2019) projects that the population will continue to grow, reaching 8.5 billion in 2030, 9.7 billion in 2050, and 10.9 billion people in 2100. In this context, the fact that global FI remains a problem today with far less people to feed means that Malthus' carrying capacity concerns should not be completely dismissed. De Beer et al. (2020) and the UNDP (2012) reckon that there is enough food available globally and even in Sub Saharan Africa to feed every mouth, but some countries remain classified as food insecure on household level. Thus, this paper addresses aggregate production levels only obliquely and instead places its emphasis on urban food systems and the effect of rapid urbanisation on FI.

According to Hendriks (2015) it was initially believed that the only cause of hunger is the inadequate intake of food. The solution seemed simple in the late 1940s – simply produce more food. Adequate food (*availability*) was determined using food balance sheets which calculated the

amount of food needed per capita. The physiological aspects of FI in individuals were measured through anthropometrical measurements. New interventions in agriculture and imports were implemented in most countries suffering from FI, particularly in response to the world food crisis in 1974, yet poor intake led to persistent high levels of hunger and malnutrition globally. Hendriks (2015) goes on to say that around 1980, the phenomenon of *access* to food became a widespread topic of discussion in the literature; Adequate access to nutritious food is just as vital as producing adequate quantities of food. Access gained attention due to the realisation that people have difficulty accessing food if they are infrastructurally, geographically, and/or financially (purchasing power) restricted. The access phenomenon also led to research focusing more on the coping strategies of people experiencing FI and what ripple effects follow from those strategies. In the 1990s, this led to policy interventions focusing on poverty reduction, food price stability, and social protection programs (Hendriks, 2015). The measurement of coping strategies was, however, critiqued and said to be misleading (Hendriks, 2015) if social, cultural, and political contexts are not accounted for (De Beer et al., 2020) in terms of *how* food is being utilised (Hendriks, 2015). The *utilisation* concept covers topics such as dietary quality, nutrients, micronutrient deficiencies, food safety, and the absorption and metabolism of essential nutrients (Barret, 2010) and is often thought to be the key to attaining FS. However, the three dimensions of availability, access, and utility are interdependent. Up until 2015, little research focused on the resilience of food systems (*sustainability*) (Hendriks, 2015).

### 2.1.2 Global, National, Provincial and Local scale

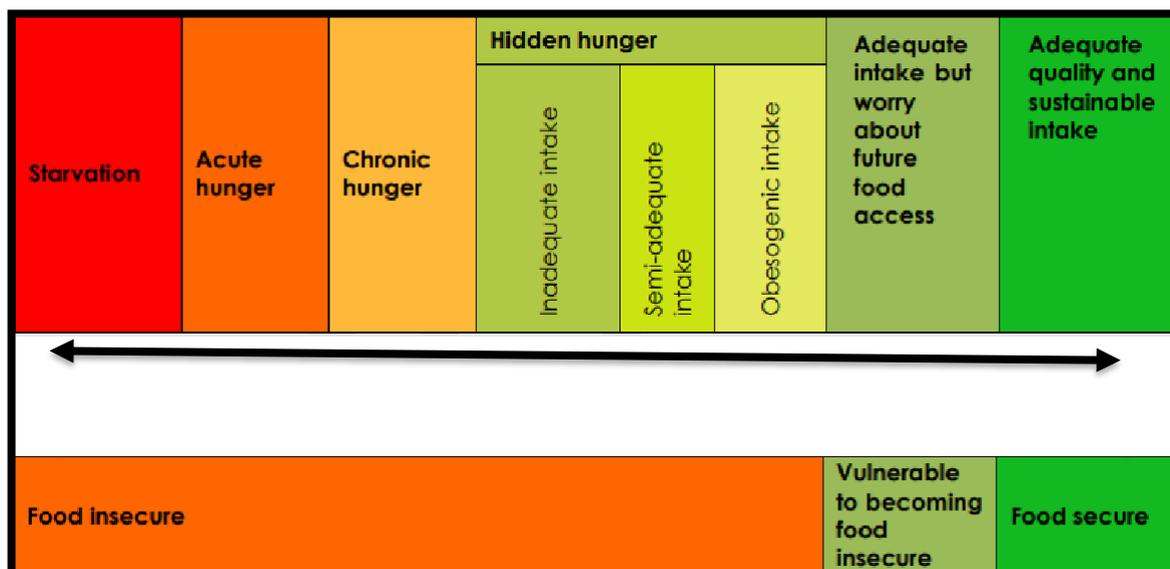


Figure 1: FI in terms of hunger stages (WGC, 2016)

There is no golden standard to measure FI. Research has been mainly focused on the causes of FI, especially after the global food crisis in 1974. However, the problem is highly complex with various economic, social, political and natural factors. In developing solutions to the problem, it is vital to understand the experiences, causes, and consequences of FI and to understand how the multiple dimensions reinforce each other and compound the problem. Food security in terms of physical intake can be measured on a spectrum ranging from complete starvation to ultimately food secure, where the definition of FS of the FAO (2006, p.1) ("physical and economic access to sufficient, safe and nutritious food to meet ... dietary needs and food preferences for an active and healthy lifestyle") is always met (see figure 3 above). One more challenge of having a unique measuring tool is that food (in)security is not static and can change rapidly, over time or cyclically (Henriks, 2015).

Appropriate interventions	Strategies employed	Characteristic*	Classification	Stage	
Relief interventions: provision of food and other basic needs	Household collapse	Severe wasting (-3SD), Emaciation, oedema, high mortality (especially under 5s) <sup>†</sup> or low adult BMI	Food insecure	Starvation	
	Sell off productive assets	Severe (-2SD) underweight, and /or stunting or oedema or low BMI		Acute hunger	
	Sell off non-productive assets	Wasting, underweight or Stunting (<1SD) or low BMI		Chronic hunger	
Mitigation interventions and social protection to boost income and consumption and protect against consumption reduction	Consumption reduction and rationalization	Sub-adequate intake and underweight (between -1SD and normal )		"Hidden" hunger	Inadequate intake
	Lack of dietary diversity	Micro-nutrient deficiencies, seasonal shortages, normal or underweight			Semi-adequate intake
	Unbalanced diet and perhaps stress eating	Low cost, high carbohydrate and fat intake (BMI over 19/20)			Obesogenic intake
Promotion of sustainable livelihoods	Worry about shortages	Generally adequate energy intake, normal weight, enjoys dietary diversity	Vulnerable to becoming food insecure	Adequate intake but worry about future food access	
Encouraging the building up of savings, assets and insurances to draw on in times of shortage	N/A	Adequate intake of all nutrients, normal weight, and good dietary diversity	Food secure	Adequate intake with sustainable future supply of food	

Figure 2: FI continuum in terms of hunger related malnutrition (Henriks, 2015)

According to Hendriks (2015), research shows that the first step in identifying a household at risk of FI is to measure their degree of panic over their food supply (see figure 4). The second step is where it becomes more complex, including the type of coping strategies one takes on. The severity of the issue can vary, improve, or worsen to a point where a household may become starved, experiencing acute, chronic, or cyclical acute hunger. A household's nutritional characteristics in this state are severe and acute. More chronic forms of FI are often referred to as *hidden hunger*. The characteristics of a household in this state are moderate acute malnutrition (MAM) (Hendriks, 2015). Despite perhaps not appearing so severe, it is important to mention that a person or household in a state of MAM not only suffers from poor intake (hunger) but consequently also a lack of essential micronutrients, making them more susceptible to illnesses and death.

The harsh reality is that a malnourished mother (whether over- or under-weight) gives birth to a child in a disadvantaged position even before his/her life started (Maitra et al., 2019). Malnutrition can be somewhat corrected in the first 1000 days of life (from conception till the age of 2 years (Cusick & Georgieff, 2013); after that, permanent and structural brain function is impaired (Maitra et al., 2019). According to Alaimo et al. (2020, p. 314) the global prevalence of malnutrition in children under 5 Years of age for the period 2017- 18 were as follows: Wasting (7.3%) 49 million affected, of whom 17 million are severely wasted. Stunting (21.9%) 149 million affected. Stunting and wasting (3.62%) almost 16 million affected. Overweight (5.9% ) 40 million affected. Malnutrition in all its forms remains unacceptably high across all regions of the world. Some reductions have been seen in the prevalence of stunting, but not in wasting. The number of overweight children has increased steadily since 2000.

This paper not only focuses on those experiencing hunger and starvation due to the poor access of food but also those who have implemented coping strategies leading to overweight, obesity and malnutrition.

South Africa experiences a double burden of malnutrition. The first as discussed referring to "hunger" and poor intake of nutrients and the second, adult obesity and malnutrition relating to the poor intake of micronutrients. South Africa is faced with this double burden of increasing malnutrition indicators such as wasting, stunting, undernutrition in young children alongside increasing levels of obesity in older children and adults, indicating that SA is undergoing a nutrition transition (Nnyepi, 2015; WCG, 2016; Tydeman-Edwards et al., 2018).

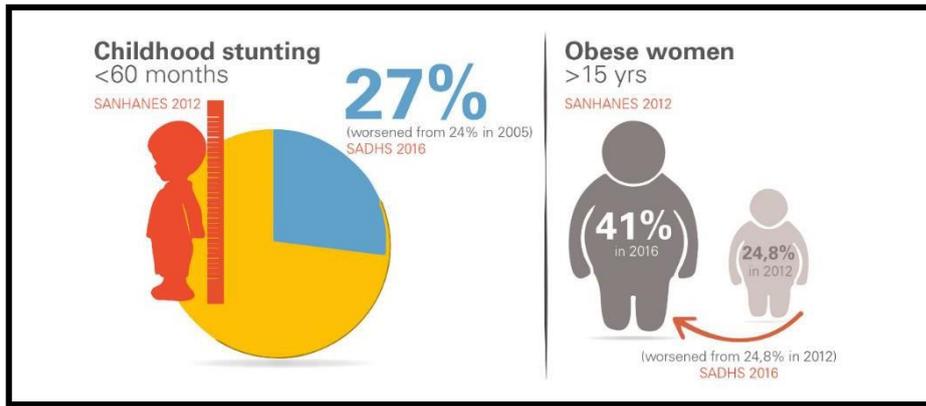


Figure 3:  
Stunting and  
Obesity statistics 2005 –  
2016 (Oosthuizen, 2022)

In the whole of SA obesity increased from 24.8% to 41% between 2012 – 2016 and stunting worsened by 3% from 2005 – 2016 see figure 3 (Oosthuizen, 2022). In 2018 overweight and obesity was identified in 66.2% of SA women living in poor urban areas (men only 16%). Sixty-six percent of children (under 5 years) stunted, underweight and wasted lived with at least one overweight or obese caregiver (Tydeman-Edwards et al., 2018). These populations show large consumption patterns of refined sugars, salt, saturated fats and the inadequate intake of fruits, vegetables and milk, further emphasising this double burden. The switch to poor diets to cope with a hungry tummy is outlined and discussed in figure 1 & 2. It is important to note that a poor diet can either be classified as the decreased intake of food or the intake of micronutrient poor foods or both depending of the severity of the issue and coping strategy one takes on.

Furthermore, as violence and conflict (discussed under section 2.1.3) are contributing factors to FI (UNDP, 2012) it is worth mentioning that violence mostly occurs in the poor urban areas including townships. The top five police precincts that accounted for more of half of the crimes in CT were Cape Town Central (5.61%) (not included as a poor urban area), Mitchells Plain (5.52%), Kraaifontein (3.88%), Delft (3.59%) and Nyanga (3.33%) (CoGTA, 2020).

In Khayelitsha alone there are approximately 118 810 households and almost 400 000 people (CPTC, 2015). In 2011 20.5% of CT's households lived in informal dwellings (7% informal backyard structures, 13.5% informal settlements). The City of Cape Town predicted that this number will only rise and not stagnate nor decline as more and more people migrate to the city seeking employment (City of CT, 2022). Currently it is estimated that 2 million people live in the Cape flats, half of the whole cities population (capetownattraction, 2022). Informal settlements are classified as housing systems illegally built on municipal land and home to the country's poorest (CPTC, 2015).



Figure 4: The Mother City: Cape Town in the Western Cape Province of South Africa (CoGTA, 2020).

If cities are growing, there is first a physical need for food. More food needs to be made available to feed every mouth, especially if rapid urbanisation occurs in areas originally not set out for agriculture (Szabo, 2015). Because highly developed countries have better infrastructure and FS is not of concern when urbanisation occurs (Szabo, 2015), this paper deals with low to middle income (LMI) countries and more specifically South Africa and Cape Town. Apart from availability and access, utility aspects also become more pressing matters of concern. Food suppliers in these areas consist of spaza shops and street food vendors, not only posing a threat to the sellers in terms of spoilage but also to the buyers in terms of hygiene, quality and variety (Szabo, 2015). The food system illustrated in figure 11 shows that food vendors in poor urban areas pay the same price as middle- and high-income consumers for their products, indicating that consumers who are infrastructurally compromised must buy from them, further compromising the consumers in poor urban areas' purchasing power (Haysom & Crush, 2017).

### 2.1.3 Drivers

#### Urbanisation

Urbanisation is proven to be one of the leading causes of the double burden of malnutrition (Nnyepi, 2015).

More than half the world's population currently resides in urban areas and the global urban population is projected to reach 67.2% in 2050: referred to in the literature as the "real population bomb" (Szabo, 2015). In England, the urban population increased from 25.9% in 1776 to

65.2% in 1871 (more than double in almost 100 years) as the industrial revolution progressed in Europe and the United States (Szabo, 2015; Geysler et al., 2012). The US at that time was a global leader in the farming industry and the revolution aided in this expansion by replacing human labor by machines and technology (Schwarzer, 2016) which in turn led to urbanisation of those left without jobs inland, seeking newly created jobs in cities and factories, as also seen in Europe (Szabo, 2015). The continuation of this trend, including the rise of megacities, especially in Asia and other developing countries, pose a tremendous threat to urban food systems (Szabo, 2015; Veenhuizen, 2006) especially in combination with factors such as climate change, price volatilities, and conflict (UNDP, 2012). The urban populations of the least developed countries has nearly tripled in the last 50 years (Szabo, 2015). In highly developed countries, individuals with restricted access to food due to illness, geographical location, disability, etc., generally have access to food deliveries and/or infrastructure to access more distant food stores and supermarkets. In Africa, most agricultural activities are based on sustenance farming, mainly due to the “absence of tenure rights, inadequate infrastructure and lack of finance for commercial agriculture” (Szabo, 2015, p.31). Those dependent on supermarkets and food stores in (poor) urban areas of cities have restricted access due to finances and purchasing power as well as poor infrastructure in terms of taxi fares or walking distances (Szabo, 2015). Apart from infrastructure and purchasing power, a lack of appliances such as fridges and storage space compromise the issue further (WCG, 2016).

Sub Saharan Africa

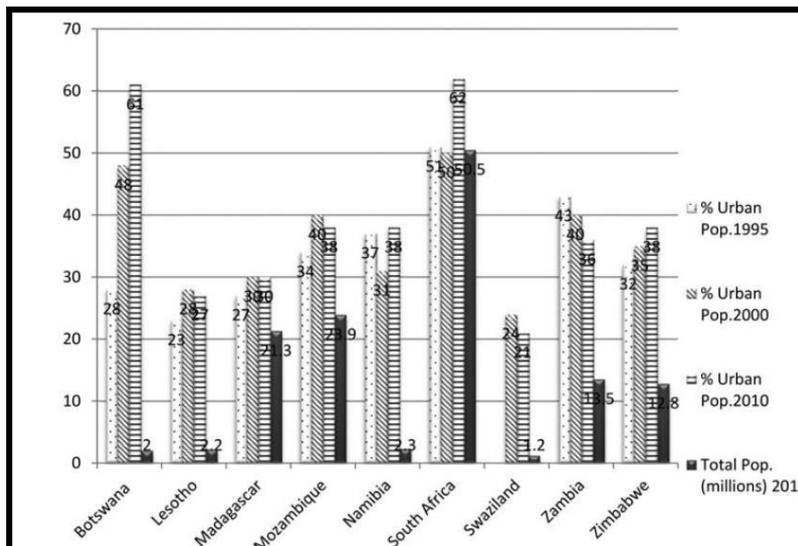


Figure 5: Urbanisation trend since 1995 –2010 (Nnyepi, 2015)

In 2010 urban dwellers constituted 30-60 % of the total population in Southern Africa with SA and Botswana being the most urbanised compared to the other Southern African countries (see figure 5) (Nnyepi, 2015). SA last conducted a national population census in 2011 thus recent

data on urban population sizes are lacking but according to estimations by the World Bank (2022) that number stands at 67% in 2022, 7% more than the upper threshold in 2010.

The imbalances created by the apartheid influx control of black and coloured populations resulted in extremely high urbanisation rates of those population groups after the abolishment of the influx control in 1991 (Geyser et al., 2012). Migration into formerly white inner cities occurred but most settlements arose in the form of newly created formal and informal settlements next to and within the black townships. Currently there are approximately 437 informal settlements (townships) in and around Cape Town (Ismaps, 2022). The emergence of large-scale urban settlements on the outskirts of cities and the ongoing rise of peripheral black and coloured townships resulted in the decentralisation of the white population through urban flight. Although the city core continues to act as the functional center of the metropolitan metropolis, economic decentralisation is becoming more prevalent. In Gauteng province, for example, this may be seen in the decrease of economic functions in the historic city core and the increase of commercial and industrial development in sub centers along the metropolitan periphery (Geyser et al., 2012).

Currently the City of Cape town is home to about 4.4 million people, making it the second largest metro by population size in South Africa (CoGTA, 2020) see figure 6. Cape Town is SA’s tourism hub making it another attracting factor for migrants. Since 2011, the population growth rate in the city has been decreasing, from 2.7 % in 2011 to 2% in 2019. The influx of people was, however, much higher than the provincial and national averages, demonstrating that CT continues to be a magnet for inward migration (CoGTA, 2020).

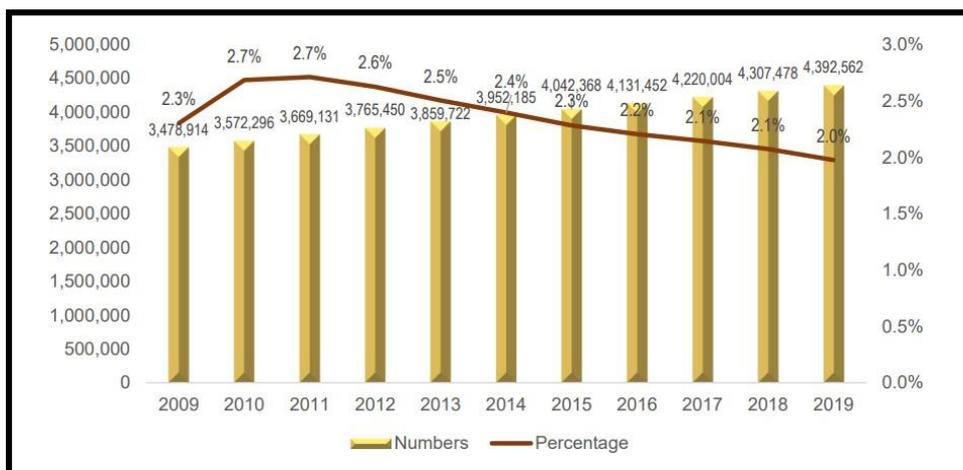


Figure 6: Cape Town’s population growth from 2009- 2019 (CoGTA, 2020)

The majority of the population is of working age (90%), with 48 % being between the ages of 20 and 49. The City's median age, 29 years, is slightly higher than the WC provinces', 28 years of age (CoGTA, 2020). Eight percent of the population is over 60 years old, while 6% is over 65 years of age. The City of Cape Town Metropolitan Municipality had a population of 1 234 317 million households in 2018 (Ibid). Women accounted for about 37.7% (475 460) of households in the city. According to the GHS (General Household Survey) in 2018, 1 226 homes in CT had children under the age of 18 (Ibid).

In 2019, there were 2 million (45.9%) people living in poverty, based on the upper poverty threshold of R 1227 (€73) per person per month, up from 1.5 million (43%) in 2010, indicating a 2.9 % (520 420) rise over ten years (CoGTA, 2020). Cape Town is the second largest provider of employment in the country, accounting for 9.9% of total national employment in 2018. However, in that same year CT had an average unemployment rate of 21,5% only a 1.3% improvement from 2011 (22.8%) (Ibid). StatsSA (2021) showed in the second Quarterly Labor Force Survey that unemployment in CT stood at 32.6% due to the lockdown measures induced by the Covid 19 pandemic. Ntsabo (2022) however states that the chief director of labor stats SA said that they had to hold back on certain labor statics due to discrepancies in the results. Data could only be collected telephonically during the heat of the pandemic and thus results could be highly underrepresented.

The UNDP (2012) released a report emphasising three major causes of Sub-Saharan African FI related to stable food systems: Weather patterns, price volatility, and conflict.

#### Weather Patterns

Climate and weather patterns are important determinants of plant growth, soil replenishment, and water availability. 93 % of agriculture in Sub Saharan Africa is rainfed, making the region very sensitive to changes in weather patterns (Ruwanza, 2022). Agricultural infrastructure and supply chains are operational, yet weak (WCG, 2016), while soils lose many nutrients each year. There exists a mismatch between economic development and rainfall – between 1995 –2000, rainfall and economic development were positively related, but after the 2000s, the relation became less with economic developing increasing and rainfall decreasing (Ruwanza, 2022). This could be due to an improvement in the infrastructural use of water and irrigation, but the up-keep and maintenance of these frameworks place stress on the agricultural systems in the long run. Between 1951 -1980 and the 2000s, monthly rainfall decreased by almost 7 millimeters (2.5 times the decline in Asia and more than ten times that in Latin America and the Caribbean)

(Ibid). Furthermore, Sub Saharan Africa is susceptible to greater changes in rainfall patterns compared to Latin America, Southeast Asia, and the Pacific. High rainfall volatility makes less land suitable for agricultural activities, reducing food production and crop yields, and stressing food systems and increasing FI both nationally and globally (Ibid).

Another factor that affects Sub Saharan Africa is natural disasters, both short-lived events such as hurricanes mostly found on the eastern coast of Africa and floods, as well as longer lasting droughts evident throughout central and Western South Africa up into Namibia. South Africa has experienced severe droughts from 1973–1974, 1983–1984, 1991–1992, 1994–1995, 2014–2016, and 2017–2018 with detrimental socio-economic and environmental impacts (Ibid). Ruwansa et al. (2022) mentions that the IPCC (Intergovernmental Panel on Climate Change) report of 2021 suggested that drought in Africa will continue to increase and cause harm to crop outputs, thus acknowledging that the challenge to FS is mainly driven by human activity (UNDP 2012).. This corroborates the earlier mentioned negative rainfall and economic growth dating back to the 2000s. It is argued that disasters are not preventable and can harm even well-prepared communities, but such events need not become a full-fledged disaster if a community or country is prepared for what may come. Climate change has been on our doorstep for decades, among the four planetary boundaries that have been transgressed (Li et al., 2021). With an ever-increasing population, floods, storms, and mass migrations, it is likely that food systems and people's livelihoods will only worsen if a dramatic change is not on the horizon.

Even though weather shocks are somewhat unpredictable, the UNDP (2012) suggests that the detrimental effects they have on human development should be possible to address as *they* are easily predictable.

#### Food price volatility

Prices, as discussed, affect supply and access tremendously. The food supply was relatively stable until 2007, yet various factors disrupted supply during 2007-2008, 2010-2011 (UNDP, 2012), and 2014-2016 (Ruwanza, 2022). In 2007- 2008 prices surged due to poor rice crop outputs from Asia induced by bad weather conditions. The 2010-2011 price hikes, even though less dramatic than in 2007-2008, were led by maize, wheat, oil, and sugar. The main reason for these price hikes was a rise in crude oil prices, adverse weather patterns in major exporting countries, and poor policy responses (UNDP, 2012). The drought experienced in South Africa between 2014 – 2016 made the country a grain importer after being one of the leading exporters globally (Ruwanza, 2022). A similar trend is currently visible with skyrocketing crude oil and fuel prices (WFP,

2022). Sub Saharan Africa is affected by volatile international food markets, but local spikes and drops in food prices seem to have a more significant impact on securing food and ensuring access.

Even though rural communities are not entirely included in the scope of this paper, it is essential to mention that these up and down cycles have detrimental effects on especially smallholder farmers who sell their crop output directly after harvest, when prices are at their lowest, to pay expenses and debts accrued during the season. The cycles continue to worsen when smallholder or self-sustaining farmers exhaust their food stocks six to eight months after harvest and then must buy food supplies when prices are highest with money they obtain by borrowing, selling their animals, doing casual work (piece jobs), or enrolling in food aid programs (UNDP, 2012). This, unfortunately, contributes to fluctuation in food prices (especially fresh produce) and malnutrition (De Beer et al., 2021).

#### Violence and conflict

During periods of conflict, food production falls (WFP, 2022; UNDP, 2012). FI is both a cause and an effect of conflict. As could be seen during the lockdown periods of the Covid 19 pandemic in SA, looting of donations of essential products to poor urban communities accentuates the direness of FI in conflict (Mkentane, 2020). Fluctuations in agricultural output and pricing can cause violent upheaval among citizens, while conflict and violence can inherently cause instability in food availability and access. The ripple effect of war/conflict and/or violence causes food prices to increase considerably. Depending on the type of distribution channels and transport infrastructure a country has, the distribution of food from other markets to these areas can be unpredictable, allowing prices to rise tremendously around the area of conflict.

Figure 7 from De Beer et al. (2021) explains the ripple effect of poor households' FI related issues. Even if food is available, adequately utilised, and access is not restricted, not having a stable supply of food and nutrition, the wellbeing of that household is compromised. Coping strategies in a food insecure household include cheaper alternatives, decreased intake, and smaller portion sizes, adding to the factors mentioned earlier of increased NCDs and public health pressures (De Beer et al., 2021). Conflict and violence will also soon follow if the issue persists (UNDP, 2012). One significant positive coping strategy includes households and communities becoming self-sustaining (if resources are available).

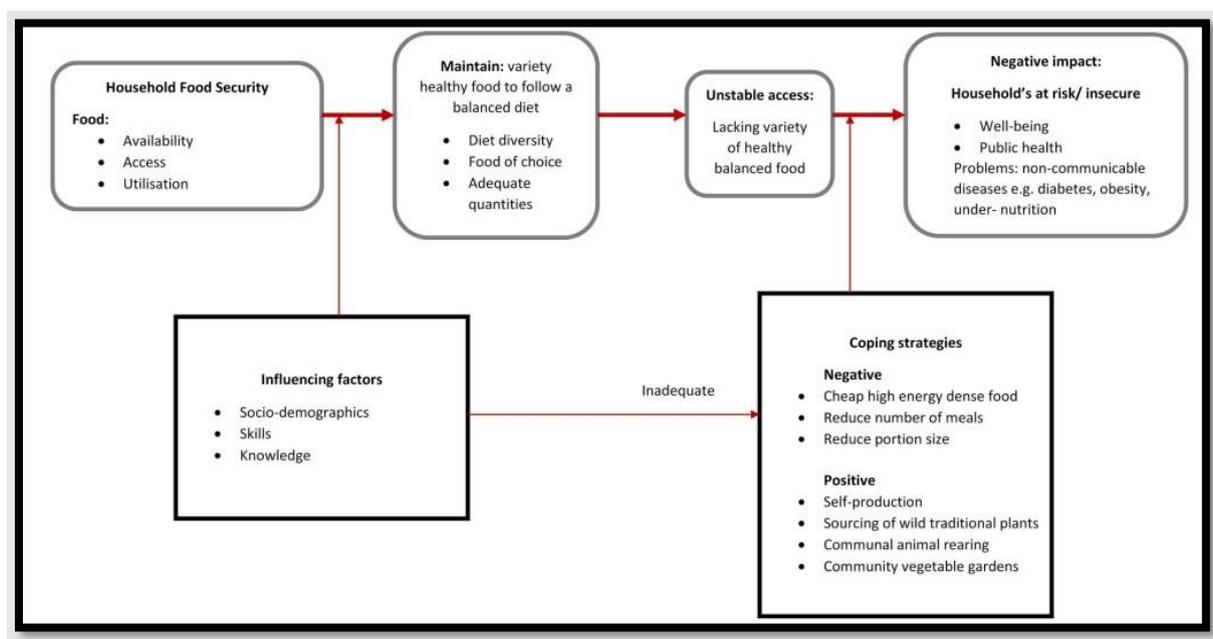


Figure 7: Conceptual framework of food utilization and coping strategies. (De Beer et al., 2021)

## 2.1.4 Urban FI

"There is no global data on food security disaggregated by urban and rural areas, although many claims that FI afflicts more rural than urban residents. The unique life characteristics in urban areas make the urban poor particularly vulnerable to FI." (Ruel, 2020, p.1)

### 2.1.4.1 Global overview

Access seems to be the main barrier in urban areas to ensuring FS. A variety of food is usually abundantly available in urban areas in the form of supermarkets, informal traders on street corners, retail outlets, hawkers and others. This, however, does not mean that everyone in poor urban areas has access to nutritious, safe, diverse, healthy, and affordable diets (Ruel, 2020). In India, the nutritional status of people and children living in some of the townships are worse than those living in rural areas, indicating that urban communities are not always better off than rural communities (Ghosh & Shah, 2004; Ruel, 2020). Similar trends are found in Bangladesh (Ahsan et al., 2017). Rural communities in some parts of Africa suffer more than those in the urban areas, causing rapid migration to large cities, pressurising urban food systems, infrastructure, and employment opportunities to house and feed these growing communities (Cordeiro et al., 2021; Neville, 2020).

A practical example can be seen in one of South Africa's neighboring countries: Zimbabwe (Nevill, 2020). The World Food Programme (WFP) estimated that during 2020 more than 7.7

million people will be facing FI due to poor climate conditions, poverty, HIV/AIDS, poor employment opportunities, climate-induced shocks followed by poor recovery and economic instabilities (Ibid). A lack of agricultural skills resulting in poor agricultural practices and crop output accompanied by poor market access contributes to the issue (Ibid). Low intake of micronutrients from unfortified grains and wheat further contribute to high rates of malnutrition as these are staples in diversity-lacking African diets. Furthermore, the Covid 19 pandemic restriction measures left many families, especially in urban areas, without food. See image 7



Image 7: A woman prepares food for her family in her living room in the capital of Zimbabwe, Harare. This picture, evidence that it is not only rural communities suffering, was taken during

the lockdown period of the Covid 19 pandemic, when people claimed that if they stayed at home, they would die of hunger (Nevill, 2020)

#### 2.1.4.2 National overview

South Africa, generally classified as a middle-income developing country (Beer et al., 2020) with the fastest growing economy in Africa (UNDP, 2012), also remains FI at the household level (Beer et al., 2020). South Africa and especially CT experienced severe droughts due to a lack of rainfall in 2016/2017, and it was evident that rural communities suffered the most having a ripple effect into urban areas resulting in rapid urbanisation pressurising urban foods systems (Cordeiro et al., 2021; Neville, 2020). Rural communities rely on agricultural activities as a primary source of food and are limited by poor infrastructure that restricts their access to supermarkets and shops. If they have physical access, their purchasing power is restricted, and storage is compromised by the lack of electricity and equipment, further compromising dietary diversity (Masipa, 2017). Thus Masipa (2017) suggested that the government should invest more in education and farming strategies in these areas to prevent urbanisation in large cities. Beer et al. (2020) further states that self-production of food aids in reducing food prices and improved access to supply

and create more employment opportunities. In 2019, however, StatsSA showed that with increasing urbanisation levels, fewer and fewer people are involved in agricultural activities and must rely more on income to purchase food.

Furthermore, around 60% of the population resided in urban areas in 2009/2010 (Frayne et al., 2009; Nyepi, 2015), yet this number was estimated at close to 70 % by 2020 (World Bank, 2022). As mentioned, apart from the difference between rural and urban communities, SA is still classified as the most unequal country globally. Inequality is not solely driven by differences in population groups but is also embedded within these groups. Adding to the burden is the slowdown of economic growth, which does not hold good prospects for incomes to increase. Therefore, there is a significant spike in poor urban FI during economic crises (WCG, 2016). Even though some progress through government interventions such as investing in health care, social grants, education, transport, etc. (discussed later), have been made to alleviate poverty and increase social wages, SA remains severely unequal in terms of household income (Beer et al., 2021; PGWC, 2019; Provincial treasury, 2020).

"Twenty-five years into democracy, South Africa remains characterised by high poverty and inequality and urbanisation rates. These realities manifest in a spatial context. Most of the provincial population lives far from economic centers and high-order social services and struggles with a lack of efficient, affordable transport." (PGWC, 2019, p.63)

Rural FI is but one major area the SA government has focused on to combat inequality through the implementation of the Broad-based Black Economic Empowerment Act 53 (Black Economic Empowerment act in short (BEE) of 2003 led by the Black Economic Empowerment Advisory Council (BBEE, 2003)). BEE has been introduced as an entrepreneurial approach of redressing the old apartheid government's socioeconomic faults. The Act aims to empower the majority of black South Africans who were formerly disadvantaged. The apartheid administration forbade them from participating in the state's economic concerns. BEE aims to reallocate wealth over a larger spectrum of South African society to impact change in all sectors. As a result, BEE aims to make a significant contribution to the economy, black people's economic lives, and thus ensuring economic growth and race transformation. The Act however is also not as efficient as envisioned due to governmental corruption, mismanagement of strategies and programmes and departmental mismanagement (Shava, 2017).

SA showed a significant decrease in FI between 1999 and 2008, 52.3 % to 25.9 %, but households being at risk of becoming FI remained unchanged. A lack of amenities (such as access to

water and electricity for cooking) in impoverished and densely populated urban areas (townships) worsens the issue.

The Western Cape Government FI report of 2016 stated that stunting affects a more significant proportion of children nationally than underweight or wasting across all age and gender categories (WCG, 2016), indicating that they are chronically malnourished (WHO, 2022).

"More than half (56,1%) of the households with younger children that experienced hunger resides in urban areas and 43,9% in rural areas." (StatsSA, 2019, p.20). (See table below).

Settlement type	Hunger (N'000)		Total
	Did not experience hunger	Experienced hunger	
<b>RSA</b>	<b>4 038 (86,9%)</b>	<b>611 (13,1%)</b>	<b>4 649 (100,0%)</b>
Urban	2 499 (61,9%)	343 (56,1%)	2 842 (61,1%)
Rural	1 539 (38,1%)	268 (43,9%)	1 807 (38,9%)

Figure 8: Type of settlement and children under 5 experiencing hunger (StatsSA, 2019).

Although malnutrition has many causes, one of the main contributing factors could be the environment children grow up in (WCG, 2016). Children are dependent on others to meet their basic needs. Thus, multidimensional poverty affects them more than older kids and adults who can make decisions for their day to day lives and have more financial power (StatsSA, 2020).

"A child is said to be multidimensionally poor when living in households where they are deprived of at least three out of seven dimensions of poverty" (Health, Housing, Nutrition, Protection, Education, Information, Water and Sanitation) (StatsSA, 2020, p.6).

During the Covid 19 pandemic, the SA government imposed regulations to minimise the spread of the virus and forced non-essential businesses and organisations to close temporarily. As a result, the national economy of non-essential goods and services came to a complete halt. The negative impact of a decline in economic activity and restrictions on movement left many urban households FI. The current price hikes in fuel due to global economic instabilities seem to have a similar effect on FI in terms of a decrease in purchasing power because of price volatility and instabilities.

#### 2.1.4.3 Provincial and Local overview

Access is generally directly related to income, but it is important to note that it cannot solemnly be contingent on income but also on the pricing structure of foods (Beer et al., 2021; WCG,

2016). For a household (depending on the size) to consume a healthy plate of food daily, they need some knowledge of proper nutrition and an income of R5 630 (±€331) per month. In 2011 it was estimated that 61.5 % of “Capetownians” earn less than R6400 (approximately \$440), placing most households at risk of FI (Temple & Steyn, 2011). Unfortunately, healthier foods low in energy but micronutrient-dense, such as oats, apples, beans, and carrots, are less desired than foods such as jam, candy, cookies, and chocolates. Apart from desirability, a healthier diet in SA is approximately 10 - 60 % more expensive than generic high energy, micronutrient-poor diets (WCG, 2016; Temple & Steyn, 2011).

Consequently, obesity is often a manifestation of FI, resulting in NCDs such as diabetes and cardiovascular diseases (Beer et al., 2021; WCG, 2016). Sixty percent of households in Cape Town that take part in gardening spend 30 % on food purchases emphasising the vulnerability of FI in these populations (WCG, 2016). Even though the human development index of Cape Town (0.74) was higher than the national rate (0.71) in 2010, children under 5 had the highest rate of being malnourished in the city, proving that FI is a pressing issue in urban areas (WCG, 2016). There is thus an urgent need for policy focus to evolve around alternatives to food availability, as most solutions are driven by increased agricultural output in this region.

Utilisation refers to "the way the body makes the most of the various nutrients in food, relating to the nutritional content of food, storage, hygiene, feeding practices, food preparation, dietary diversity, intra-household distribution of food, life stage, social behaviors and health status" (WCG, 2016, p.15). Over the years, as technology advanced and due to the food system being mainly privatised (Haysom & Crush, 2018), people's diets have changed. Fresh produce high in micronutrients competes with more affordable, packaged and processed foods (Beer et al, 2021; WCG, 2016). The third leading cause of death in the WC province is cardiovascular disease, diabetes and other NCDs (Western Cape Government, 2019). Another factor that plays a vital role in overall nutritional health is dietary diversity (DD): “A measure of the variety of food from different food groups consumed over a reference period” (FAO, 2020, p.253). The lack of DD is the leading cause of preventable blindness and death due to the susceptibility to infections and illness in early childhood throughout Africa (Beer et al., 2020).

## 2.2 AVAILABILITY

Availability addresses the supply side of FS and refers to the physical inflow and presence of safe and nutritious food at a given time and place (Fraanje & Lee Gammage, 2018).

### 2.2.1 National production

South Africa has a well-developed agricultural sector with the most modern, productive, and diverse agricultural economy compared to the rest of Africa (ITA, 2021). Although the Gross Value Added (GVA) by the agricultural sector dropped by 13% in 2019 and decreased its share on national level, it still accounted for 15% of the total national share (Patridge et al., 2021). Grazing is possible on 69% of SA's land area, and cattle production is the country's most important agricultural sector (see figure 9) (Patridge et al., 2021). The national cow herd in SA has increased by around 6 million since the 1970s, to nearly 14 million in 2006 (WWF, nd). This increase was almost sufficient to meet the increased demand from SA's rapidly growing population at the time. Beef, dairy, and mutton consumption per capita has decreased since the 1970s and chicken consumption has increased to the point where it exceeds the total red meat consumption (WWF, nd). Egg consumption also doubled since the 1970s, while fruit and vegetable consumption stayed relatively the same (WWF, nd). The large market share the agricultural sector has, emphasises its importance in providing employment, ensuring FS, creating wealth, and reducing poverty. The sector is, however, very reliant on investment and global trade to reach these prosperous goals, and is negatively impacted by "credit ratings downgrade, land reform concerns, volatile exchange rates, ongoing weather concerns and the latest Covid-19 pandemic" (ITA, 2021, p.1).

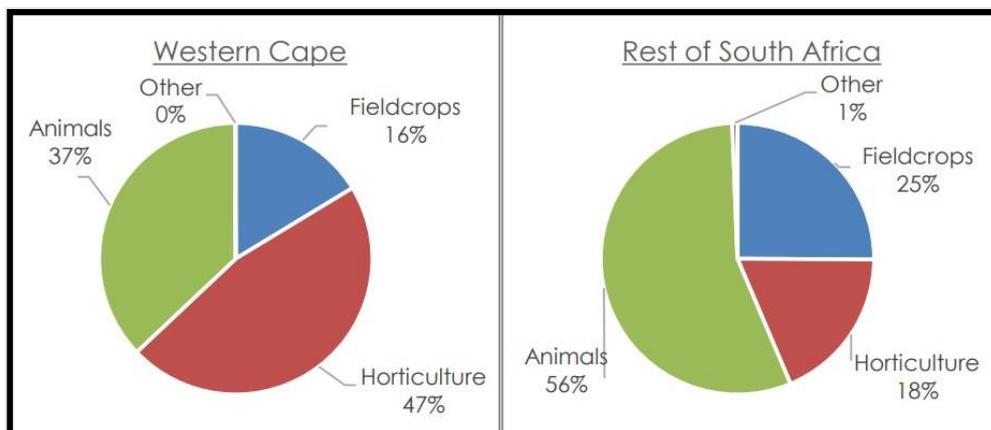


Figure 9: Gross Farm income from agricultural activities in the Western Cape vs South Africa (Patridge et al., 2021)

South Africa is food secure on national level but not on household level (De Beer et al., 2020, Adeniyi et al., 2021; Tsegay & Rusare, 2014). The issue is that the crop production numbers represented on national level are not evenly reflected in consumption rates at the household level (Tsegay & Rusare, 2014). South Africa produces more than enough and a sufficient variety of food to meet every citizen's caloric need but, according to the literature (Adeniyi et al., 2021; Tsegay & Rusare, 2014), the main factor spearheading FI in terms of hunger is access, which is restricted by: 1. Rural communities having poor physical access to food markets and transport costs in traveling to markets to buy food comprising a large part of their spending; 2. Poor financial access or purchasing power in urban areas, where traveling distances are shorter to spaza shops and neighborhood markets in townships and poor urban areas, but the volatility in food prices and lack of employment restricts their ability to purchase adequate calories and micronutrients. De Beer et al., (2020) argue that even if the issues of availability and accessibility are addressed, utility and education plays just as vital a role in correctly using foods to maximise one's nutritional status.

### **2.2.2 Provincial production**

Like the whole of SA, the primary industry in the Western Cape province is agriculture (Vink & Tregurtha, 2005). Agri-processing and the agricultural sector together make up more than half of the economic activity in the Western Cape, with 47% of the gross income in the province attributed to horticultural production, compared to 18% for the rest of the country (WCG, 2022). The Western Cape has a Mediterranean climate with rainfall which ranges from 1000mm in some mountainous areas to less than 150mm in certain parts of the Karoo and northwest regions per year (WCG, 2022). The variety of soil types and variations in rainfall contribute to significant diversity in crop production (WCG, 2022). The Cape Winelands account for more than a third of the GVA in the province, making it the largest agricultural area in the Western Cape province. Horticultural production in these areas' accounts for 60% of farm income. Seventeen percent of crop production could be attributed to wheat followed by wine grapes, canola, barley, rooibos tea, apples, table grapes, pears and oranges. In terms of employment, the agricultural and agri-processing sectors in the Western Cape alone created 34 thousand new jobs in 2019 (Patridge et al., 2020) emphasising the importance of these sectors in reducing poverty and increasing FS.

In the late 1980s, agricultural and agri-processing activity performed equally as well on the global market in terms of trade. Over the years, however, agricultural products have increasingly been exported unprocessed, resulting in a trade deficit due to the importation of goods which could have been produced locally were the inputs not shipped off for processing (WCDa, 2020) see figure 10. Despite these overall favorable facts, the severe droughts experienced between 2015 and 2017 had tremendous implications for the prosperity of this sector as well as hunger experienced by citizens in this region.

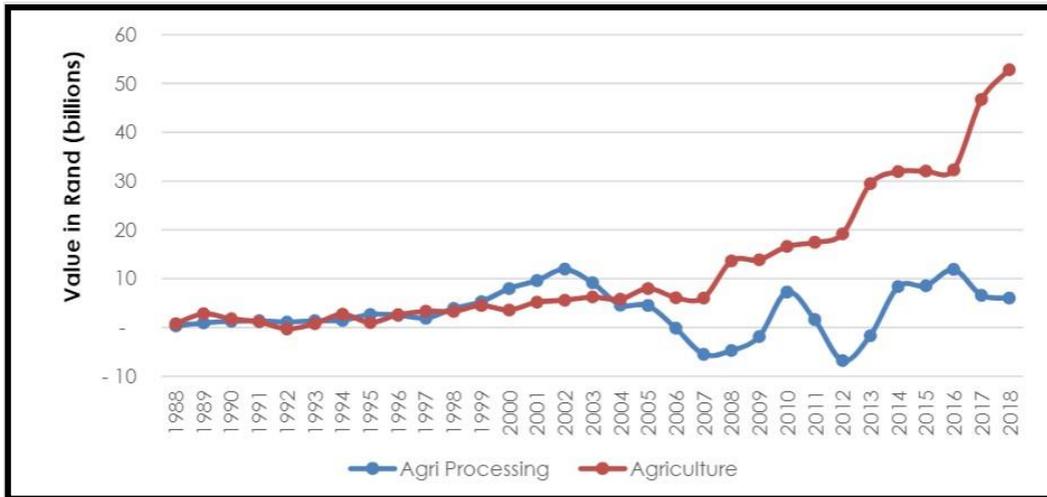


Figure 10: SAs trade balance from Agriculture and Agri-processing between 1988 and 2018 (WCDa, 2020)

### 2.2.3 Price implications

It is evident that that the Western Cape province produces an abundance of not only “calories” but also “micronutrients” to feed all its people. Factors contributing to the FI issue, however, are a bit more diversified when compared to the rest of the country. Cape Town's poor urban areas not only house unemployed populations with little to no purchasing power (Tsegay & Rusare, 2014) but also deal with a poor infrastructure to house populations migrating to the city seeking jobs (City of CT, 2022; Patridge et al., 2020). In recent years there has been a slight decline (from 15% to 13% from 2015 to 2020) in people experiencing hunger in poor urban areas of Cape Town but the numbers are still staggering with 11% of household reporting children going hungry and 12% of households reporting adults going hungry in 2020 (Patridge et al., 2020). The fact that these 2020 numbers are higher than those reported in 2008 (9% and 10%) indicates that the FI issue is nowhere near to being resolved (Patridge et al., 2020). The coping strategies discussed earlier include the purchasing of cheaper alternatives, which then leads to malnutrition even for those who are neither hungry nor underweight. Thus, in urban

areas “poor households have good access to bad food but poor access to good food” (Tsegay & Rusare, 2014, p.25).

An extract from Tsegay & Rusare (2014, p.26) paints the picture a bit clearer:

“As hunger is ever present, a number of respondents said that it was difficult for them to easily detect malnutrition unless it had reached the chronic stage. One respondent in Limpopo related, ‘My child was sick and I never realized that it was malnutrition until I took him to the hospital. Even adults are being affected by diseases of malnutrition because some of the food we eat is not nutritious.’ Members of coastal communities in Cape Town Metropolitan (e.g. Ocean View) stated that their access to nutritious food had changed dramatically over the past couple of years. A discussion amongst participants revealed that many are forced to buy inferior-quality (pre-cooked, par-boiled and frozen) processed foods, because they cannot afford the more expensive healthier foods.”

## **2.3 ACCESS**

Access looks at whether an individual or household can gain access to (and eat) available food. This includes the ability to purchase or exchange goods for food as well as access to donated food and goods. As such, access also considers the social mechanisms alleviating FI, equality in the distribution of food among a community, infrastructure, food prices, etc. (Fraanje & Lee Gammage, 2018). Access is directly related to income (Battersby, 2011), and the vulnerability of individuals with low income worsens the issue (UNDP, 2012). Drastic price increases, the lack of sufficient and efficient safety nets and social protection mechanisms, delays in humanitarian responses, and poor physical infrastructure all reduce access (UNDP, 2012). South Africa is also one of the most unequal countries in terms of household income. Depending on the poverty line used, 45-57% of the country is poor (Ndlovu, 2019). Poverty, however, declined nationally from 2001 to 2016, but inequality remained high as depicted by the Gini coefficient, which is one of the highest globally: “The income per capita Gini coefficient (income inequality) remained close to 0,70 (0,72 in 2006; 0,69 in 2009, 0,69 in 2011 and 0,68 in 2015)” (StatsSA, 2019, p.5). During the Covid 19 pandemic, significant job losses left many millions of people in Africa and approximately 2.6 million people in South Africa in crisis (Posel et al., 2021). Furthermore, the current economic recession exacerbated by global economic instabilities causing prices to skyrocket out of proportion and putting these populations even further disadvantaged (WFP, 2022). The price of cooking oil, for example, has increased by almost 35%, having a harsh impact on households

who mainly make use of oil for cooking and producers who provide cheaper alternatives to expensive foods (Fourie, 2022). It is important to note that earning a wage does not make one safe in terms of purchasing power (De Beer et al., 2020). Low wage earners have little bargaining power and generally do not receive inflation adjustments to their income (UNDP, 2012). South Africa implemented a Social Relief of Distress (SRD) fund (SAGov, 2019; McDermott & Swinnen, 2022) in 2019 to assist those who are disadvantaged: specifically, children, unemployed people, the elderly, and the disabled (McDermott & Swinnen, 2022). During the pandemic induced lockdown, severe restrictions on movement left millions without food, especially populations who rely on daily wages and piece jobs to purchase *that* days food. It is estimated that unemployment increased by approximately 2.2 million people during the lockdown period (IPC, 2020), which excludes foreign and undocumented immigrants who are not registered in the SA system. South Africa already has a well-established social grant infrastructure, that enabled rapid distribution of funds during the crises (IPC, 2020; McDermott & Swinnen, 2022). However, the SRD fund was discontinued in April 2021, together with the discontinuation of top-ups to existing grants in October 2020, despite one-fifth of South Africans relying on social grants as their primary source of income (McDermott & Swinnen, 2022). Poor infrastructure also restricts access to food for people living in Southern Africa. Access to electricity, safe water, and sanitation is essential for cooking purposes (UNDP, 2012), yet all are limited in various regions. Southern Africa has 18% paved roads compared to 33% in Latin America and 59% in South Asia (Ibid). In 2012, it was estimated that the cost to improve these access issues was approximately 93 billion USD per year until 2015 (Ibid). In SA, similar trends are visible even though not so stark. The recent drastic electricity shortages (Ayamolowo et al., 2022), rise in fuel prices (WFP, 2022), fiscal instabilities (PGWC, 2019), national debt accounting for 60% of GDP primarily due to state bailouts (PGWC, 2019), and increasing food prices (WFP, 2022) leaves little room for improved statistics related to urban (and rural) FI and malnutrition related issues.

### **2.3.1 Urban food systems**

The term urban implies a town/built-up area or suburb usually surrounding a city characterised by the density of human populations, usually non agriculturally employed (National Geographic, 2022). The definition of FI is thoroughly discussed in the previous sections. Thus urban FS implies that people from these areas also have the right to food with equal availability, accessibility, utility and sustainability. Food security also includes the ability to access personal and culturally acceptable food that can be obtained in a way that upholds human dignity (Beer et al., 2020).

Production and consumption should be managed and supported by equitable and fair social values (FAO, 2020). FI is not an issue with a single cause or effect. It encompasses an array of elements that include socio-economic factors, especially for the urban poor, which is becoming an increasing population throughout Sub-Saharan Africa (Ziervogel & Frayne, 2011). Haysom & Crush (2017) stated that the African Food Security Urban Network studied 11 Southern African countries to determine the extent of urban FS and found the following, emphasising that urban FS is of growing concern:

- Four out of five urban poor families are food insecure.
- Dietary diversity is poor.
- Poverty and FI are associated in a direct way.
- Increases in food prices have adversely affected four out of five impoverished families.
- Seasonality is a factor in urban FI.
- There is a gender component to food security, with female-headed families being the most food insecure.
- There is a correlation between health and FI, with food insecure families experiencing higher rates of illness and death (including HIV/AIDS and tuberculosis).
- Urban-urban and rural-urban interhousehold food exchanges are critical, particularly for urban families with FI.
- Urban agriculture is not an important food supply for low-income families.

(Haysom and Crush, 2017)

### **2.3.1.1 National**

*Food systems* have been defined as: " a set of activities and outcomes ranging from production through to consumption, which involves both human and environmental dimensions...Food systems encompass a range of social, institutional, and ecological components (activities, actors, and outcomes), all of which may be vulnerable to environmental change in different ways" (Ericksen, 2008, p.4.). A food system is essentially the process from farm to fork.

As stated in Haysom & Crush (2017) after the SA regime change in the early 1990s, three developments directly impacted the food systems in SA (and Cape Town).

1. The signing of the Uruguay Round of Global Agreement of Trade and Tariffs (GATT) obligated countries to trade agreements which affected the production and distribution

of agricultural and food systems (in- and exports). In 1995 the GATT led to the World Trade Organization (WTO).

2. The strict governmental systems led by policy and regulatory systems that predominantly governed agriculture was replaced with a combination of free-market and forms of industry self-regulation.

These two processes led to the Marketing of Agricultural Products Act of 1996.

3. The amendments to the Co-operatives Act in 1993 led to the removal of co-operative infrastructure from farmer control and the subsequent privatisation of these assets.

Corporate power took over the SA food system with the last two factors, laying the foundation for national and provincial food systems (Haysom & Crush, 2017).

On the Agricultural side: The 2001 Strategic Plan for Agriculture loosened restrictions and made the market competitive, especially globally. With the downward shift of field crop prices to meet global market, commercial farmers mechanised production and shifted field crops to better quality soils. The changes resulted in larger commercial farms and fewer small family-owned and sustenance farms (Haysom & Crush, 2017).

Small local companies have been placed in a somewhat disadvantageous position due to markets becoming fewer and more centralised. The same is visible in the food supply and processing sectors, where ample food retailers and processing companies overshadow the smaller vendors. For a city to feed itself sufficiently and efficiently, various outlets, locations and local scale markets need to be available and accessible (Haysom & Crush, 2017; Battersby & Watson, 2019). The periodic closure of small-scale food producers, processors, and merchants in urban centres resulted in the poor relying on expensive car/taxi bus/bus-dependent supermarkets for food (Haysom & Crush, 2017).

### **2.3.1.2 Provincial and Local**

The Cape Town food system is complete in production, processing, packaging, distribution, retail, consumption and waste disposal. Many activities, actors and institutions interact with one another to let this food system flow efficiently (Haysom & Crush, 2017). The food industry is mainly led by large corporations and corporate supply chains (PLAAS, 2010), not resulting in a food-for-all scenario (Haysom & Crush, 2017). The formal and informal sectors are completely connected (Ziervogel & Frayne, 2011) and supply food to the same target market. However, the

distinctive difference lies therein that the informal sector lacks visibility and policy, remaining largely illegal (Haysom & Crush, 2017). The informal sector is highly masked, underrepresented and suppressed by corporate food systems due to uncertainty around competition and a lack of data (the informal sector has no obligation to report on figures) (Haysom & Crush, 2017).

However, the informal sector is significant in size, and it is estimated that in Cape town alone, about 15 000 people take part in this system (excluding consumers). This number, however, could be highly underestimated due to a lack of data. Fifty percent of Massmart's (South African Walmart subsidiary) business comes from the informal sector (van Breemen, 2014), emphasising how large this sector is. It is economically well known that an ample supply requires a great demand. The private sector mainly controls the food system meaning that information is not readily available to the public, and data is not uniformly recorded. The private sector has sole control that impedes evidence-based food system governance. Despite the monopoly in corporate food systems, significant competition exists that results in the unwillingness to provide detailed information regarding food flows (Haysom & Crush, 2017). "Any attempt to ascertain what proportion of the cereals, fruit, vegetables and livestock produced nationally makes its way to Cape Town and is consumed there is thwarted" (Haysom & Crush, 2017, p.32).. Therefore, Cape Town's consumption of food needs to be considered within the context of broader South African consumption patterns.

### 2.3.2 Cape Town's urban food system

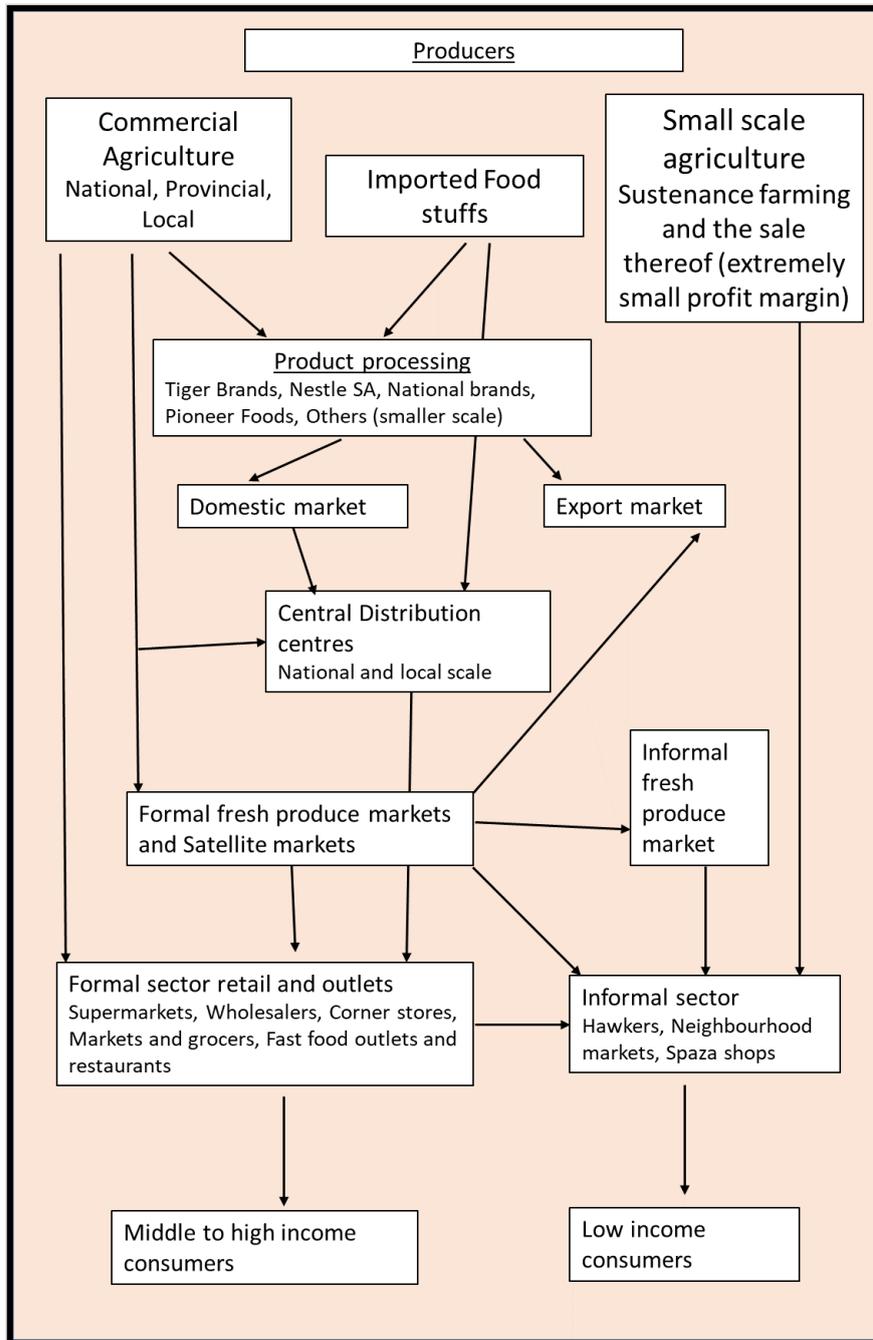


Figure 11: The CT Urban food system (Author contribution, adapted from Haysom & Crush, 2017 and Van Breemen, 2014)

Producers:

The producers in figure 11 consist of commercial farmers, imports and sustenance farming. South Africa mainly imports wheat, rice and poultry and exports citrus fruit, wine, table grapes, deciduous fruit, maize and beef (Meyer, 2020). Multiple new areas around Cape Town have

been zoned out for food production and are assigned a protective status. However, the level of security is weak for food production areas as urban developers compete for space to accommodate the rapid influx of people due to urbanisation. However, vineyard production areas have an extremely high level of protection due to this agricultural activity being a leading role player in the economy and export market and a part of the city's heritage (Haysom & Crush, 2019).

In 2007 Cape Town adopted an Urban Agriculture Policy and established an Urban Agriculture Unit with several focus areas: Awareness and advocacy for urban agriculture; research, knowledge and technology transfer; production and marketing of horticulture and urban livestock; and youth engagement. In Support of the Urban Agriculture Policy is the Food and Garden Policy, which aimed to alleviate and reduce poverty through addressing the establishment of sustainable gardens. Unfortunately, the support was short-lived. The broader focus on the functioning of food systems was overshadowed by poverty alleviation programmes resulting in the lack of a functional approach towards FI (Haysom & Crush, 2019).

The City of Cape Town, the Social Development and Early Childhood Development Directorate and the Western Cape Province Department of Agriculture together supports approximately 300 community gardens and 30 programmes related to input materials (manure, seeds, equipment). Vegetable gardens make up 93% of all "agricultural activity", with a small handful dealing with livestock (pigs and poultry), and together with other projects, it supports over 1500 beneficiaries. However, these urban gardens (and farmers, mostly 50 years and older) face some issues related to weather influences, theft, flooding and pests, resulting in crop losses, further burdening the already poor income these projects generate (Haysom & Battersby, 2019).

#### Product processing:

In PLAAS (2010, p.11), Greenberg stated, "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". In 2010 the major corporations dominating the food processing and manufacturing industry was: National Brands, Pioneer Foods, Tiger Brands, Nestle SA and Foodcorp (Tsegay & Rusare, 2014). "Thus, the strong motivation for localised food markets enabling communities to cultivate their own food, facilitate wealth creation and improve access and dietary diversity." (PLAAS 2010, p11).

The food processing sector within Cape Town is diverse and provides a wide variety of products to retailers and wholesalers. Most of the country's processing companies have head offices and

factories in the Mother City. Due to the high concentration of large corporations, the smaller informal traders cannot compete and are forced to pay supermarket prices (Haysom & Crush, 2017).

Most of these large corporations have been found guilty of price fixing. In 2010 the Competition Commission found milling and baking corporations such as Tiger Brands, Pioneer Foods, Foodcorp and Premier Foods guilty of fixing prices through cartels. Some of the largest dairy corporations such as Clover, Parmalat, Ladysmith Cheese, Woodlands Dairy, Lancewood, Nestlé SA and Milkwood were found guilty of anti-competitive behaviour that included price fixing (Tsegay & Rusare, 2014). Another case of price fixing was found in the fish industry (Oceana Group) where they fixed prices on canned fish that is a vital and affordable source of protein and minerals especially to the poor. In 2012 Oceana was also found guilty for fixing prices with Foodcorp, Premier Fishing, Pioneer Fishing and Tiger Brands. Price fixing makes food products unnecessarily high and unaffordable especially in the populations with poor purchasing power (Tsegay & Rusare, 2014).

Formal sector retail and outlet:

As illustrated in figure 11, most processors have their own distribution centres and warehouses to distribute to the leading players in retail (supermarkets). Battersby & Watson (2019) found that street vendors buy their products from supermarkets and have very little access to wholesalers, making their profit margin smaller and the price to consumers larger due to logistical reasons and transport fees. Consumers, however, have poor access to supermarkets due to the already mentioned issues (taxi fares, for example) and thus must rely on informal street markets and vendors. The benefit, however, is that the street vendors can buy in bulk and sell smaller portions (bulk breaking) for approximately the same price as supermarket prices, where consumers could save by buying bulk themselves but cannot afford it (Haysom & Crush, 2017).

The Fresh Produce Market (FPM) refers to a specific market structure where small traders sell produce on the formal market. This additional link in the supply chain makes prices even higher, and the hawkers and street vendors only have access to supermarkets to buy fresh produce. The FPM supplied over 40% of Cape Town's fresh produce in 2013 but supermarkets are taking over this role posing a further threat to small informal entrepreneurs and consumers within townships (Haysom & Crush, 2017).

The leading supermarkets in SA are: Shoprite Checkers holding 38% of the traditional food retail market, Pick 'n Pay at 31%, Spar at 20% and Woolworths at 8% (Haysom & Crush, 2017). Super-

market chains use central purchasing processes through large-scale distribution centres to ensure a standard of quality and hygiene. Due to the purchase structure, small-scale farmers are excluded from the market and stand no chance of entering the market. Furthermore, to emphasise the unequal distribution of the flow of food through the city, it is important to highlight that the richest communities have almost eight times the number of supermarkets per household compared to less wealthy communities, restricting their ability to shop for lower prices or products. uSave, for example, is the "cheapest" supermarket that stocks less fresh produce and has a limited product range that caters for the poor, and the majority of uSave's are located in the second-poorest communities resulting in the poorest of the poor having longer travelling times and expenses (Haysom & Crush, 2017). The negative effect, however, is that "residents of low-income areas with supermarkets are gaining more access to calorie-dense, nutritionally-poor foods than to fresh produce" (Haysom & Crush, p.49). Processed goods are generally cheaper but loaded with saturated fats, refined starches and poor micronutrients, creating a malnutrition dilemma (de Beer et al., 2021; Battersby & Haysom, 2019).

#### Informal sector:

Haysom and Crush (2017) points out that the informal food sector plays a significant role in providing and making food accessible to low-income households and has a markable structure to maximise availability. These vendors are mainly located on the street close to taxi ranks and train stations (see image 3) as the road is a major thoroughfare for people using public transport. Some of the vendors only operate over weekends as these are the peak times of business and when their target groups have the most time to buy food. Street vendors primarily sell meats and takeaway foods, chips, cold drinks, sweets and (very little) fruit and vegetables. These informal traders are very responsive to the needs of their customers, such as the mentioned bulk breaking to enable affordability and the provision of buying food on credit (Haysom & Crush, 2017; Battersby, 2012). Haysom and Crush (2017, p.52) highlight the work of Kroll, stating that "the dichotomy between formal and informal retail, suggesting that the trade practices of the informal traders connect directly to the formal sector. Thus, while their structures and business processes may be less formal, informal traders maintain mutually beneficial linkages with formal suppliers. For example, formal wholesalers are the main source of produce for informal vendors, followed by supermarkets and fresh produce markets. Purchasing is frequent because of limited transport, storage and refrigeration, and ensuring high-quality perishables".

De Beer et al., (2020) however argues that even if the issues of availability and accessibility are addressed, utility and education plays just as vital a role in correctly using foods to maximise one's nutritional status.

## 2.4 UTILITY

Utilisation addresses the body's ability to make the most out of the nutrients in food that is consumed (De Beer et al., 2021). Effective utilisation of food is affected by factors such as poor storage, spoilage, cooking practices, food safety, nutritional knowledge, and diseases that affect the consumption and digestion of food (Fraanje and Lee Gammage, 2018; WGC, 2016). A full stomach does not satiate hunger. Even if food is available and accessible, proper human development will not necessarily follow (UNDP, 2012). The utility factors primarily relate to a lack of access and availability of related goods and services in suitable locations. Poor access to electricity and efficient transportation, worsened by lack of employment and purchasing power (as mentioned), preclude the possibility of refrigeration for safe storage and influence the amount and type of food bought (WGC, 2016). De Beer et al. (2020) argues that, alongside these factors and "housing characteristics, household structure, as well as characteristics of the neighbourhood food system and geographical location" (WGC, 2016, p15), education plays an equally, if not more important, role in the type of food people buy and inevitably their nutritional status.

Micronutrients play a vital role in human development. Most African and even South African staple diets consist of starch in the form of cereals, maize porridge, and root vegetables (De Beer et al., 2021). The South African Food-Based Dietary Guidelines (FBDG) states that starchy food should be made the base of every meal. The food guide (See figure 12) illustrates well-known items that can be selected from, and suggests that starchy meals should be the staple of South Africans, both rich and poor (FAO, 2022). Foods providing vital vitamins and minerals can mostly be found under the second pillar of the food pyramid: Fruit and vegetables. The issue, however, is that these foods spoil quickly, and both the storage and provision of these foods in urban townships are compromised (WGC, 2016). Sub Saharan Africa has the highest prevalence of iron deficiency anaemia among preschool children and pregnant and non-pregnant women, which has remained unchanged for the past 20 years. Iron is an essential nutrient that aids red blood cell formation, and the lack thereof contributes to death in children and pregnant women, especially during childbirth. Iodine is a vital component in the brain development of unborn foetuses, and in Sub Saharan Africa, 58 million children consume less than the recommended



distribution and sustainable supply. Policy has largely been focused on the availability of food and addressing FI in rural areas (Battersby, 2019) but, according to UNICEF, urban poverty rates are rising and, consequently, the urban-rural malnutrition gap is closing (Ziervogel & Frayne, 2011); this raises questions about the need for redirection or broader application of FI policy initiatives.

## **2.6. POLICY AND LEGISLATIVE FRAMEWORK**

The right to adequate food is a human right (Beer et al., 2021; WCG, 2016; Frison & Claeys, 2018) and it was first recognized in international law through the Universal Declaration of Human Rights (Luiz & Valente, 2014) in 1948 (Luiz & Valente, 2014; Hendriks 2015). In 1966 the right was further incorporated into the International Covenant on Economic, Social and Cultural Rights where it became the states' obligation to ensure that all citizens have adequate access to food (Frison & Claeys, 2018). The government must ensure that individuals "... have regular, permanent and unrestricted access, either directly or by means of financial purchases, to quantitatively and qualitatively adequate and sufficient food corresponding to the cultural traditions of the people to which the consumer belongs, and which ensures a physical and mental, individual and collective, fulfilling and dignified life free of fear" (Frison & Claeys, 2018, p1). The state is also obligated to strengthen people's access and utilisation of food in times when they cannot fulfil that need themselves, without distinguishing between urban and rural community needs. Regardless of the fact that FI has been a recognised phenomenon since 1948 and the global food crises in 1973 (Hendriks, 2015) it has largely been neglected in international agendas until the global financial crisis of 2008 (Fukuda-Parr & Orr, 2013) which left the world with a global food shortage (Timmer, 2010). The first Millennium Developmental Goal (MDG) in 2000 to eradicate extreme poverty and hunger paved the path to make the eradication of hunger a priority on its own after targets were not met in 2015 (UNDP Africa, 2022). In 2018 a report by the Food and Agriculture Organization (FAO) however, alerted that the world is not on track to eradicate hunger by 2030 as envisioned by the second SDG (StatsSA, 2019; FAO, 2020). Furthermore, this SDG does not explicitly focus on eradicating hunger in urban areas but leaves enough scope to include both urban and rural FI.

### **2.6.1 National overview**

The SA government makes use of various methods to determine FI: The General Household Survey (GHS), Income and Expenditure Index (IES), the Labour Force Survey (LFS) and Community

Survey, but due to the complexity and variability of results from different models, measuring the extent of the issue, results may vary (Masipa, 2017).

Food security policy is based on the Bill of Rights which is enshrined in the constitution. Section 27(1) (b) of the Constitution of the Republic of South Africa states that, “everyone has the right to... sufficient food and water” and emphasises that “the State must formulate reasonable legislative efforts and take other measures within its available resources, to achieve the progressive realisation of these rights.” (CRSA, 1996, p.11). Children’s right to nutrition is further emphasised in Section 28, 1 (b) and section 7 (2) of the Constitution states that the “State must respect, protect, promote and fulfil the rights in the Bill of Rights” (CRSA, 1996, p5). Food security policies aim to facilitate and create an enabling environment to support FS initiatives in SA where Constitutional rights identify the necessity for supporting these policies (Battersby, 2012).

After the regime change in 1994 the Reconstruction and Development Programme (RDP) identified FI as a policy priority. People previously disadvantaged struggling with FI issues were made priority and public spending money was directed at: “social programmes of all spheres of government such as school feeding schemes, child support grants, free health services for children between 0-6 years, for pregnant and lactating women, pension funds for the elderly, working water, community public work programmes, provincial community food garden initiatives, land reform and farmer settlement, production loans scheme for small farmers, infrastructure grant for smallholder farmers and the Presidential tractor mechanisation scheme.” The RDP mainly focused their attention on rural communities (DoA, 2002, p.5). By 2000 there were too many unwanted overlaps in programmes launched by different government departments and spheres, and this resulted in creating one national FS strategy. 17 July 2000 the Integrated Food Security Strategy (IFSS) was published, aiming to harmonize streamline and integrate diverse FS programmes provincially and nationally. This strategy is multidimensional, and its main goal is to improve the stable supply of access to safe and nutritious food both nationally, provincially and locally as well as reduce poverty with particular focus on:

- Increased household food production and trading
- Improved income generation and job creation opportunities
- Improved nutrition and food safety
- Increased safety nets and food emergency management systems
- Improved analysis and information management system
- Provision of capacity building
- Inclusion of stakeholders

(DoA, 2002, p.6)

Battersby (2012, p.10) however argues that the limitations of framing the FI issues in the country can be seen in the above-mentioned objectives. The focus of the interventions is based on household level and do not engage “with the market as an agent in FI, nor any other extra-household drivers of food access. Access is not simply determined by sufficient income to purchase available food, but by the wider asset base of households and by a set of spatial determinants.” Koch in the IPC report (2020) further emphasises the lack of stakeholder involvement and the monocentric governmental and authoritarian response to FI issues. The report further states that the IFSS lacks political power related to poor coordination and institutional capacity.

This could be a contributing factor to why the Department of Agriculture, Forestry and Fisheries (DAFF) implemented The Food and Nutrition Security Policy in 2012 (IPC, 2020). It would further support the IFSS and act as a key pillar in the National Development plan (NDP). This policy recognizes that high urbanisation rates cause FI to be a major issue in poor urban and peri urban areas with a lot of focus on establishing target programmes to reduce FI in those areas and communities. Objectives of the policy include

- “Increased and better targeted public spending in social programmes which impact on food security
- Efforts to increase food production and distribution, including increased access to production inputs for the emerging agricultural sector
- Leveraging Government food procurement to support community-based food production initiatives and smallholders
- The strategic use of market Interventions and trade measures which will promote food security.” (DSD & DAFF, 2013 p.6)

This policy provides the most dynamic response to FI issues through touching on all relevant topics that encompasses the problem and their respective solutions. It acknowledges that a response must be taken on a multidimensional level (availability, access, utilisation and stability) including various public, private and civil society partnerships. The policy states that stakeholders from agriculture, FS and consumer bodies, climate change and environmental practitioners and representatives of organised communities will aid in providing leadership and insight. It acknowledges that land use and zoning are municipal responsibilities and that any new developments should make space for agricultural activities as well as establish alternative strategies to curb FI in urban areas. The policy emphasises that there is a growing need for institutional support and proposed the inclusion of information management systems, a centralized food

control system, food and nutrition risk management system and an agricultural and technology research sector strengthened by the stakeholders mentioned (DSD & DAFF, 2013) A National Food and Nutrition Security (FNS) Council, to be led by the Vice President, was to be established; however, this council has not yet been established to date, nor has its role.

The 2013 State of the Nation Address (SONA) once again proclaimed the National Development Plan as the development blueprint for a 2030 vision after its launch in 2012: “Tackling the problems of poverty, inequality and unemployment (DSD & DAFF, 2013). It is a roadmap to a South Africa where all will have water, electricity, sanitation, jobs, housing, public transport, adequate nutrition, education, social protection, quality healthcare, recreation and a clean environment.” (DSD & DAFF, 2013, p.5) The NDP recognised FI as a pressing and persistent issue both as a cause and result of poverty and inequality and aims to improve (and resolve) this issue among many others by 2030 (DSD & DAFF, 2013). Combating FI includes the “expanded use of irrigation, security of land tenure, especially for women, and the promotion of nutrition education.” (DSD & DAFF, 2013, p.5). Even after decades of democracy, inequality in household income and employment remains pervasive. The NDP seeks to increase employment through accelerating economic growth, enhancing the quality of education, skills, and innovation, and enhancing the state's capacity to play a transformative role. (National Planning Commission, 2012). The NDP acknowledges that growing population numbers and urbanization is a pressing issue and it is detrimental to overall quality of life. There is no direct motion to access to food, but it aims to improve people's access and mobility by promoting mixed housing strategies and more compact urban development as well as investing in public transport, which will especially benefit low-income households (National Planning Commission, 2012).

In 2009, three million households in SA were experiencing a degree of FI with the majority in rural areas (Stats GHS, 2009), and in 2017 that number stood at 1,7 million (StatsSA 2019) with the majority being in poor urban areas (37 %) and rural areas (33 %) and the highest at-risk group being in urban areas (4 % more than in rural areas) (National Planning Commission, 2012). The NDP recognizes that FI is not solely an issue of availability but also due to poor access and utilisation. Focus is mainly directed to educational and agricultural activities faced in rural communities (National Planning Commission, 2012) but this should not take the urgent need for attention away from poor urban areas (Battersby 2012) in terms of communities experiencing hunger and the effect of malnutrition (underweight to overweight groups).

Between 2002 and 2011 households experiencing hunger dropped from 23.9 % to 13.4 % but between 2011 and 2016 this number remained static at approximately 13.4%, and it was evident

that FI has not been addressed as successfully as was envisioned in 2011 (WCG, 2016). Failing to meet the goal of the SDGs and NDP by eradicating hunger by 2030 can be attributed to sectoral and separate strategies instead of unified responses (WCG, 2016).

By 2017 SA had a FI policy, a NDP, an IFSS and over 60 policies, strategies, plans and programmes for addressing hunger and malnutrition, but lacked a single universal and integrated food and nutrition security plan (Battersby, 2019). This led to the National Food Security and Nutrition Plan (NFSNP) of 2018 –2023.

The NFSNP has 6 main objectives:

1. Establish a multisectoral Food and Nutrition Security Council to oversee alignment of policies, coordination and implementation of programmes and services which address food and nutrition security
2. Establish inclusive local food value chains to support access to nutritious and affordable food.
3. Expand targeted social protection measures and sustainable livelihood programmes
4. Scale up high impact nutrition interventions targeting women, infants and children
5. Influence people across the life cycle to make informed food and nutrition decisions through an integrated communications strategy
6. Develop a monitoring and evaluation system for FNS, including an integrated risk-management system for monitoring FNS related risks

(Ngomane, 2017)

Point one highlights the establishment of an evaluation and monitoring council. Their immediate task after implementation included: “reviewing recommendations of the various evaluations and advocating for the integration of policies, legislation and programmes to achieve coherence” (University of Pretoria, 2020, p. 2). DAFFs annual performance plan in 2018/2019 does mention the NFSNP committee but does not make any explicit reference to establishment and operations of the council. In their 2019/2020 annual performance plan and 2020/2021 budget plan there was also no mention of the NFSNP nor the councils’ role or progress. The Government’s performance report (Towards a 25-year review) for the period 1994-2019 also makes no mention of the NFSNP council. In 2019 the Final Report of the Presidential Advisory Panel on Land Reform and Agriculture highlighted the importance of the private sector and states collaboration in combatting FI but also stated that: “there is poor alignment between these sectors strategically and operationally” and made no mention of the NFSNP advisory council (University

of Pretoria, 2020, p2). Similar to the WCG Household Food and Nutrition Security Strategic Framework (discussed below) as well as the FNS Policy there has been an absence in communication and even 3 years after the implementation of the plan no Advisory Council has been finalised (University of Pretoria, 2020).

The main policies and strategies with focus on obesity and malnutrition specifically are:

- Strategy for the prevention and control of obesity in SA (2015) which ended in 2020.
- The strategic plan for the prevention and control of non-communicable diseases 2013 - 2017 (WHO, n.d.).
- The National School Nutrition Programme which wrote their last annual report in 2013/2014 (SAgov, n.d).
- The infant and young child feeding policy and the sugar tax (Kaltenbrun et al., 2020).

### **2.6.2 Provincial and Local overview**

Policy documents and plans directed at FI:

Western Cape Government Household Food and Nutrition Security Strategic Framework September 2016 which is still a draft.

Even though the objectives listed below are broad and holistic the main objective of the framework will still focus on improved incomes by creating more employment opportunities, but as discussed just increasing one's purchasing power will not ensure FS.

The main objectives include:

- Effective food assistance strategies and improved nutritional safety nets for children and vulnerable adults
- Improved nutrition and food safety capacity building to assist households and communities in monitoring their nutritional status
- Improved WASH programmes in schools
- Integration of food sensitivity in development planning of local and provincial government
- Enhanced resource management strategies to ensure the continued local availability of diverse and nutritious food sources in the future
- Improved support of the informal food sector and the emerging agricultural sector
- Improved transversal Food Governance.

The framework acknowledges urbanisation as a major cause for urban FI in Cape Town and that a holistic approach is needed to combat the problem. It also acknowledges that FI is largely considered a rural problem in the literature, but that the Western Cape settlement profile is urban “(86% urbanised, with 18% living in informal settlements)” (WCG, 2016, p. 2). Inequality mentioned earlier within groups is also witnessed in Cape Town's poor urban settlements. The framework highlights that Black and Coloured populations as well as females suffer more compared to male only households. The framework states that the processing firms outside of Cape Town metro can possibly aid in job creation alleviating the burden of overly dense populations in and around the city, but then again there is a lack of data on how many jobs could be created and how many companies would be willing to employ people and if this shift would make a remarkable difference. The informal food supply system is acknowledged in this framework and objectives to empower it are as follows (Adeniyi, et al., 2021).

- Exploring new infrastructure projects
- Improving regulation for this industry
- Promoting and supporting Western Cape products locally and abroad.

(WCG, 2016)

The Western Cape Government Household Food and Nutrition Security Strategic Framework of 2016 is probably the most holistic document in terms of what is *acknowledged* and what *should* be done but as mentioned in the framework (WCG, 2016, p.3) “One of the primary functions of the Food Security Work Group will be to ensure that this becomes a living document” is still not visible 6 years later (Adeniyi, et al., 2021).

### **2.6.3 Stakeholder involvement**

Stakeholder engagement from both private and public sectors in food policy development and implementation as well as governance is necessary to ensure proper policy coherence, coordination, and execution. Stakeholder involvement also broadens the scope of expertise and highlights vital role players within the food system. Furthermore, the active involvement of stakeholders could also aid in grasping the grey areas of the problem, especially in the complexities as discussed (Pereira & Drimie, 2016). In SA policy focus mostly revolves around governmental solutions only (Adeniyi, 2021) even though policies, frameworks and plans do acknowledge the importance of including NGO, NPO and other civil society stakeholders.

One essential aspect completely neglected in policy is urban planners' role in creating food secure cities (Haysom, 2021, WCG, 2016). Haysom (2021) states with agreement from WCG (2016) that governmental authority presides over abundant technological and infrastructural capabilities to plan and design solutions to problems in urban settings and that including these resources in urban planning *should* not be an obstacle.

According to Adeniyi et al. (2021, p.79) a diagnosis exists in food system governance:

“... a priority is given to food production and food supply, despite a recognition of the cross-sectoral dimension of FS; policy fragmentation between departments and programmes, and weak coordination mechanisms, which results in policy incoherence; and a partial and inadequate stakeholder engagement due to the domination of top-down approaches and a ‘tick-the-box’ type of participation.”

Koch in the IPC (2020, p.16) report further strengthens this argument and states that: “The two main challenges that hamper the fulfilment of the right to food can be summarised as legislative and measurement challenges...”.

Policy context in terms of urbanisation:

In contrast to several highly urbanised countries and major cities in Latin America, there is little understanding in Africa of the significance of developing policy measures to manage and mitigate the growing challenge of urban FI (Haysom 2015). The countries that have developed national food and nutrition security plans such as Kenya, South Africa, and Uganda fail to recognise the severity of the problem, and as a result, they tend to see FS as an issue of agricultural and rural development (Battersby & Watson, 2019; Haysom & Crush, 2017). As thoroughly discussed above there are few to no examples of coherent policy responses in FS in general and on the city level and almost no “responses to the management of urban food systems in the interests of the poor and food insecure” (Battersby and Watson, 2019, p.51). Food security is also majorly lacking in local and national urban development agendas. Battersby & Watson (2020, p.51-52) paints a clear picture of this issue: “We argue that the pervasive rural bias and anti-urbanism identified in the international and regional FS agendas in the first decade of the twenty-first century have persisted into the second. The SDGs, like the MDGs before them, provide few grounds for optimism going forward, nor do the 52 Jonathan Crush and Liam Riley priorities of UN agencies such as the FAO, IFAD, and the WFP or the CFS. If urban FS is addressed in a substantive manner, it will probably only be indirectly through the actions of the influential global nutrition lobby. Despite the promise of the NUA, there are grounds for caution about its ability

to seriously and systematically formulate and promote a coherent set of policy interventions that reach much beyond the tired mantra of urban agriculture. That said, continued research, advocacy efforts (such as the recent Bellagio Declaration), and initiatives to put food onto urban policy agendas at the local level should continue in order to lay the foundations for innovative and rights regarding policy responses for the time when Africa's urban marginalised and food insecure force themselves onto the governance agenda".

#### **2.6.4 Critique**

International and national food policy, still largely considers FI as a rural issue and makes little to no mention of how FI should be addressed in urban areas (Battersby, 2019) and the Western Cape FI framework draft acknowledges this (WCG, 2016). The UN SDGs also largely fail to mention the difference between rural and urban FI and by now it is evident that solutions to these different areas are fundamentally different. Some SA policies and plans do acknowledge that FI is not only an issue of availability but access and utility as well as the stability of food and nutrition supply. According to Battersby (2012, p.10), SAs "responses to FI tend to focus on technical solutions, such as increased crop production, price monitoring, food subsidies and others, but not on broader causes of FI and how these are profoundly political". On the agricultural side The NDP of SA also focuses on production and land tenure as a solution to FI assuming that the issue is largely a rural one. These solutions do not aid in urban communities' problems related to access, utility and sustainability of FS (Battersby, 2012). Even though the national FS policy acknowledged that urban FS is a growing problem and that the issue should be dealt with on household level, their focus is also still mainly based on FI alleviation in rural areas. Urban agriculture as mentioned in the NDP (National Development Plan, 2017) is also highly criticised in the literature and seen as an isolated solution to the problem that also mainly focuses on production (van Breemen, 2014). Battersby (2012) mentioned that there is no explicit urban FS policy and till today there is still not one visible (Battersby, 2019).

South African food policy and governance problems are diversified due to the management of food systems together with the design and implementation of policies affecting the countries' FI issues differently (Adeniyi et al., 2021). South Africa's approach to FI remains "monocentric" which is unsuitable to address the problem especially if factors such as food system management (Adeniyi et al, 2021) are being revised together with issues on household level such as social, cultural and political factors (de Beer et al, 2021). Thus, there exists a lack in proper

conceptualisation of FI and policy coherence, coordination, institutional capacity and the execution of sufficient stakeholder involvement (Adeniyi et al., 2021).

The way food (in)security is conceptualised in SA is one of the main challenges in policy coherence, there exists a major lack of uniformity. The lack of local level data and various stakeholders' different views of the cause and effects of FI creates even more diversity in tackling the issue properly. This incoherence and divergence emphasises the constraint on the effectiveness of food governance policies (Adeniyi, 2021). In Thow et al. (2018) studying policy coherence they showed that there exist three conflicting coalitions of food governance all with different perspectives on the causes and policy responses to FI: The economic growth, the FS and agricultural production, and the health coalitions.

The economic growth coalition represents the dominant one and is aligned with the NDP and most of SA FS policies. The economic growth coalition states that the problem of FI is mainly due to individual factors such a lack of income (Adeniyi et al., 2021; Thow et al., 2018) and knowledge of nutrition and NCD prevention (Adeniyi et al., 2021; Beer et al., 2020; Thow et al., 2018) as well as hunger and malnutrition to be the main pressing issues. The coalition's focus is on economic empowerment in terms of employment, economic growth and education as well as the prioritisation of food trade, the food industry and industry led growth (Thow et al., 2018). Round table meetings of cross-sectoral government clusters (economic, social and trade) do not address nor take responsibility regarding the issues of FS and nutrition due to no specific objectives being set for the different clusters. This coalition believes that FI issues and NCD prevention can be solved through increased trade and economic growth (people becoming wealthier) (Ibid). The coalition acknowledges the shift of consumers towards unhealthier processed diets but frames it as personal preference for fat, sugar and salty foods indicating that they take no responsibility for the FI issues created through economic growth (Ibid).

The FS and agricultural production coalition frames FI as a challenge of poor production and accessibility. The importance of markets, especially local, the affordability and accessibility of food as well as the support needed for producers and consumers (this is where the Department of Agriculture, Forestry and Fisheries (DAFF) operate mostly) (Thow et al., 2018). The National FNS Policy plays a major role under this coalition. This coalition promotes investments into the production system and is reliant on the civil societies framing of FI to gain stronger participation in policy development which have been poor (Ibid).

The health coalition states that the issue is mainly due to unhealthy food environments and the easy availability of unhealthy foods and the marketing thereof (Thow et al. 2018). It frames “food security and nutrition from the perspective of malnutrition as a health outcome” (Ibid, p.1126). Solutions to the issue include making the availability and the affordability of healthy foods the primary responsibility of the food system. This perspective, however, contrasts the Economic Growth coalitions’ point of view. Two core views of the health coalition is that (1) there is a great need for policies that support nutrition objectives and that (2) policies with focus on nutrition related subjects should not be influenced by the food industry (Ibid). The Health Coalition, however, does not have the same influence as the Economic and FS/agricultural coalitions. Reasons for this include a lack of resources (“limited engagement by civil society organisations, a low capacity for enforcement, and limited financial resources”) and “political will and human and organisational capacities, which have resulted in limited policy action... resulting in poor influence on policy changes and implementation.” (Ibid, p.1126). Globally the lack of policy action could also be attributed to poor engagement from civil society (Ibid).

Even though fragmentation can aid in giving a larger working capacity it could result in the ineffectiveness of policies and programs and the uniformity thereof. Intergovernmental departments are also fragmented in terms of initiatives which cause undesirable overlapping and duplications of roles and responsibilities affecting the overall effectiveness of policies, plans and programmes (Adeniyi et al., 2021).

Poor policy coherence and implementation impedes the effectiveness of those policies. Policy incoherence is because of conflicting policy objectives and lack of coherence within government departments (Thow et al., 2018). This argument is further emphasised by Adeniyi et al. (2021) where they state that finding policy coherence between economic growth, health and social development objectives causes tension within departments due to conflicting motivations.

Poor policy coordination results in weak or no results and it is no secret that coordination of policies is lacking in SA (Beer et al., 2020; Thow et al., 2018; Adeniyi et al., 2021). Active coordination is important for harmonising various stakeholders' interests while integrating sectoral collaboration. An important factor that contributes to policy coordination is institutional capacity, which SA also lacks (Adeniyi et al., 2021: IPC, 2020). Institutional capacity refers to “ the capability of an institution to set and achieve social and economic goals, through knowledge, skills, systems and institutions” (ITDP, 2016, p.1).

## 2.7 CONCLUSION

The issue of FI was introduced in this chapter. The history of the phenomena, the factors that contributed to it, as well as the current condition of the issue on a global, national, and regional scale were all covered in this piece. The overarching idea of food (in)security encompasses a wide range of issues, including hunger, malnutrition, coping strategies, access and availability, as well as the gap that exists between urban and rural FI. However urban FI is mostly neglected on national and global agendas. The area under consideration (Cape Town) is known for luring a significant number of job seekers from other part of the country and other countries thanks to its growing economy. However, the city's food distribution system does not effectively empower the informal food sector as it controlled by the profit seeking private sector. As a result, migrants are unable to acquire access to nutrition that is both inexpensive and easily accessible. Even if there is enough food to fulfil the appetites of everyone, those who are economically disadvantaged sometimes do not have the means or the means to buy the healthier alternatives that are available. When we do an in-depth analysis of the legislative and regulatory frameworks governing FI, we discover that the majority of them disregard the explicit inclusion of urban FI. It was found that there were significant flaws in the policymaking process as well as difficulties with the execution. Various stakeholders' perspectives on the reasons and solutions to FI inspired the creation of questionnaires, in order to gain a more in depth understanding of drivers and problems with failed solutions.

### **3 METHODOLOGY**

The study is qualitative because FI, especially in poor urban areas, is a large grey area lacking in policy (Battersby, 2014; Battersby & Watson, 2019). Opinions of interviewees from the academic and private sectors will aid in a greater understanding of the issue and what is still lacking, especially in the case of policy, because even though the right to food is enshrined in the constitution of SA, every citizen still does not have equal access. The government would also have provided great insight regarding the issue and possible solutions, but there was no success in retaining any answers despite extensive efforts to gain contact. Emphasising that a uniform policy might not alleviate the issue alone. Qualitative studies have also been an effective method in most African studies due to their flexibility and in-depth ability to communicate institutional, environmental and socio-economic complexity (Baxter & Jack, 2008). Yin (2014) also states that qualitative studies aid in answering who, what, where and how questions instead of only quantitative and statistical questions (even though it is also essential to base qualitative studies on).

#### **3.1 RESEARCH QUESTIONS**

1. Is hunger or malnutrition a more significant issue in poor urban areas in Cape Town, and what are the main drivers?
2. What are people's views in governmental, academic and public stakeholders on the issues, causes and solutions? Are there contrasting views and how does these influence solutions to the problems?
3. What policies, frameworks, strategies, plans, and legislative frameworks exist to tackle the issue, and how effective are they?
4. What are feasible solutions?

## 3.2 METHODS

This research paper consists of primary and secondary data. Primary data included personal interviews with individuals from academic, governmental and civil society spheres. Unfortunately, there was no response from the governmental sphere and merely one response from the academic and one from civil society. However, the author visited an NPO (Peninsula School Feeding Association) in support of World hunger day on May 27th 2022, to gain greater insight from field workers and the recipients of the associations' distribution services (see images 9-12). The three different spheres were selected due to an apparent misalignment of the interest and views of government, the private retail sector and civil society regarding the drivers and solutions (Thow et al., 2018). An essential tool in qualitative research is interviews (Yin, 2014), thus having a look into the opinions of the different spheres opinions could aid in determining where the real problem lies and what the most effective and efficient solution could be.

### 3.2.1 Desktop study

The study started with a basic web search on food (in)security, which led me to a lot of statistical evidence on the StatsSA website. After that, another web search related to the most stressed areas in SA led to published journal articles of which plenty of the authors were the authors, undergraduate lecturers from the North-West University Centre of Excellence for Nutrition (CEN). Their papers led to more in-depth sources also relating to the relevant policy documents analysed in this paper. Data regarding population figures and urbanisation numbers track as far back as the early 1990s due to the SA regime change having a significant influence on urbanisation and legislative changes. The last SA National census was conducted in 2011; thus, population figures and urbanisation rates were collected on an aggregate level, and thus additional quantitative and qualitative data from FAO, UN, WHO, Stats SA and World bank were used. Haysom & Crush and Battersby & Watson provided the most insightful qualitative and quantitative information regarding urban food systems and the food market monopoly. Hendriks, Thow et al. and Adeniyi et al., provided the most insightful research regarding policy and legislative issues. One of the interviews with Chantell Witten also revealed various academic papers which contained various sets of relevant information. Retrospective research aided in better understanding the conceptualisation of FI stretching as far back as Thomas Malthus's theories in the late 1700s regarding population growth vs food production. In more recent years, from the 1990s till recently, urbanisation has become of more significant concern, and the literature showed that urban FI and poverty is a relatively new concepts being studied. Studies from Haysom & Crush (2017) and Battersby & Watson (2019) revealed the market monopoly, significant retail players, policy gaps and incoherence regarding urban FS.

Van Breemen (2014) conducted her master's thesis in 2014 regarding FI in urban Cape Town, and her analysis, together with several studies from Haysom assisted in determining the food flows in South Africa and Cape Town from production to consumption. This information assisted in developing a food flow diagram, but it is important to note that the diagram (figure 11) is merely a summary, and due to all the various aspects touched on in this paper, smaller role players are merely discussed in the literature and not illustrated in the flow diagram.

### **3.2.2 Interviews**

Academic sphere:

Dietitian Chantell Witten has a PhD in Nutrition from the North-West University/Centre of Excellence in Nutrition in South Africa and is registered with the Health Professionals Council of South Africa (HPCSA). She was also the authors undergraduate lecturer at the Northwest University, SA. Chantel's PhD dissertation was a mixed-methods prospective cohort study titled 'Mothers' breastfeeding experiences and practices: An explorative mixed methods study in the sub-district of Tlokwe, North West Province, South Africa'. Her work experience in child health and nutrition programming spans nearly fifteen years across multiple sectors, including academia, local non-governmental organisations, and international nutrition experience with the South African Medical Research Council, various United Nations agencies, and Helen Keller International/Bangladesh. In addition to her PhD, Chantel's programming talents and job experience include the idea, planning, implementation, and writing of research (2016-2020). Prior to joining North-West University, she was the Nutrition Specialist for UNICEF/South Africa (2011-2014) and the Nutrition Lead directing the Nutrition component of the mid-term review for the South African Strategic plan for Maternal, New-born, Child, and Women's Health and Nutrition (C. Witten, personal communication, 28 May, 2022).

Food systems scholar Florian Kroll is interested in the bio politics of urban food system administration in African cities. Chantell Witten referred the author to him after several projects they worked on together. He has undertaken urban FS and policy assessments in Johannesburg, Cape Town, and Pretoria while working with the Wits Health Promotion Unit to promote agroecology and nutrition. His involvement with the Southern Africa Food Lab has instilled in him an appreciation for social innovation and discussion. In 2014, he participated in the International Visitor Leadership Program on FS and international policy. Presently, he is employed by the University of the Western Cape School of Public Health and the DST-NRF Centre of Excellence in Food Security, where he convenes and facilitates multi-stakeholder dialogues with the Western Cape

and Gauteng Communities of Practice in Food Governance to promote democratic and sustainable food governance. Currently, he is a PhD student at the Institute for Poverty, Land, and Agrarian Studies (PLAAS) (F, Kroll, personal communication, 30 May 2022).

#### Civil society:

Andrew Boraine is a global authority on economic and urban development as well as collaboration for systemic change. He has worked in South Africa's development sector for over 41 years. In the first post-apartheid years, he was a top officer in the constitutional department of Nelson Mandela's cabinet. He was the first City Manager of Cape Town after Apartheid. Later, Boraine developed the South African Cities Network and helped build the Cape Town Partnership, where he served as CEO from 2003 to 2013. Currently, he serves as the chief executive officer of the Western Cape Economic Development Partnership (EDP) (A. Boraine, personal communication, 10 May, 2022). Thus A, Boraine was selected to take part in this study. His knowledge on urban development could have aided in extensive knowledge regarding how urbanisation for example pressurises food systems, poverty and FI.

Peninsula School Feeding Association is a registered non-profit, non-governmental organization that combats hunger among young learners and students attending primary, secondary, and special needs schools, as well as Orphaned & Vulnerable Children Centres (OVCs), Early Childhood Development Centres (ECDs), and Technical and Vocational Education and Training Colleges (TVETs) in the Western Cape province of South Africa. PSFA's primary goals are to minimize short-term hunger, promote school attendance, and improve children's capacity to study via school meals. Amelia Koeriers is the operations administrator who oversees the food storage and distribution facilities. In addition, she is in charge of all field workers and their school branches. She also handles the operational activities of PSFA's services to their many schools and Early Childhood Development centres (menu formulations, kitchen equipment, cooking and training programmes, etc.) (A, Koeriers, personal communication, 18 May, 2022). The PFSA was selected after a phone call with Pebbles projects which primary focus is on education, health, nutrition, community and protection programmes for children in the rural setting of the WC province. Due to the scope of this paper being urban FI they directed me to PFSA where Amelia Koeriers was the contact person and ultimately the main interviewee.

#### Government:

It was almost impossible to reach any regional or municipal public health agency via phone or email. Eventually one respondent came back to me but failed to follow through.

Lerato Matsaunyane is an Agricultural Research Council researcher (ARC). The Agricultural Research Council (ARC) is a renowned scientific organization that conducts research with partners, develops human resources, and promotes innovation to support and advance the agricultural industry. (L, Matsaunyane, personal communication, 29 April, 2022).

Everyone got an email with a survey. In addition, the author contacted participants regularly to plan interview dates and times, but only Chantel Witten and Amelia Koeriers provided comments.

### **3.3 TOOLS**

The main tool used in this research was questionnaires. Questions were open-ended to motivate interviewees to give their opinions and reduce bias. The questionnaires all had different approaches to accommodate the different interviewees' spheres of work but fundamentally remained faithful to the topic of FI. Emails with questionnaires were sent out to participants after a phone call where they confirmed to take part in the study. It is essential to keep in mind that just two respondents responded. C, Witten represents academia, while A, Koeriers represents civil society. The governmental questionnaire was thus omitted and is not illustrated. Over the course of one month, only mobile phone and email were used to contact C, Witten. On the 28th of May, 2022, she eventually sent her responses via after many informational exchanges. A, Koeriers was asked several questions on the day of the World Hunger Day outreach in Mitchells Plain and by email. She answered with her final responses to the questionnaire on the 28th of May and the 6th of June. She was originally approached on the second of May. What the author is trying to gain from the questionnaires are the following:

1. Confirmation that FI is not solely driven by availability but due to poor access, utilisation and sustainable food systems. Which one of those three is burdened the most, or are they completely integrated?
2. How related to FI is the policy environment of the country and Western Cape. How in-line are their objectives with what has been achieved thus far, and if not, what are the main reasons for it failing?
3. What can still be done about the issue? Where are the significant missing gaps?
4. How big of a part does the private sector (NGOs, civil society) play in combating FI in poor urban areas, especially Cape Town.

Introduction to all questionnaires were:

The geographical scope of this research is urban areas of Cape Town. In addressing the following questions, please reflect on the people, food systems, and governance of this region (unless otherwise indicated by the question).

At the household level, urban FI manifests as either insufficient calorific intake (resulting in hunger and starvation), leading to malnutrition and on the contrary; caloric intake exceeding the recommended daily allowance (RDA) together with inappropriate nutrition. Malnutrition occurs in both populations, those experiencing hunger and those that are normal weight to obese. This research deals with these two types of FI, hereinafter referred to as “hunger” and “inappropriate nutrition” (with the focus of the paper and questions based on the assumption that both populations are malnourished) separately, under the hypothesis that the causes and solutions may differ between the two.

**Academic Questionnaire:**

1. Do you consider hunger or inappropriate nutrition to be the greatest FI challenge in urban Cape Town, and why?
  2. What are the primary drivers of urban hunger, and what do you see as the best approach to ensuring that all people can access sufficient calories while meeting their RDA of micronutrients?
  3. What are the primary drivers of inappropriate nutrition in urban areas, and what do you see as the best approach to improving the nutritional balance of people's diets in Cape Town – especially those in greatest need?
  4. In terms of policy, is the focus currently on hunger or (in)appropriate nutrition?
  5. Where is policy reform most needed? At the federal, provincial, or local level, or in the private sector, or civil society?
  6. In your opinion, what are the top three things that should be done about the issue of FI in urban areas of Cape Town?
- Relevant follow-up questions will be asked depending on answers given during the interview if applicable

**Public/Civil Society questionnaire:**

1. Do you consider hunger or inappropriate nutrition to be the greatest FI challenge in urban Cape Town, and why?
2. What are the primary drivers of urban hunger, and what do you see as the best approach to ensuring that all people can access sufficient calories while meeting their RDA of micronutrients?
3. What are the primary drivers of inappropriate nutrition in urban areas, and what do you see as the best approach to improving the nutritional balance of people's diets in Cape Town – especially those in greatest need?
4. In terms of policy, is the focus currently on hunger or (in)appropriate nutrition?
5. In your opinion, how much does the government actually include private stakeholders in combatting FI?
6. Who would you say are the major private stakeholders in combatting FI?
7. What is still majorly lacking on the ground level to achieve a food secure environment (combatting hunger and malnutrition) in densely populated poor urban areas?
8. In your opinion, what are the top three things that should be done about the issue of FI in urban areas of Cape Town?

### 3.4 ANALYSIS

As a result of the low number of respondents, it was very simple to categorize their feedback and evaluate it in light of the existing body of research. Because respondents answered the questions directly via email, the responses were transcribed verbatim (Busetto et al., 2020). However, some transcriptions, especially those containing behaviour annotations, were made feasible due to the PFSA and the authors' outreach to Mitchells Plain. The genuineness of the respondents and field workers that the author dealt with during the course of the day provided essential insight into the cultural elements that drive FI. Due to the fact that it was previously worded in a formal framework, the comments from the academic realm were mostly immediately cited in the verbatim transcription.

The layout of the questionnaire was the same as the layout of the literature review. The initial phase in the procedure consisted of distinguishing between hunger and malnutrition. During the course of the literature review, these two aspects were analysed, and the findings revealed that despite the fact that both of these aspects are major features of FI, one does not take more priority over the other. Short-term remedies to the hunger problem are necessary; long-term policy changes and FI solutions should address malnutrition. The similarity of the responses to the first question demonstrates that the opinions of the respondents and the literature are in accord with one another.

The policy background was next investigated and analysed in the literature, and this aspect of the problem was also included into the questionnaires once the problems of hunger and nutritional deficiency had been addressed. Once again, the findings of the literature study and the replies from the interviews converged to the same conclusion. Major omissions from legal amendments and the lack of a defined plan to alleviate urban FI are both issues that need to be addressed.

After the policy amendments, the relevance of stakeholder groups was stressed throughout the research literature as well as in the questionnaire. In spite of the fact that respondents placed a strong emphasis on the significance of stakeholder participation, the academic sphere said that the private sector is motivated by profits and that the government has to intervene by imposing price control measures and other marketing regulations. The civil society, on the other hand, said that they cannot rely on the government and that they need the participation of the formal

sector, despite this sector being profit-driven. The private sector is more reliable and consistent than the finance provided by the government.

According to what was said in the portion of the research that was devoted to the discussion and analysis, the findings and inferences drawn from the assessments of the previous research were coupled with those obtained from the interviews. One can examine the method that was just discussed by taking a look at the coding strategy that was used throughout the whole of the study - The structure of the questionnaires, was based on the layout of the literature review in order to assist in the process of classifying the replies and comparing them to the relevant literature. Thereafter the results were discussed making use of the research problem layout and finally the conclusion was developed through answering both the research questions as well as following the flow of the literature review.

### **3.5 STRENGTHS AND WEAKNESSES OF THE STUDY METHOD**

The case study technique's capacity to conduct research from several sources is a notable asset. This method of study relies heavily on a range of sources. None of the sources is manifestly better than the others. In reality, the various sources are largely complementary; consequently, a good case study would incorporate as many sources as possible (Yin, 2014). Yin further (2014) defines triangulation as the intersection of multiple sources that all support the same conclusion. Converging (intersecting) lines of study validate the research results and add to the researcher's ability to gain a comprehensive understanding of the subject (Yin, 2014). Case studies provide researchers with a wealth of information that is frequently unavailable through other research techniques (Yin, 2014).

This paper analysed retrospective events of FI globally, nationally and locally including the development of policies and legislation around the issues of FI as well as the development of the terminology and definitions. If a thorough understanding of the problem is required, previous situations must be evaluated for their success or failure in addressing the issue, and these instances should serve as inspiration for a new contextual approach. Consequently, examples from all over the world were essential to the development of the analysis. However, the generalisability of the case study method is widely contested. Figures cannot be extrapolated to the entire population or, in this case, to other food-insecure cities (Yin, 2014). Due to the context-specific nature of the ideas, the conclusions of a case study cannot be applied to a different setting. Case study research is occasionally criticised because it is perceived to be more subjective than other

methodologies, as no external factors prevent the researcher from forming an opinion on the problem. Therefore, researchers must make an effort to avoid subjective evaluations.

### **3.6 LIMITATIONS TO RESEARCH**

My supervisor David Leonard was very accommodating regarding time restrictions due to poor responses from interviewees, but regardless of the nature of the paper and topic re-searched left limited scope and time for more in-depth methods of analysis (interviews on household-level, for example). Even though my original goal was to base most of the paper on primary research, it became implausible as only two respondents replied, and the focus was directed to more secondary data. The literature reviewed and analyses stretch over 11 years (2010-2021), leaving a substantial time-lapse, and due to this, industry-changing continually poses a significant limitation to perfectly accurate results. Van Breemen (2014) had the same issue, and this is problematic because only focusing on recent results (2017-2021) could have aided in more accurate solutions to the problem, but as mentioned, this topic is diversified, and various contradictions and avenues (recent and old) exist in the literature. The majority of literature used for analyses, critiques and solutions, however, was focused on research published between 2016-2021, and due to this factor, limited authors' publications were discussed (Jane Battersby, Gareth Hayson and Vanessa Watson, to name a few)

### **3.7 CONCLUSION**

The aim of this chapter has been to record how this research was conducted. The research drew on the case study research method to conduct this research. This method allowed the author to gain an in-depth understanding of Cape Town's (as the case study) food system, severity of FI issues as well as populations affected mostly. The information gained from this sectioned resulted in six proposed solutions to the problem of FI in a country that produces enough food.

## 4. RESULTS AND DISCUSSION

This section will only directly address the results according to the research questions. A more in-depth discussion can be found under the discussion section. In addition, results obtained through the desktop study will be discussed together with the result obtained from interviews.

### 1. **Is hunger or malnutrition a more significant issue in poor urban areas in Cape Town, and why?**

"FI is, at its core, an experience of human suffering....and defines hunger as an uncomfortable or painful physical sensation caused by insufficient dietary energy consumption" (Alaimo et al., 2020, p 312). Coping strategies, as mentioned earlier, include restricting intake through either fewer meals per day or smaller meals and increased consumption of cheaper nutrient-poor foods such as large volumes of maize meal (Beer et al., 2021, WCG, 2016, Hendriks, 2015). In some cases, adults report not eating so that they can feed their children (Alaimo et al., 2020).

"Hunger of the mind describes the psychological and emotional anguish related to the stresses of FI intertwined with poverty, ill health, and exposure to violence. Respondents to qualitative studies report loss of dignity, shame, embarrassment, guilt, powerlessness, stress, fear, alienation, and trauma. These experiences of suffering create both individual and collective trauma that have cultural, political, and social implications." (Alaimo et al., 2020, p. 313). The FAO in Alaimo et al. (2020, p 314) describes malnutrition as: "an abnormal physiological condition caused by inadequate, unbalanced, or excessive consumption of the macronutrients that provide dietary energy (carbohydrates, protein and fats) and the micronutrients (vitamins and minerals) that are essential for physical and cognitive growth and development." Indicating that malnutrition includes undernutrition, overnutrition, and micronutrient deficiencies

According to the literature analysed, a lack of calories and micronutrients are discussed simultaneously and rarely separate. FI is a broad concept and cannot be discussed in singular dimensions such as hunger or malnutrition. As discussed, malnutrition can be caused by coping strategies caused by hunger (with hunger having its stimuli, i.e. unemployment, inequality, urbanisation pressurising food systems and employment opportunities) (Beer et al., 2021; Battersby & Haysom, 2019).

In the literature and expert interviews, hunger manifests itself as a result of unemployment resulting from migrants searching for jobs and poor social safety nets and infrastructure to accommodate the influx of people into urban centres. The second driver is the unaffordability of foods (C, Witten, personal communication, 28 May 2022; A, Koeriers, personal communication, 28 May 2022), together with the lack of education on how to utilise healthy foods when and if available and affordable (Beer et al., 2021; A Koeriers, personal communication, 28 May 2022). Thirdly, migration from rural to urban results from climate change, poor weather conditions, theft, and a lack of equipment and knowledge to farm and sustain families in the rural setting (UNDP, 2021). Thus the rapid urbanisation into cities of job seekers places pressure on an underdeveloped infrastructural and food system sector and a poor social security urban setting (UNDP, 2021; C, Witten, personal communication 2022).

Dr Chantel Witten (personal communication, 28 May 2022) also states that hunger AND malnutrition are manifestations/outcomes of greater economic deficiencies fuelled by poverty and inequality. She says that both are equally pressing issues, and the one cannot be discussed without the other. She mentioned that hunger and malnutrition resulting in FI had been exacerbated by recent, frequent and large disrupters and shocks. Disruptions include the maladministration of the "Zuma" government, state capture and shocks include the impacts of Covid 19 lockdown measures and the deepening economic recession and meltdown gripping the globe. She also states that this issue will not likely resolve soon due to SA being in debt to the International Monetary Fund (IMF) and will be for many more years.

A Koeriers (personal communication, 28 May 2022) from civil society states that when she started working at the Peninsula School Feeding Association (PFSA) in 2008, the focus was on filling tummies and not on nutrition. She said their focus shifted in the last ten years, focusing on more minor (but adequate) meals in terms of calories and proper nutrition. They aid in menu planning for ECDs and schools and recently started exploring the possibility of nutritional training programs for their staff and the recipients of their distributions. However, she did mention that the perception of the needy and poor, especially in Cape Town (as this is their field of operations), is very much influenced by cultural factors. ECDs and schools receiving grants from the government can spend their money on civil society actors such as PSFA to aid in food delivery and nutritional planning schemes. However, due to the perception of just filling one's tummy, schools will instead feed their children two large bowls of maize meal a day to make them feel

satiated instead of feeding them two smaller meals (still calorie sufficient) but meeting the recommended daily requirements of nutrients. She also stressed the need for a permanent nutritionist or dietician on their team to aid in educational programs for their recipients.

A Koeriers statement is confirmed by Tsegay & Rusare (2014, p.26), where participants of their study done in the Eastern and Western Cape responded by saying: "Malnutrition is caused by the environment we were raised in, in terms of what we were fed and we grew up with. The same goes with the obesity that we face – it's a matter of the habits and foods we got used to eating growing up... We know that vegetables, seafood and fruits are the "ideals" of healthy food. However, that is not the reality in our community: we do not consider the nutrients in what we buy, only whether we can afford it or not."

## **2. What are people's views in governmental, academic and public stakeholders on the issues, causes and solutions? Are there contrasting views, and how does this influences solutions to the problems?**

Once again, the literature and expert interviews illustrated similar results. Thow et al. (2017) clearly showed three different coalitions regarding the views of FIs' causes and solutions.

Government publications stress FI as primarily a rural issue (Battersby & Watson, 2019). The urban setting and FI issues are addressed by making food available, education and promoting farming strategies to empower urban households. They also have ambitious plans and strategies to create more jobs and increase people's purchasing power. This relates to the economic and agricultural coalitions' view regarding FI (Thow et al., 2017). C Witten (personal communication, 28 May 2022) from the academic (and health coalition) sphere states that the government attempts to increase availability and improve utility. However, governments' attempts to create more jobs and employment opportunities also do not solve the problem if the private sector is not controlled through price policies or the marketing of healthier foods.

The unaffordability of food results from the market monopoly controlling food prices and products under the economic and profit-driven coalition. C, Witten (Personal communication, 28 May 2022) agrees with this statement and says that SA, as a capitalist state, does not institute price control, such as in Asia with rice prices. She further states that the ever-rising prices and the government not stepping in could result in further inequality, food riots, and unemployment. She argues that the private sector is profit-driven and that the "government needs to legislate and mandate the private sector to be responsive to the increasing needs for price control and

the removal of unhealthy foods." Emphasising a significant mismatch in the interest of various stakeholders in the urban food system and role players in combatting FI. Civil society also argues that due to the unaffordability of food, people become FI. This statement is related to the control of the economic coalition (A, Koeriers, personal communication, 28 May 2022). None of the recipients stressed availability as an issue, merely access (physical and financial) and poor utility practices (in terms of a lack of knowledge, storage and equipment). C, Witten (Personal communication, 28 May 2022) did, however, say that the lack of food in the poorest household is of immediate concern. However, the issue once again is not a lack of availability of food but merely access and the unaffordability thereof.

*"The author witnessed this situation on her visit to a feeding scheme in one of Cape Town's poorest townships in Mitchell Plain, Tafelberg community. There was a lady selling chips, sweets, cold drinks and oranges. Right next to her stall was a homeless man digging in the bin for any leftover food. He even opened a piece of paper where there was a half-eaten sandwich and ate it. This illustrates a harsh but clear reality of the poor's access to food."*

Civil society argues that government spending is inadequate in suitable locations and that it usually ends up more harmful than helpful when they assist in funding projects. This is because money does not reach recipients (NGOs, NPOs and the general public in terms of grants) as it should, and due to corruption, funding gets lost, creating false hope and stress. C, Witten (personal communication, 28 May 2022) from the academic sphere mentioned that relying on the private sector to aid in the alleviation of FI is not feasible due to this sector "being profit-driven and that government should legislate and mandate this sector to be responsive to the increasing need for price control and the removal of unhealthy foods." She goes on to say that Civil society has a significant impact and aids in a bottom-up approach, but they cannot act alone. A, Koeriers (personal communication, 28 May 2022) from civil society, on the other hand, says that the private sector is their major investor and if it is to gain global popularity in terms of corporate social responsibility or greater investment for their benefit they do not care because their funds are consistent. Therefore, they can rely more on them than on the government. She also mentioned that during the covid-19 lockdown, the private sector is what kept them going in terms of donations and funding. Once again, she mentioned that even if the donations were primarily to get rid of expired but unspoiled food, they would still rely on the private sector for support than the government, even if the private sector does not explicitly implement strategies to combat FI.

### 3. **What policies, strategies, plans, and legislative frameworks exist to tackle the issue? How effective are they?**

In 2017, SA had a FI policy, an NDP, an IFSS and over 60 policies, strategies, and programmes for addressing hunger and malnutrition but lacked a single universal and integrated food and nutrition security plan (Battersby, 2019). The NFSNP 2018-2023 that theoretically fills the gaps of previously failed attempts have also not succeeded, mainly due to mismanagement and poor implementation of strategies (University of Pretoria, 2022). The WCG also published an FS strategy in 2016, but it remained a draft (Adeniyi et al., 2021). These policies, legislations, frameworks and plans indicate that the government is aware of the issue and problems in SA and the WC regarding FI especially in urban settings. However, the implementation of policies and strategies in SA is largely "constrained by corruption, fraud, mismanagement, poor accountability and a lack of monitoring and evaluation", as can also be seen with the implementation of BEE (discussed earlier) to combat inequality (Shava, 2017, p.168). C. Witten (personal communication, 28 May 2022) from the academic sphere mentioned "While South Africa has a National Food and Nutrition Security Policy (2014) that states that a National NFNS Council under the leadership of the Deputy President is to be constituted, to date that council has not been constituted nor has the mandate of the council been activated which is to address the rising malnutrition rates. South Africa now faces obesity and a chronic child malnutrition crisis. This will only worsen with more disruptions and shocks such as the July riots, the Kwazulu Natal floods and the impending economic meltdown". She goes on to say that one of the leading solutions in the policy is urban agriculture

In conclusion to policies, legislation, frameworks, strategies, and plans thoroughly and extensively discussed earlier; it is clear there is enough in place. However, due to significant incoherence and a lack of execution and implementation, they are not as effective as envisioned.

Outreach to Peninsula Feeding Association to Tafelsig community in Mitchells plain in support of World Hunger day: All images taken by author with permission from the PFSA and Early Learning Development Centre from where food was distributed.



Image 8: Left, Bonnie Evert (Author), Middle, Antoinette Lerm, Right Belinda Mentoor



Image 9 & 10: Adults and Children form the community gathering around for a bowl of lunch



Image 11: Lunch was beans, samp, soya and mince meat. One piece of butternut, an apple, 1 loaf of bread and a bottle of water



## What are feasible solutions?

### 4. What are feasible solutions to the problem?

Literature and interview results will be discussed simultaneously:

Recommended solutions are broad, and depending on which perspective one is talking about, solutions to the problem could be highly diversified and even become vague; thus, the following solutions were specifically selected to address the nature of the research problem.

1. *There should be a shift of focus regarding where the issues lie. Rural and urban FI should be separated and not addressed as one or the same problem.*

Battersby & Watson (2019) states that government publications, policies, frameworks, plans, and strategies regard FI as primarily a rural issue. Urbanisation and the effect on urban FI are not thoroughly understood nor discussed in the proposed solutions. Urban FI is not explicitly concerned with food availability as there is "enough food to provide an adequate food basket for every household in the urban setting" (C, Witten, personal communication, 28 May 2022). Instead, it is an issue of food access and affordability in suitable locations (Thow et al., 2018; Haysom & Crush, 2017, Battersby & Watson, 2019, Adeniyi et al., 2021).

2. *Regarding policy, a National, Provincial and Local food act should be developed using a bottom-up approach.*

At this stage, it is evident that the government acknowledges the issue of FI and takes it seriously, as it is written up in the Bill of Rights in the Constitution of SA. However, the monocentric and authoritarian response to the problem threatens to combat the issue (Adeniyi et al., 2021; Hendriks, 2015). A, Koeriers (personal communication, 28 May 2022) also illustrated stronger relations between the private sector and civil society than between academic and civil society and government and civil society actors. C, Witten (personal communication, 28 May 2022) also mentioned that civil society is vital in combatting FI, but they are too small to tackle the issue alone. The government acknowledges the importance of including stakeholders such as the private sector, civil society and academics in policies, strategies and plans. However, to date, there is an evident lack of coherence and the inclusion of stakeholders. If included, programmes are short-lived and mostly not as successful as originally envisioned (Adeniyi et al., 2021).

Sound and improved coordination of Provincial, local and national government policies should be appropriately executed (Tsegay & Rusare, 2014). C, Witten (personal communication, 28 May 2022) also stated that "each province is supposed to have a coordinating structure to address rising FI". Tsegay & Rusare (2014, p.34) further states that "local government and municipalities must, with the support of the national government, improve targeting of households and individuals who are facing hunger; coordinate between policies; include communities and civil society in local planning, and support local markets to flourish (e.g. by supporting infrastructure, transport, storage facilities)".

3. *Address the immediate issue of hunger through a food voucher system subsidised by the government and a set in stone nutritional 'safety net' plan of action for those in greatest and immediate need (customised for the urban setting).*

StatsSA (2019) states that involving households in agricultural activities can alleviate hunger in food-insecure populations. Most populations practising sustenance farming to supplement the food supply for their household mainly rely on grants as the primary source of income.

In the urban setting, city gardens and urban agricultural programmes have been shown to relieve tiny communities for specific periods, such as the "township horticulture project", before theft, vandalism and a lack of knowledge destroyed the initiative (Fieldworker PFSA, personal communication, 28 May 2022). Several NGOs support urban agriculture, such as SEED. In Mitchell's Plain alone, they support over 100 home gardens and facilitate training programmes to educate and assist home gardeners. Urban agriculture is one of the solutions to the problem. However, more research is needed regarding the effectiveness of the locations and populations it aids as policy and stakeholder support is lacking (Haysom & Crush, 2019). During the Covid 19 pandemic, the number of families suffering from FI increased significantly. In early 2020 the WC Department of Social Development took hands with civil society actors to distribute food parcels to those in greatest need. However, it mainly relied on donations from the general public and the SRD fund to fund the project (DSD, 2020). However, the SRD fund was discontinued in April 2021, and the top-up grants later in 2020 placed these communities in danger again (McDermott & Swinnen, 2022). C, Witten (personal communication, 28 May 2022) argues that these programmes, such as food gardens and subsidies in the form of grants, are inadequate and still do not solve the issue of access. She suggests that a food voucher system should be incorporated within a nutritional safety net plan that allows poor income households to access a subsidised food basket. The logistics and, once again, execution of this plan might be impeded by poor

coherence, corruption, and all other factors mentioned, negatively impacting strategies and causing policies and plans to fail.

*4. Start a National, provincial and local conversation on the topic from the ground level.*

Civil society actors (field workers from PFSA) from A, Koeriers' team pointed out that even though their heart is in their job and alleviating FI is their passion, they still do not have adequate nutrition knowledge and neither know how to convey the importance of proper nutrition to their recipients. Beer et al. (2021) also state that the problem of FI in the urban setting is poor access and knowledge on utilising food and optimising a bargain-basement budget to gain the most of limited food stock. Therefore, A Koeriers (personal communication, 28 May 2022) suggest training programmes in schools, community kitchens, civil society associations, and even corporate level events (their private sector investors) regarding a) the importance of nutrition and b) the utilisation of food with limited ingredients c) shopping strategies and methods to stretch food (such as adding soya and beans to mincemeat and cooking vegetables with the skins for extra fibre for example).

*5. Decentralise the Urban food system and restrict unhealthy food retail marketing and production*

Firstly, access is a pressing topic in paper and decentralising the food system is one option for assisting in alleviating FI.

If the informal trade sector (hawkers, vendors and spaza shops) could have equal access to warehouses or a direct link to producers (Haysom & Crush, 2017; Battersby, 2012), the poor could equally access good quality and a variety of food at affordable prices (Battersby, 2009). The informal sector is highly dependent on the formal sector, which opens up a key policy opportunity to make the system work for the poor (Battersby, 2009). The issue, however, is that the informal trade sector has no obligation to report on figures, earnings, or even register their business; thus, data to obtain information on where subsidies could aid and who has access to warehouses for example are restricted (Haysom & Crush, 2017; A Koeriers, personal communication, 28 May 2022).

Secondly, it is evident that the private sector controls the retail food market and not only sets the prices but also sells cheap alternatives to healthy food, which are usually calorie-dense,

highly processed, high in salt, high in refined carbohydrates and micronutrient poor (Beer et al., 2021; Battersby & Haysom, 2019, WCG, 2016). Thus, like C, Witten (Personal communication, 28 May 2022) stated, price control systems imposed by the government could prevent possible food riots and violence but also aid in making food more affordable for the poor. More significant and more meticulous audits are also necessary to prevent price-fixing by large corporations, as price-fixing keeps the cost of food unnecessarily high for those who already have poor purchasing power (Tsegay & Rusare, 2014).

#### *6. Sustainable food systems and infrastructural support*

Even though none of the interviewees explicitly touched on this topic, literature shows that sustainable food systems are critical in ensuring FS (Beer et al., 2021; Hendriks, 2015; UNDP, 2012). As migration to cities is on the rise, urbanisation pressurises food systems as the areas where these populations choose to reside are not infrastructurally equipped to house them. C, Witten (Personal communication, 28 May 2022) states that "Urbanisation is not a problem if their economic systems can absorb and support earnings. However, at the moment, South Africa's economic downturn and job losses spell disaster, and FI is a manifestation of this failed system." Battersby (2009, p10) argues that the "cycle of poverty and unsustainable urban growth can be broken." However, this effort will need input from all levels of government that focus on the importance of nutrition and food as a significant component of well-being. The reengineering of cities in terms of sustainable, inclusive, and healthy environments should be prioritised while including food systems to accommodate the poor in urban planning (Haysom, 2021).

Furthermore, relating to the previous solution of an inclusive and decentralised market, if the government includes the informal sector as a policy priority, planning of urban food systems system could be executed in line with sustainability objectives (Battersby, 2009). Last but not least, the global Sustainable Food System Programme does not currently address nutrition. As SA is co-chair of this Programme, it could open up opportunities for dialogue (Thow et al., 2017).

## 5. CONCLUSION

The study indicates that FI difficulties in Cape Town are the result of a combination of extensive and intricate urban interactions that have been shaped by a variety of social, political, private, and geographical variables. FI is an increasing global, national, and provincial health, social, and economic challenge. In contrast to supermarket purchases, it is obvious that subsistence agriculture and self-production are not the primary means by which people get food. Urbanisation is a significant contributor to the strain on urban food systems, and the migration of rural people to the city in search of jobs exacerbates urbanisation. The movement is encouraged by climate change, degraded soils, and a lack of sustainable agriculture expertise. On the other end of the scale, however, the situation is exacerbated by rising food costs and the inability to purchase food. The formal and informal sectors make up urban food systems, with the informal sector being strongly dependent on the formal sector's ability to establish and manage prices. The private formal sector is not regulated by government price control measures, so those with limited financial and physical access cannot afford (1) sufficient calories (2) nor adequate nutrition to maintain an active and healthy lifestyle at all times, as defined by the FAO (2020).

It is well-known that urban FI is more prevalent among the poor than among middle- and upper-income groups (van Breemen, 2014). It was also determined that FI in Cape Town is geographically spread across the city, with the largest concentrations of FI found in the poor townships and informal settlements of the Cape Flats. This spatial expression of FI, which makes it more difficult for low-income families to get nutritious food, is mostly attributable to the low-income population in these areas. It was observed that poverty has a direct influence in urban residents' inability to access adequate and high-quality food, leading to severe FI. In poor regions of Cape Town, food merchants often offer less nutritious, processed foods that are high in saturated fat and carbs. These items were determined to be often less expensive and did not need refrigeration, making them more suitable for the urban poor's living circumstances. Diverse limitations have an impact on the dietary choices of the urban poor, causing them to consciously choose nutritionally deficient foods. Affordability, time constraints, the ease of transporting meals, commuting distance, home storage, and cooking facilities are contributors to the issue. The study revealed that the physical availability of food production is not a worry in terms of FI, but rather the availability of affordable nutritious food, particularly in the formal sector that will result in improved availability and access in the informal sector. The profit-driven formal sector usually only stocks up on things that are needed right now, instead of trying to predict what will be needed in the future, such as if people knew more about healthy diets and healthy foods were cheaper. As noted earlier, the private sector is not subject to

government price regulations; hence, the rising monopolization of urban food systems by supermarkets has led to a rise in urban FI. Due to their stringent criteria, it has been shown that they limit the market opportunities for small-scale farmers and threaten the existence of informal markets, since prices on informal markets are often higher than supermarket prices. In this research, the importance of informal markets for the poor in Cape Town was highlighted since they offer an alternative source of employment for residents of low-income communities and make food readily available in the city's poorest neighbourhoods.

Although urban FI is notably absent from the international discourse, South Africa's NDP, NFNSP, and Western Cape Food security framework recognize the problem. It is vital to emphasize that none of these plans, strategies, or policies have been implemented well or even at all. Due to the complexity of urban FI, cross-departmental and external organization collaboration is necessary to address the problem on several fronts. Due to the complexity of the growing urban food systems in Cape Town, FS policies cannot be restricted to the productionist approach of national governments, since this narrow emphasis limits consideration of other drivers of urban FI. The City, municipal agencies, and external partners all play a significant role in the execution of systematic programs that enable Capetownians to access and afford the city's food. The City of Cape Town is responsible for enabling the engagement of a larger variety of stakeholders and ensuring that these stakeholders (using a bottom-up approach) set consensus objectives to solve the problem of urban FI. This paper argues that a lack of urban FS policy would lead to increased levels of urban FI, as well as other escalating urban difficulties such as rising populations and less employment possibilities, hence lowering family income. Reduced income reduces the capacity of the poor to acquire enough food and, thus, to be considered food secure. It is strongly suggested that the (Country and) City realize the necessity for a dramatic reform in food system governance if Cape Town (and other Capitals) are to solve FI issues.

This study is just a preliminary review of Cape Town's food system, policies, programs, plans, strategies, and laws pertaining to FI, as well as other FI-related topics. Further study is necessary to comprehend how these suggested solutions will emerge, how they would sustain themselves, what problems they will confront, and how they will effect or alter urban FI in Cape Town (and SA). Multiple parties from outside the academic, government, and civil society sectors are required to conduct a more comprehensive examination. It is necessary to do further research in the field of urban food systems itself. Further investigation into the forward and backward linkages, as well as the identification and reduction of unnecessary links, is required in order to

ascertain the precise actions that are required in order to make food more affordably available, particularly for the less fortunate. Since there is a significant lack of data, it is difficult to devise strategies for improving the visibility and "power" of the informal sector. As a result, legislative opportunities relating to the informal sector need to be investigated further.

Even though policies, frameworks, and strategies all explicitly mention the inclusion of stakeholders in interventions, there is a significant lack of stakeholder involvement in the execution of most programs, despite the fact that stakeholder involvement is widely believed to be a major strategy for combating the problem of FI. There is a need for research on the precise kind of stakeholders that are required for certain programs, as well as for further information about the reasons why stakeholders do not take part in governmental plans despite the fact that collaboration is welcomed. In addition to stakeholder engagement, it is essential to discover why government initiatives fail to implement plans and strategies, in some instances even far before the programme's launch. The relationship between the government and the private sector in terms of policy must also be investigated deeper in order to discover policy gaps and, therefore, feasible solutions.

In no particular order of priority, the six recommended tactics from this paper are as follows:

1. There should be a change in emphasis about the nature of the problems. Rural and urban FI should be treated as distinct problems and not as one.
2. Regarding policy, a National, Provincial, and Local food act should be prepared utilizing a bottom-up methodology.
3. Address the immediate problem of hunger with a government-subsidised food voucher system and a nutritional "safety net" plan of action for those with the greatest and most urgent need (customised for the urban setting).
4. From the ground up, initiate a national, provincial, and local dialogue on the subject.
5. Decentralize the urban food system and decentivise unhealthy food retail marketing and manufacturing
6. Infrastructure assistance for sustainable food systems

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