

UNIVERSITY OF KWAZULU-NATAL

**UNDERSTANDING THE DYNAMICS OF FOOD (IN)SECURITY AND
VULNERABILITY IN THE AMATHOLE DISTRICT OF THE EASTERN CAPE
PROVINCE, SOUTH AFRICA**

by

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**A thesis submitted in fulfilment of the requirements for the degree of
Doctor of Administration
in the
School of Management, IT and Governance
College of Law and Management Studies**

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January 2019

DECLARATION

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DEDICATION

To any one

who cares for the plight of others, the cause of social justice and
for the way they live their lives.

and

To any one

who has to struggle against the yoke of poverty,
for the lessons of courage, humility and faith they teach me every day.

You have been, and continue to be, my inspiration and pillar of strength throughout this
journey.

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‘If I have seen further it is by standing on the shoulders of Giants.’

– Newton’s letter to Hookey, 5 February 1676.

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GLOSSARY OF ABBREVIATIONS AND ACRONYMS

ADM	Amathole District Municipality
AFRA	Association for Rural Advancement
AIDS	Acquired Immune Deficiency Syndrome
AIIB	Asian Infrastructure Investment Bank
ALRMP	Arid Land Resource Management Project
ANC	African National Congress
APP	Annual Performance Plan
APTECA	Aflatoxin Proficiency Testing for East and Central Africa
ASAL	Arid and Semi-Arid Lands
ASSAS	Adaptation at Scale in Semi Arid Regions
AU	African Union
CAADP	Comprehensive Africa Agriculture Development Programme
CAC	Central America and the Caribbean Food Security Portal
CASP	Comprehensive Agricultural Support Programme
CBS	Central Bureau of Statistics
CCAFS	Climate Change, Agriculture and Food Security
CFS	Committee on World Food Security
CIS	Commonwealth of Independent States
CNDC	Community Nutrition Development Centres
CoGTA	Cooperative Governance and Traditional Affairs
CSA	Climate Smart Agricultural practices
CSI	Coping Strategy Index
CSIS	Coping Strategy Index Score
CWP	Community Works Programme
DAFF	National Department of Agriculture, Forestry and Fisheries
DEDEAT	The Department of Economic Development Environmental Affairs and Tourism for the Eastern Cape
DFID	Department for International Development
DG	Director General
DHIS	District Health Information System
DIRCO	Department of International Relations & Cooperation
DoH	Department of Health
DPME	Department of Planning, Monitoring and Evaluation
DRC	Democratic Republic of Congo
DRDAR	Department of Rural Development and Agrarian Reform
DRDLR	Department of Rural Development and Land Reform
DSD	Department of Social Development
DTI	Department of Trade and Industry
EC	Eastern Cape
ECA	Economic Commission for Africa
ECCCRS	Eastern Cape Climate Change Response Strategy
ECDOH	Eastern Cape Department of Health
ECIT	Eastern Cape Information and Technology

ECSECC	Eastern Cape Socio Economic Consultative Council
EFF	Economic Freedom Front
EIA	Environmental Impact Assessment
EPWP	Expanded Public Works Programme
EU	European Union
FAM	Food Aid Management
FANTA	Food and Nutrition Technical Assistance
FAO	Food and Agriculture Organisation
FAOSTATS	Food and Agriculture Organization of The United Nations Statistics
FAP	Food Acquisition Programme
FFW	Food for Work
FIES	Food Insecurity Experience Scale
FIVIMS	Food Insecurity and Vulnerability Mapping Systems
FNCO	Food and Nutrition Coordinating Office
FSP_MIIS	Food Security Policy Makers and Implementers Interview Schedule
FSP-SSA	Food Security Portal for Africa South of the Sahara
GCIS	Government Communication and Information Systems
GDP	Gross Domestic Product
GHG	Global Greenhouse Gas
GHI	Global Hunger Index
GIEWS	Global Information and Early Warning Systems
GIS	Geographical Information Systems
GNP	Gross National Product
GVA	Gross Value Added
HDDS	Household Dietary Diversity Score
HDI	Human Development Index
HFCA	Household Food Consumption Approach
HFCS	Household Food Consumption Score
HFIAS	Household Food Insecurity and Assess Scale
HIV	Human Immune Virus
HIVAN	HIV/AIDS Networking
HSRC	Human Sciences Research Council
ICT	Information and Communications Technology
IDP	Integrated Development Plan
IDZ	Industrial Development Zone
IFAD	International Fund for Agricultural Development
IFPRI	International Food Policy Research Institute
IFSS	Integrated Food Security Strategy
IISD	International Institute for Sustainable Development
ILO	International Labour Organisation
IMF	International Monetary Fund
INS	Integrated Nutrition Strategy
IPC	Integrated Food Security Phase Classification
IQ	Intelligent Quotient
ISDR	Integrated Strategy for Disaster

IYA	Imbumba Yamakhosikazi Akomkhulu
LED	Local Economic Development
LIFDC	Low Income Food Deficit Countries
LM	Local Municipality
Lovedale TVET College	Lovedale Technical Technical Vocational Education and Training College
MAPS	Mainstreaming, Acceleration and Policy Support
MDGAF	Millenium Development Goals Achievement Fund
MDGs	Millennium Development Goals
MIG	Municipal Infrastructure Grant
MINAGRI	Ministry of Agriculture and Animals Resources
MPI	Multidimensional Poverty Index
MPs	Member of Parliament
MRU	Monitoring and Response Units
MUAC	Mid-Upper Arm Circumference
NCEI	National Centers Environmental Information
NDA	National Department of Agriculture
NDOH	National Department of Health
NDP	National Development Plan
NDPW	National Department of Public Works
NEMA	National Environmental Act
NEPAD	New Partnership for Africa's Development
NFCF	National Food Consumption
NFCS	National Food Consumption Survey
NFP	National Food Policy
NFSNP	National Food Security and Nutrition Policy
NGO	Non-Governmental Organisation
NHI	National Health Insurance
NLTRP	National Land Tenure Regularisation Programme
NOAA	National Oceanic and Atmospheric Administration
NPFNS	The National Policy on Food and Nutrition Security
NPO	Non-Profit Organisation
NSNP	National School Nutrition Programme
ODI	Overseas Development Institute
OTP	Office of the Premier
PCMH	Patient-Centred Medical Homes
PDP	Provincial Development Plan
PGDP	Provincial Growth and Development Plan
PIDA	Programme for Infrastructure Development in Africa
PLAAS	Programme for Land and Agrarian Studies
POA	Programme of Action
PPP	Public Private Partnerships
PRA	Participatory Rural Appraisals
PSNP	Productive Safety Net Programme
QH_FSV	Questionnaire on Household Food Security and Vulnerability
RADA	Rwanda Development Authority

RCQHC	Regional Centre for Quality of Health Care
RDA	Recommended Daily Allowance
RDP	Reconstruction and Development Programme
RDS	Rural Development Strategy
ROI	Reactive Oxygen Intermediates
RRA	Rapid Rural Assessments
SA	South Africa
SABC	South African Broadcasting Corporation
SADC	Southern African Development Community
SADCC	Southern African Development Coordination Conference
SAM	Severe Acute Malnutrition
SANHANES	South African National Health and Nutrition Examination Survey
SASSA	South African Social Security Agency
SAVCG	South Africa Vitamin A Consultative Group
SDG	Sustainable Development Goals
SERO	Socio-Economic Review and Overview
SEZ	Spatial Economic Zones
SIP	Strategic Infrastructure Projects
SMME	Small, Medium and Micro-sized Enterprises
SPLUMA	The Spatial Planning and Land Use Management Act
SPSS	Statistical Package for Social Sciences
SSA	Africa South of the Sahara Food Security Portal
STATS SA	Statistics South Africa
TB	Tuberculosis
TVET	Technical and Vocational Education Training Colleges
UBPL	Upper-Bound Poverty Line
UFH	University of Fort Hare
UIF	Unemployment Insurance Fund
UK	United Kingdom
UKZN	University of KwaZulu-Natal
UN	United Nations
UNCTAD	United Nations Conference on Trade and Development
UNDG	United Nations Development Group
UNDP	United Nations Development Programmes
UNESCO	United Nations Educational Scientific and Cultural Organization
UNICEF	United Nations International Children's Emergency Fund
UNSD	United Nations Statistics Division
US	United States
US\$	United States Dollar
VIC	Vitamin Information Centre
WBFPW	World Bank Food Price Watch
WEMA	Water Efficient Maize for Africa
WFP	World Food Programme
WFS	World Food Summit
WHO	World Health Organization

WMA	Water Management Areas
WTO	World Trade Organization
WWTW	Waste Water Treatment Works

GLOSSARY OF TERMS USED

APTECA	Aflatoxin Proficiency Testing and Control in Africa, programme patterned after a successful aflatoxin regulatory risk management programme in Texas.
BOLSA FAMILIA	A conditional cash transfer programme for health and education; the national programme strengthening family agriculture.
PLANO REAL	Real plan

ABSTRACT

Food insecurity is a major development problem facing many third world countries. It is caused by a myriad of factors in the global, regional, national and local spheres of human life. Numerous efforts by different actors have been put in place to alleviate food insecurity globally, regionally, nationally and locally. Communities in the Amathole District Municipality of the Eastern Cape Province in South Africa experience severe food insecurity and government and other non-governmental organisations have been striving to ameliorate the situation. Despite concerted efforts, the poverty and food insecurity situation continue in the district. There is a dearth of empirical study on the nature, causes and possible solutions to food insecurity among vulnerable people in this district. Also, there is a need to find out whether the food security approaches and strategies put in place by governments, non-governmental organisations (NGOs) and communities have produced the intended results of pushing poverty frontiers. It is against this background that this study determines the dynamics of food security and vulnerability among people in the Amathole District Municipality of the Eastern Cape.

A mixed-methods research approach of quantitative and qualitative triangulation design was adopted to carry out this study. A total sample of 330 heads of households from the six local municipalities in the Amathole District Municipality participated in the study. Quantitative data was collected through a validated questionnaire and qualitative data was collected through a key informant interview schedule. A triangulation approach was adopted in analysing the data where qualitative analysis was used to complement the quantitative data. The qualitative analysis was completed through themes informed from the research questions, while the quantitative analysis was completed through descriptive statistics, multiple regression and a significance level adopted of 0.05.

The results of this study show that the main source of income for the vulnerable people of the Amathole District Municipality is pension money (58.8%), the main source of water is tap water (61.0%) and the main source of food is through purchase (58.0%). The majority (74.0%) of residents rarely have access to enough food. Factors such as measures taken against food shortage, time of food shortage, causes of food shortage, acquired agricultural skills, agricultural activities and available agricultural resources have a significant contribution to the level of food security.

The study concludes that vulnerable people in the Amathole District Municipality are still facing food insecurity despite the efforts put in place by the present government. The sources of income and food of these people are not sustainable. The study recommends empowerment of the vulnerable people through agricultural activities with adequate provision of agricultural resources to the entire district.

Key words:

Food insecurity, food security, vulnerability, sources of food, hunger, poverty, food access, sustainability.

CHAPTER 1 : INTRODUCTION AND OVERVIEW OF THE STUDY

‘Poverty is the worst form of violence.’ (Gandhi)

1.1 Introduction

This chapter seeks to provide a general overview of the research study that focuses on food insecurity and security in relation to issues of vulnerability in the Amathole District Municipality of the Eastern Cape Province in South Africa. In addition, the chapter presents the rationale for the study, the research problem, the research goal and objectives and the research questions. It presents an initial literature review of food security. It then outlines the research methodology, significance, limitations and delimitations of the study, as well as the ethical considerations and operational definitions of the key terms used. Finally, the chapter ends with an outline of the all of the chapters and a brief summary of each.

1.2 Background to the study

Despite the reported continuous economic growth and development seen in the world, in many parts of the world a substantial proportion of the global population continues to suffer from food insecurity and malnutrition. The Sustainable Development Goals 1 (No Poverty) and 2 (Zero Hunger) recognise that hunger and food insecurity are the core hardships of poor people, and specifically set out to halve the proportion of extremely poor and hungry people in the world. Even if the situation has improved since the 1990s, the rate of improvement remains far short of that required to attain these targets. Currently the Food and Agriculture Organization (FAO) reveals that 823 million people in developing countries are undernourished, which is an increase of 23 million since 1996. Nonetheless, over that decade the proportion of undernourished people in the developing countries fell to 17.0%, because the total population grew faster than the undernourished portion. This seems to suggest that there are a vast number of people who remain vulnerable to food insecurity, and these numbers are growing faster than anticipated (Food and Agriculture Organization (FAO), 2006).

The International Food Policy Research Institute (IFPRI) further informs us that global food security is currently under stress. Although the world’s leaders – through the first Millennium Development Goal – aimed to halve the proportion of hungry people between 1990 and 2015, we are nowhere near meeting that target (IFPRI, 2010). The percentage of undernourished

people dropped from 20.0% between 1990 and 1992 to 16.0% between 2004 and 2006. In recent years, however, the number of hungry people has been increasing. In 2009, on the heels of a global food price crisis and in the midst of a worldwide recession, the number of undernourished people surpassed 1 billion. Estimates by the Food and Agriculture Organization of the United Nations suggested that number would have dropped to 925 million in 2010. However, much of the world population is now suffering from famine and undernutrition. Such problems are aggravated at times in the least developed countries where food intake is greater than food production (FAO, 2009).

It is a well-held view that food insecurity causes poverty, vulnerability and livelihood insecurity; but at the same time is also a result of these situations. Eradicating extreme hunger is an effort to speed up progress towards the development goals in other sectors. Hunger, poverty and undernutrition make it particularly difficult for poor people to improve their livelihoods and make it impossible for them to contribute toward sustainable and broad-based growth. The persistence of hunger is a direct threat to efforts and interventions to reduce child mortality, to improve educational attainment and to enable people to invest in their own futures (FAO, 2007).

The Eastern Cape Province contains a society struggling to escape its colonial and apartheid inheritance, and in particular, the challenges faced by people living in the former homeland areas, where over 60.0% of its population still resides. Poverty, unemployment, food insecurity and access to basic services are all greater challenges in the former homelands than elsewhere in the province and in South Africa as a whole. The exceedingly high rates of social deprivation in the former homelands are a consequence of five underlying and mutually reinforcing challenges:

- Absence of formalised land ownership that limits fixed investments in these areas and thus constrains job creation and the growth of the tax base of local municipalities.
- Under-investment in public infrastructure and education provision during the colonial and/or apartheid era.
- High population densities and sprawling settlements (including ‘rural townships’) that increase the costs of infrastructure provision and encroach on land suitable for agricultural and tourism development. A related issue is theft of high-value farm produce.
- Absence of effective land-use management.

- Difficulty in responding to fairly rapid population dynamics in terms of infrastructure provision and the growth of well-planned and -managed towns to be able to attract and grow investment and enterprise.

About 30.0% of the provincial population live in the two metros where the challenges of poverty and unemployment are less acute. Here the main challenge is the slow rate of economic growth compared to other South African (SA) metros. The fact that 1.9 million people (27.0% of the present provincial population of 7.0 million) have left the province and now live in other provinces, is a key indicator of the magnitude of the challenges posed by the poverty traps of the former homeland areas and of the slow-growing metros. The stunted nature of the provincial economy, including the slow growth of black business and stalled ‘mega-projects’, are specific challenges, among others, that this Provincial Development Plan (PDP) must address.

The National Development Plan (NDP) identifies nine main challenges facing the country’s development and economic growth. Except for one, these are all relevant to the Eastern Cape:

- Too few people work.
- The standard of education for black learners is poor.
- Infrastructure is poorly located, undermaintained and insufficient for growth and spatial transformation.
- Spatial patterns exclude the poor from development.
- The economy is overly and unsustainably resource intensive.
- A widespread disease burden is compounded by a failing public health system.
- Public services are uneven and often of poor quality.
- Corruption is widespread.
- South Africa remains a divided society.

The challenge that is not applicable to the Eastern Cape is number five. In this case the challenge is the underutilisation of natural resources, and, in particular, water and land for agriculture.

While eight of the challenges identified by the NDP are relevant to the Eastern Cape, we need to think about challenges that are specific to the province. The following section contains an analysis of the main challenges facing the province, and the main drivers of development and change, in the next five to ten years.

Analysis conducted shows that forces that will impact provincial development over the next decade are likely to include the following:

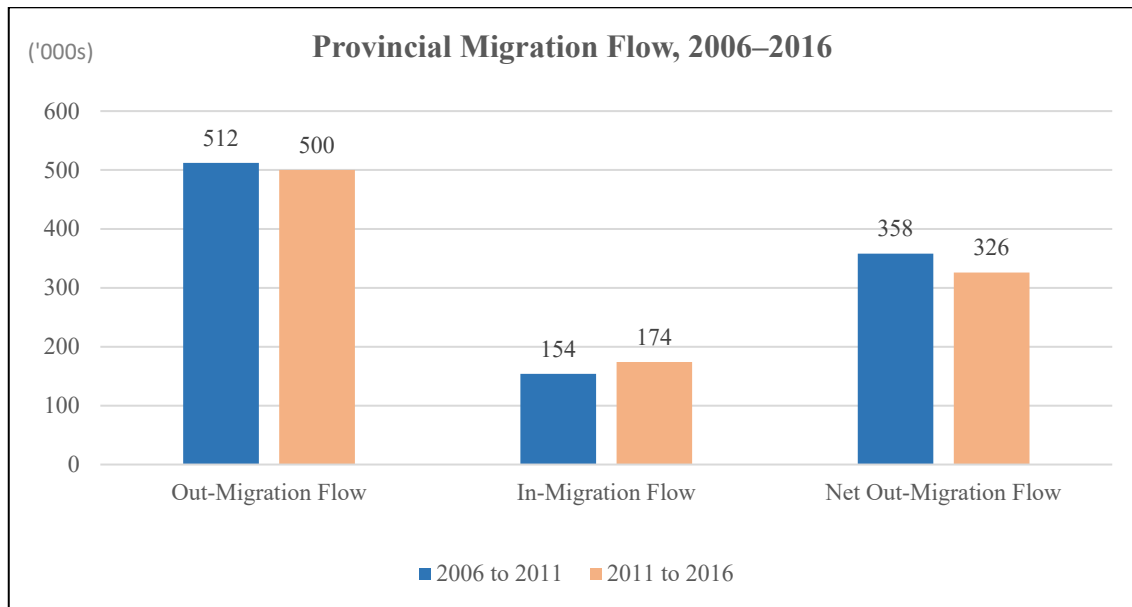
- population dynamics and urbanisation
- quality of governance
- fiscal consolidation
- technological change
- climate change

The historical challenges in remote areas of poverty, low human development, persistent service backlogs, as well as high unemployment and low growth, remain features that the province must contend with, and address in the coming decade.

Population dynamics and urbanisation

In the period between the South African National Census of 2011 and the Community Survey 2016, the total population of the Eastern Cape (EC) increased from 6.6 million to 7.0 million, or 6.6%. This was slightly less than the SA population increase of 7.5%. The relatively slow growth of the EC population is due to net out-migration, rather than lower fertility rates or higher morbidity rates compared to the national average. Statistics South Africa (STATS SA) produces inter-provincial migration data based on stock data (the number of migrants at a point in time) and flow data (migration over a period of time). In terms of stock data there was almost no change between 2011 and 2016 with a net out-migration for the EC in both years of 1.6 million. About 1.9 million people born in the EC lived outside of the EC, and about 300,000 people who lived in the EC were born outside the province. Flow data from the 2017 mid-year population estimates is as follows:

Figure 1:1 Provincial migration flow patterns (2006–2016)



Source: STATS SA and Eastern Cape Socio-Economic Consultative Council (ECSECC), 2017

Economic structure

The historic absence of significant mining activity in the Eastern Cape, and the creation of the former homelands as unproductive ‘labour reserves’ are the main reasons that the provincial economy has tended to underperform compared to the national economy in terms of higher rates of poverty and unemployment. Generally, the Eastern Cape has a small and slow-growing private sector with low levels of fixed investment, and capital assets per capita are about half the national average. In addition, the province has a small agricultural sector with declining levels of employment, partial deindustrialisation (particularly of labour-intensive, non-automotive manufacturing), and very low levels of productive economic activity in the former homelands.

In terms of economic structure, there are significant differences between the province and the country. The Eastern Cape has a small primary sector (the smallest in South Africa both in absolute terms and as a percentage of provincial GDP), a medium-sized secondary sector and the largest tertiary services sector (as a percentage of provincial GDP) in the country. Within the tertiary sector, the largest subsector is general government (including community services), which accounts for twenty percent of national GDP and contributes thirty four percent of provincial Gross Domestic Product. This underlines the province’s dependence on state spending (and social grants), and its high-risk exposure to future fiscal contractions. Local

economies in the former homelands are particularly dependent on state spending and social grants. The impact at the national level of prolonged recession, low growth and investment levels has been severe, and the Eastern Cape in particular has been badly affected. Most economic activity in the province is in the two coastal metros. The relatively high population growth of several other coastal municipal areas also indicates the emergence of a predominantly coastal economy.

Unemployment has been increasing and this includes the economic hubs (unemployment in Nelson Mandela Bay Metro increased from 26.4% to 28.8% between 2006 and 2016). There are 781 000 unemployed people in the Eastern Cape and there was a net loss of 64 570 jobs between 2006 and 2016. Employment growth has been disappointing since the adoption of the original PDP in 2014 and youth unemployment is now at 40.2% (official definition). Since the downturn, the Eastern Cape has lagged national trends in production, employment, education levels and population growth. This is reflected Eastern Cape's falling share of the national economy on key measures.

Nonetheless, the Eastern Cape also possesses several developmental opportunities, including:

- an 800-kilometre coastline
- underutilised land and water for agricultural development
- some good infrastructure (roads, three ports, and two Industrial Development Zones (IDZs))
- a manufacturing base (built around the automotive industry)
- four universities and eight Technical and Vocational Education and Training colleges (TVETs)
- talented, energetic, innovative and ethical people in all levels of society
- a large and resourced public sector system with the potential to increase its value add

Natural resource stress and climate change

The natural environment provides the basis for human, social and economic coexistence. In this regard, it is important that the interaction between human beings, development and ecosystems is a central part of the PDP. This is based on the definition for the 'environment' as provided by the National Environmental Management Act (NEMA). According to NEMA, the environment is the surroundings within which humans exist. It is made up of the land, water and atmosphere of the earth as well as micro-organisms, plant and animal life. The

environment also includes any part or combination of the aforementioned and the interrelationships amongst and between them as well as the physical, chemical, aesthetic and cultural properties and conditions that influence human health and well-being. The Eastern Cape is vulnerable to climate change. It will likely impact on many aspects of development in the province from the susceptibility of infrastructure, to the availability of water for human, agricultural and industrial consumption towards 2030. Rural and impoverished communities will be particularly vulnerable to climate change with respect to maintaining rural livelihoods, exposure to heatwaves, disease, and susceptibility of dwellings to the destructive forces of extreme weather events.

Climate change in the Eastern Cape has been comprehensively addressed in the Eastern Cape Climate Change Response Strategy (ECCCRS, 2011). It indicates that there is a high probability that the area will experience higher temperatures (1.5°C to 2.5°C), altered rainfall patterns, more frequent, intense and extreme weather events – such as heat waves, droughts and storms – and rising sea-levels and tidal surges. The Eastern Cape is expected to experience highest temperature increases towards the north-west interior, while lowest increases are most likely along the coast. Associated with the higher temperature will be increases in evaporation rates and increased intensity of droughts. Downscaling models for the Eastern Cape have been developed that generally show higher future precipitation levels in the province with an increase more likely to the east and lower levels to the west of the province (ECCCRS, 2011).

The Eastern Cape has not fully transformed spatially or economically. The province still feels the effects of:

- colonial land dispossession
- uneven development that has privileged the urban economy (and continues to do so through interventions with an urban-centric bias)
- a migrant labour system (that has stripped rural regions of human capital and dislocated families and communities)

There are considerable physical and human resources that can be the basis for genuine transformation. The process of urbanisation and settlement changes are noted in this document. However, the Eastern Cape remains predominantly rural, with over 70.0% of citizens living outside of the metropolitan areas; in villages, rural settlements, rural towns and farm areas. Social and economic development indicators score lower – access to services and key facilities are generally lower in rural areas.

The NDP states that rural communities require greater social, economic and political opportunities to overcome poverty. The NDP vision includes better integration of the country's rural areas, achieved through successful land reform, infrastructure development, job creation and poverty alleviation. This includes ensuring quality access to basic services, health care, education and food security. Intergovernmental relations should be addressed to improve rural governance. The NDP argues that plans for rural towns should be tailor-made according to the varying opportunities in each area. In areas with low economic potential, quality education, health care, basic services and social security will support the development of human capital. In areas with some economic potential, non-agricultural activities (such as agro-industry, tourism, small enterprises and fisheries) will boost development.

The PDP understands rural as a spatial category; thus, all the goals and objectives of the PDP contribute towards rural development and transformation. Access to basic social and infrastructural services is a high priority for many rural households, and these are addressed by Goal 2 (Infrastructure Development) and Goal 4 (Human Development). Goal 1 focuses on developing economic opportunities, without which services are unlikely to be sustained in the long term. This includes spatially balanced economic development and small-town revitalisation as well as digital transformation and development of the ICT sector. Goal 5 is concerned with the sustainable use of natural resources, and Goal 6 with institutional development and governance. However, this goal is dedicated to rural development and sets out a vision of an innovative and high-value agriculture and rural sector. As per the NDP, the PDP argues that underdevelopment in the former homelands must be confronted through agricultural development, improved land management, infrastructure and targeted support to rural populations.

The advent of democratic transformation in South Africa in 1994 brought with it the high hope that the triple challenges of poverty, unemployment and inequality would be significantly reduced from the high levels that existed during the apartheid era. These expectations are not being met. Instead, the triple challenges have continued to exist until present. One of the symptoms of these challenges is food insecurity. The concept of 'food insecurity' refers to situations where food is not easily accessible; where households experience difficulties in securing food that is adequate for them (Du Toit, 2011). It also implies that people find themselves living with hunger and the fear of starvation on a daily basis (Reddy & Moletsane, 2011).

Food insecurity at its core exists with food security. Food security implies that there should be adequate food in society at all times in order to sustain an active and healthy life. Firstly, food security is about the availability of food that is safe and nutritious. Secondly, it is about the ability to procure and acquire good quality food in a manner that is socially acceptable. This would involve, for example, obtaining food without using measures such as stealing, scavenging and using emergency food supplies (Du Toit, 2011; Labadarios, Mchiza & Steyn, 2011: p.891).

Food security and/or insecurity is connected to poverty, unemployment and income. 'Poverty' refers to a situation in which people do not have the means of getting basic human needs such as clean water, education, health care, nutrition, shelter and clothing. The situation is characterised by the loss of employment, which results in the loss of income. In the absence of income, the degradation of living standards takes place; hence, unemployed people end up living in poverty. Interestingly, living in poverty creates barriers to searching for employment opportunities, such as having no access to job advertisements in newspapers or on the internet. Consequently, the situation results in long-term unemployment and then food insecurity challenges arise (Du Toit, 2011). In short, poverty, unemployment and the shortage of income are the perpetuators of food insecurity.

Reddy and Moletsane (2011) argue that food insecurity and/or security takes place at three levels: national, community and household. Nationally, food security encompasses the ability of the nation 'to produce, import, retain and sustain food' that is necessary for providing its population 'within minimum per capita nutritional standards'. At community level, food security is concerned with the ability of residents to get food that is safe, culturally acceptable and nutritionally balanced. This food needs to be gained through using a system that is sustainable, in order to achieve self-reliance by community members. Lastly, at household level, food security is concerned with the availability of sufficient quantity and variety in the household, and that members of the household have access to it. In other words, food security takes place only if the household members are not living in hunger or in a situation where they fear starvation (Reddy & Moletsane, 2011). Reddy and Moletsane's perspective of value, as it enlightens policymakers, development practitioners, politicians, administrators and other role-players about spaces they may utilise in the process of monitoring and measuring food insecurity and/or security in their respective backyards.

Indirect traits that influence South Africa's food security status are, for example, the food security crisis experienced in the USA (Springhall, 2012: p.26) and the increasing global population. The rise in the global demand for food cannot be met by the government's current agricultural activities (Thornton et al., 2011: p.118). As the food supply demand increases, food prices escalate. Manyamba et al. (2012) supported by Oot et al. as quoted by Tawodzera (2016) state that the southern region of Africa is often beset with acute food shortages. South Africa is one of the few Southern African Development Community (SADC) countries that has made significant strides to meet the regional target of achieving a cereal yield of 2 000 kg per hectare. These factors indicate the country's ability to feed itself, since cereal production is generally indicative of a nation's ability to supply its food needs. According to Tawodzera (2016) taking all of the above factors into consideration, one may be compelled to conclude that South Africa has no food problem. However, that conclusion would not be entirely true, because the situation at national level is not necessarily replicated at sub-national levels. On a sub-national scale, chronic food insecurity is still pervasive – largely as a result of poverty and structural inequalities in the country, as well as skewed income distribution among the country's populace (Altman, Hart & Jacobs, 2009).

According to Davies (2016) and Riley and Legwegoh's (2014) comparative work in Gaborone and Blantyre: place and scale matter in food security outcomes. Diverse historical, geographical and sociological contexts in southern African cities result in context-specific food security determinants and outcomes. Urban residents, particularly the poor, are vulnerable to food system changes that occur at multiple scales (Acquah et al., 2014, Mitlin & Satterthwaite, 2013, Resnick & Thurlow, 2014). Haysom (2014: p.31) argues that, 'the food system thus embodies the scale debate, highlighting the hierarchical components but also reflecting that the contingent outcome of the tensions between structural forces and agentic practices'. Changes in the contextual environment affect the calculated genetic actions at the scale of everyday life within food networks, and the unrecognised connections between value chains and fluid urban spaces. Interactions between local and global forces shape food systems. Thus, local food systems differ from place to place, with critical implications for food security responses that are imperative for the future of southern Africa.

In comparison with other countries, South Africa is considered to be performing well in securing food for its population. The country has the capacity to produce adequate staple foods (or to import food where there is a need to do so), in order to fulfil the basic nutritional needs of its people. However, a concern is that while food security seems to exist at the national

level, it is inadequate at the household level, especially in rural areas (Du Toit, 2011). Therefore, this situation uncovers the fact that the distribution of food among members of the population in the country is unequal.

The country is still characterised by a gap between the rich and the poor that keeps widening due to drought. Rich people seem to have more than enough access to food security, while poor people live in conditions of food insecurity. Rose and Charlton (2001) support this view, as they argue that the nation has an adequate food supply to enable it to feed the entire population; despite this, the country is dominated by cases of undernutrition within certain segments of its population.

South Africa has made efforts to meet the challenge of food insecurity. However, such efforts are inhibited by the fact that gaining access to food security is influenced by multiple factors that are dynamic in nature. Altman, Hart and Jacobs (2009b) argue that these multiple factors are not easily understood – and that they may have a negative impact on the country’s ability to identify relevant policies and programmes that would assist in making food accessible to individuals and households.

Some examples of these multiple factors and the dynamic nature of food security and/or insecurity are mentioned below:

- The increasing food prices have a negative impact on food security. Staple foods (such as maize and wheat) are vital to the poor people in South Africa (Human Sciences Research Council (HSRC), 2007); thus, the rise in staple food prices makes these foods inaccessible to them.
- The low production of staple foods (for example, cereals) by different nations in the world makes food inaccessible (Du Toit, 2011).
- Gender issues, such as women not owning land and property in some areas, mean that women have less access to an income; ultimately, this perpetuates their food insecurity.
- Unemployment (as previously mentioned) is one of the factors that contributes to the continuation of food insecurity.
- Food security changes often, which brings challenges in accurately measuring it and making use of policy interventions. The difficulty in understanding it may be attributed to the confusing trends at both the national and at household level – that is, the actual experience of households which should be obtaining food (Altman, Hart & Jacobs, 2009).

Good performance in commercial agricultural production does not necessarily equate to accessibility of food. Sometimes, this might be determined by factors such as what is occurring in food markets and the functioning of distribution systems (Altman, Hart & Jacobs, 2009b). Therefore, factors such as these have an influence on the accessibility of food to households.

These examples indicate that providing solutions to the food insecurity problem is not a straightforward process. This is due to the multiple factors and the dynamic nature of food insecurity, which inhibit the efforts to solve this challenge. In light of these points, this study aims to gain a better understanding of the factors that influence the food security. The thesis' research focuses on the factors that negatively influence food security in the Eastern Cape and will suggest the most effective and appropriate intervention methods that may solve the problem of food insecurity in the province.

The Amathole District Municipality (ADM) was officially demarcated after the local government elections in December 2000, during the establishment phase of South African municipalities. The district is situated on the eastern seaboard of the Eastern Cape and stretches from the Indian Ocean coastline in the south, to the Amathole Mountains in the north, and from Mbolompo Point (just south of the Hole-in-the-Wall along the former Transkei Wild Coast) in the east, to the Great Fish River in the west. The ADM is one of six districts within the EC and is the third largest district in the province in terms of population (behind the O.R. Tambo and the Nelson Mandela Bay Metropolitan areas). The district covers a land area of roughly 21 229km², and the three district municipalities of Cacadu, Chris Hani and O.R. Tambo municipalities border it.

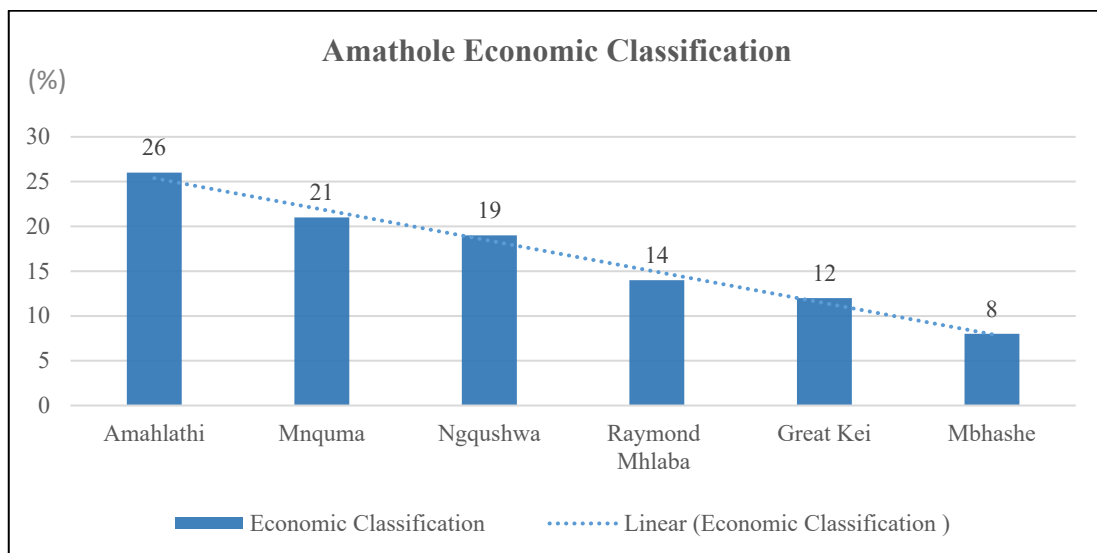
The demographic profile of the ADM presents the district and local municipality (LM) population dynamics, household, age and gender distributions, as well as the district and LM access to basic services. The ADM's health profile is also provided in this section. The population estimates for 2013 indicate the Amathole District Municipality has 898 000 people, which is a 0.9% increase from 2011, 0.6% decrease from 2007 and 4.4% decrease from 2000. A significant part of the former Ciskei homeland is located within the Amathole district, and this has influenced the region's population growth. Population density is high in settlements along major transportation routes including the N2 (Butterworth and Dutywa), the R72 (Peddie), the R63 (Alice) and the N6 (Stutterheim).

The main demographic challenges for the Amathole District Municipality as stated by the district’s vision 2030 are:

- poverty, with 59.0% of the district population earning under R1 600 per month
- education, with only 19.0% of the population having completed matric or higher qualifications
- HIV/AIDS and tuberculosis (TB) remain national, provincial and district level concerns for South Africa, although the Amathole District Municipality and Eastern Cape situation is improving slowly

Further, the Amathole District Municipality district vision of 2030 reveals that in reviewing the local municipal contribution to the district economy, Amahlathi accounts for the largest share of the provincial GDP. While Amahlathi has a lesser spatial contribution to the district – and does not have the major share of population – it is, however, the main contributor to economic activity, accounting for 26.0% of the GGP. The second largest contributor to economic activity and growth is Mnquma, with 21.0%. This is due to its historical strengths as the economic hub of manufacturing activity in the former Transkei. The question that requires further interrogation relates to what the picture for Mnquma is, as individual municipality.

Figure 1:2 The Amathole District Municipality economic classification



Source: SERO, 2017

The district’s economy is primarily dominated by community services. This dominance has continued to grow since 1996 and reflects the presence of government services. The bias of the economy is understandable given the dominance of the former Bantustan areas in the

region. The district hosts the former Transkei (Mnquma and Mbhashe) and Ciskei (Raymond Mhlaba and Ngqushwa) regions. Given the centrality of the government services in the former Bantustan areas, it is not surprising that this trend has continued with the integration into the ADM. The second main contributors to regional economic activity from a sector perspective are finance and trade. This reflects the presence of the banking industry that provides services to government employees that benefit from the community services. In addition, trade dominance is also linked to the massive presence of the government services in the form of government social grants and salaries of government employees.

Although the region hosts four higher educational institutions (the University of Fort Hare (UFH), Walter Sisulu University (WSU), Fort Cox Agriculture and Forestry Training Institute (FCC), Lovedale Technical Vocational Education and Training College (Lovedale TVET college), this has not translated into improved socio-economic status for the people of the region, according to Statistics South Africa (STATS SA) (2011).

The challenge facing the delivery of infrastructure to the rural parts of the region is further compounded by the absence of reliable sources of financing. The district currently depends on conditional municipal grants. These are made available by the national government, through the Department of Cooperative Governance and Traditional Affairs (CoGTA) and the Municipal Infrastructure Grant (MIG). The fiscal formula for the allocation of funds to municipalities does not favour the district. The district (which includes two former Bantustan areas) has to deal with the challenge of massive infrastructure backlogs. The current formula used by the National Treasury does not take into account these backlogs inherited from the apartheid past in determining the allocation of resources. Therefore, it is critical that the district explores creative means of mobilising resources to deal with backlog, which include water, sanitation, transport and other economic needs, and are enablers of sustainable development and investments. These backlogs constrain the capacity of the region to grow at levels that could deal decisively with underdevelopment and poverty.

The motivation for conducting this study is based on the researcher's involvement in food security projects as part of his full-time government employment. The researcher's observation is that the food insecurity challenge is persistent, despite the many efforts that have been made by government to eradicate food insecurity in the province. This study is thus concerned with gaining a better understanding of the factors that might account for the persistence of the food

insecurity, in order to come up with effective and efficient intervention methods to solve this problem.

1.3 Statement of the problem

The Food and Agriculture Organization of the United Nations estimates that about 815 million people of the 7.6 billion people in the world (or one in ten) were suffering from chronic undernourishment in 2016. FAO further argues that almost all of the hungry people live in developing countries, which proves to be so difficult to understand. According to the FAO, a common strategy among different nations of the world to reduce or eliminate all manifestations of hunger and tackle food insecurity is currently under implementation. This is as the World Food Summit and the Sustainable Development Goals (SDGs) have proposed – to achieve halving the proportion of people in the world who suffer from hunger. The time horizon raised for the achievement of this goal is the year 2030, focusing on developing countries to generate food plans, national and regional programmes, and public policies aimed at improving the food security.

According to world hunger statistics, 795 million people in the world do not have enough food in order to lead a healthy and active life. That is approximately one out of nine people on earth. The majority of hungry people live in developing countries, where 12.9% of the population is undernourished. Asia has the hungriest people – where two thirds of the continent faces a catastrophic situation of hunger. However, the percentage in Southern Asia has fallen in recent years but it has increased slightly in Western Asia. Whilst the sub-Saharan Africa is the region with the highest prevalence facing hunger (in terms of population percentage), in the region it is estimated that one person in four is undernourished. Bearing in mind that poor nutrition causes nearly half of the deaths in children under five (45.0%, and 3.1 million each year), one out of six children – roughly 100 million – in developing countries is reportedly underweight. World statistics further reveals that growth of one in four children in the world is stunted, and in developing countries this proportion can rise to one in three. If female farmers had the same access to resources as men, the number of hungry people in the world could be reduced by up to 150 million. Across the developing world on the education front, it has been reported that 66 million children of primary school-going age attend classes while hungry – 23 million in Africa alone. The World Food Programme (WFP) agrees with the FAO world statistics and calculates that US\$3.2 billion is needed per year to reach all of the 66 million hungry school-age children, despite the concerted efforts of the Sustainable Development Goals (SDGs).

Food insecurity in the developing world is different compared to developed countries. Household food insecurity in developing countries is commonly measured through consumption and anthropometric measures, and is often used interchangeably with similar concepts such as poverty, malnutrition and hunger (Coates et al. 2006). This is evidenced in several definitions of food insecurity. 'A person is considered food-insecure, or hungry, if average food availability or access to food falls below the Food and Agriculture Organization's recommended average calorie intake levels of approximately 2,100 calories per day, with some differences among regions' (Meade, Rosen & Shapouri, 2007). 'Food insecurity as a concept concerns the risk of macronutrient or micronutrient deficiency, which may threaten the physical wellbeing of the individual' (Barrett, 2002). Malnutrition, hunger, and at the most extreme, starvation, are extreme forms of food insecurity. However, there are also households that are food-insecure and are not immediately experiencing malnutrition, hunger or starvation.

It is difficult to deny that these extreme forms of food insecurity exist in the developing world. Of the estimated 953 million undernourished people in the world, about 820 million live in developing countries, with about 200 million of them in sub-Saharan Africa. The situation has been worsened by the rise in food prices, which has restricted economic access to food for many in developing countries. Here it is currently estimated that about one in three people are deprived of access to sufficient food (FAO, 2008). Many factors have exacerbated the food insecurity issue in developing countries. One such factor is the HIV crisis that is ravaging many countries in sub-Saharan Africa (UNAIDS, 2004b). Food insecurity and HIV have an unhealthy two-way relationship that works through malnourished individuals engaging in risky behaviour in order to survive (e.g., traveling for food and additional income, migrating, engaging in hazardous work, and exchanging sex for money or food, among others). The result is the cycling of poverty, as, individuals weakened by HIV find it harder to access food because they are not healthy enough to work (Oxfam, 2002). This tragedy has severe implications for children in this region. The massive explosion in the number of AIDS orphans has led to increased poverty and poor nourishment among other negative conditions faced by these children (Oxfam, 2002). Other factors such as conflicts, persistent droughts, increased grain prices and spiralling energy costs have compounded the food insecurity issues in sub-Saharan Africa (FAO, 2006; Meade, Rosen & Shapouri, 2007).

Food insecurity is an ongoing problem in the Eastern Cape despite many programmes and projects that have been put in place by the present government as a means of alleviating this

problem in households. Vulnerable groups are the most affected by food insecurity. Clarity is lacking about:

- the extent to which households could access enough quality food
- the extent of food security in the near future
- factors that inhibit the achievement of food security in diverse households in the province

It is against this background that this study sets out to determine the dynamics of food insecurity and vulnerability in the Amathole District Municipality. The agricultural activities, assets and needs of the people in the district will be examined in line with food insecurity, in order to formulate effective and efficient intervention methods.

Not much has been documented on the status of household food production, household food consumption patterns, household sources of food, status of household food insecurity and coping strategies in the Amathole District Municipality. Due to the aforementioned observation, the study on understanding the dynamics of food insecurity and vulnerability, as well as coping strategies in the Amathole District Municipality was deemed necessary.

1.4 The research goal and objectives

The main goal of this study is to investigate and determine the current food insecurity status and assess vulnerability to food insecurity among households in the Amathole District Municipality.

Some of the following specific objectives will accomplish the goal:

- To investigate and statistically determine the major sources of income and food of the vulnerable people of the Amathole District Municipality.
- To profile the level of household food insecurity in the Amathole District Municipality.
- To estimate the vulnerability of food insecurity in households quantitatively.
- To identify which people are vulnerable to food insecurity and to analyse the socio-economic characteristics of households with higher vulnerability.
- To scrutinize influencing factors of vulnerability to food insecurity.

1.5 The research questions

In line with the above stated objectives, the principal motivation of the present analysis is thus to explore the following questions:

- What are the sources of income and food of the vulnerable people of the Amathole District Municipality?
- What is the current rate of food insecurity in the research area?
- Who is vulnerable to food insecurity and what are the characteristics of households with vulnerability?
- Do the characteristics featuring households with food insecurity and households with vulnerability differ?
- What is the degree of households' vulnerability to food insecurity in the rural part of the region, and what are its influencing factors?

1.6 Significance of the study

This study will make a contribution by creating a body of knowledge on the subject on food insecurity and vulnerability in the Eastern Cape. The generated knowledge will be useful in terms of community engagement by the three spheres of government and civil society. Since this has been a lengthy problem in this community, the findings from this study will be used to design and develop intervention methods that will bring about food security. Food security and vulnerability analysis will enable strategic stakeholders to identify the food secure and insecure households within communities and try to predict how the different segments of population will be affected by unexpected adverse events. Such an identification mechanism can be used to design appropriate pre- and post-shock institutional assistance strategies. Aid agencies and development organisations continue to face challenges of needs assessment and targeting interventions, since there is a lack of mechanisms that can be used to differentiate food secure from food-insecure, or at-risk, households. Therefore, it becomes important to identify the food-insecure sections of the society and predict what their situation will be when they face an adverse shock. Once the insecure or at-risk households are identified and we know what resources they lack, interventions can be designed to provide the households with those resources, thus enabling them to get out of hunger trap.

Moreover, a deeper understanding of the characteristics of vulnerable groups would provide an empirical basis for social policy, thereby strengthening both the analytical and operational content of the Ethiopian poverty reduction programme in general, and the study area in particular. This study therefore provides an approach on what can be done to help the current food-insecure to be food-secure and to reduce the likelihood of the vulnerable from falling into food insecurity in the future. Consequently, such studies are important for the success of efforts

to be made in the area of ensuring food security. Policy makers and planners will also use these lessons (on designing effective strategies) to not only reduce the current food inadequacies faced by households, but also exposure to future food insecurities. The envisaged strategies include informing people about the lack of community participation in government projects on food security, and developing a sense of reliance on community members to enhance food security in their households.

1.7 Scope of the study

It is assumed that all members in a household are undernourished if their calorie consumption (per adult equivalent) is less than the calorie intake cut-off. Conversely, all household members with per adult equivalent calorie consumption above the cut-off are considered to be consuming sufficient calories. Various studies of South African household livelihood and coping strategies have found that household members may not fully share risk factors for undernutrition, and an individual in a household that is defined as not being undernourished, may be in fact be undernourished (Dercon and Krishnan 2000). Given data constraints, we are unable to calculate calorie intake variations within the household; besides which, the ideal vulnerability analysis requires panel data. However, in this study vulnerability estimation is made using the model developed to estimate vulnerability to food insecurity using cross-sectional data. This may however cast doubt on the entire dynamism of the analysis.

1.8 Research plan

The framework of the research study is illustrated in Figure 1.2 and was developed by the researcher under the supervision of Professors E.N. Khalema and co-supervisor T.I. Nzimakwe.

Figure 1:3 Research framework



Source: Researcher's own contraction

1.9 Limitations of the study

The study will be undertaken among households of the Amathole District Municipality community and therefore, could be generalised to other communities beyond the district. The study will mainly focus on understanding the dynamics of food insecurity and vulnerability in

the Amathole District Municipality and will not explore animal production as a means of food security. The study will try to assess the nutritional status of household members. In addition, the study will look only at food availability and access, and will not look at food utilisation. According to Creswell (2009), at the theoretical level, several limitations could be encountered as the data has been extrapolated from the interviews. The sample size is small, and findings may not be applied to the population as a whole. Furthermore, the participants may not accurately reflect the entire population, and therefore, the findings must be considered with caution. However, the findings may provide directions for future research.

1.10 Delimitations of the study

Simon (2012) states that delimitations are defined by the researcher in order to reduce the size of the research objectives. Delimitations are in the control of the researcher. The proposed study's scope will focus on vulnerable household members of the ADM only (which includes seven local municipalities) and the issues regarding food security and/or insecurity. External stakeholders, such as customers and suppliers, will be excluded due to time constraints. Regarding data collection, it will be assumed that all households will answer the survey questions honestly, and that people will remember all the foods purchased during the month prior to the survey. It will be assumed that the Coping Strategy Index (CSI) measures food security and/or insecurity accurately and directly. Lastly, it will be assumed that the scale of production is not dependent on the area; therefore, every person who participates in the survey will have an equal opportunity for production.

1.11 Operational definitions of terms

The definitions given below were developed and obtained from multiple sources as well as (in some cases) from the research process itself. Where relevant, references for these definitions have been provided in the main body of this thesis. The following key terms and their meanings will be used in this research study:

Affectivity:

Means adequate to accomplish a purpose, producing the intended or expected result to be effective.

Agricultural land:

Any land used for farming purposes. Is situated in the area of the jurisdiction of a municipal council and was classified as agricultural land when the first members of the council were elected.

Agri-park model:

A networked innovation system of agro-production, processing, logistics, marketing, training and extension services located in district municipalities. As a network, it enables a market-driven combination and integration of various agricultural activities and rural transformation services.

Amathole District Municipality:

The Eastern Cape is divided into six districts and two metropolitan municipalities (i.e., metros). The six districts of the Eastern Cape are Alfred Nzo, O.R. Tambo, Amathole, Chris Hani, Joe Gqabi and Sarah Baartman, with the two metros being Buffalo City and Nelson Mandela Bay. The districts and the two metros are further sub-divided into sub-districts for ease of governance and management. The Amathole District Municipality consists of four sub-districts: Amahlati, Mbhashe, Mnquma and Nkonkobe, District Health Information System (DHIS, 2009). This study will be conducted in the Amathole District Municipality.

Antioxidant vitamin:

A type of vitamin found in fruits and vegetables that may help fight infection.

Capacity:

The combination of all strengths and resources within a community that can reduce the level of risk or disaster Intergrated Strategy for Disaster (ISDR, 2003).

Civil society:

The part of the society that consists of organisations and institutions that help, and look after people, their health and rights. This excludes the government and the family.

Community:

A coherent, social group of people with interests or rights in a particular area of land which the members have, or exercise communally, in terms of an agreement, custom and/or law (ISDR, 2003).

Dependency:

An attitude and belief that a group cannot solve its own problems without outside help. It is a weakness that is made worse by charity (Bartle, 2007).

Disaster:

A progressive, suddenly widespread or localised natural or human-caused occurrence that causes, or threatens to cause, death, disease or damage to property, infrastructure or the environment; it can also cause or threaten to cause the disruption of the life of a community. It is of a magnitude that exceeds the ability of those affected by the catastrophe to cope with its effects using only their own resources (Blaikie et al., 2006)

Disaster risk reduction:

Prevention and mitigation through environmental management, land-use planning, protection of critical facilities, networking and partnership, and financial tools (Concern, 2004).

Early warning:

The provision of timely and effective information through identified institutions that allow individuals who are exposed to hazards, to take action to avoid or reduce the risk, and prepare for effective response (ISDR, 2003).

Experience:

Knowledge or skill resulting from practice or learning (Longham Dictionary of Psychology and Psychiatry, 1988).

Food:

Any substance consumed to provide nutritional support for the human body. It is usually from animal or plant origin and contains essential nutrients such as carbohydrates, fats, proteins, vitamins and/or minerals.

Food accessibility:

Refers to the ability of households to obtain sufficient food for all members at all times, either through production for own consumption or through exchange.

Food availability:

The total quantity of food available, including domestic food production, international importation and efficiency of food distribution. It is assessed in light of the food requirements for the population.

Food chain:

The systematic production and development of food from the primary production until consumption.

Food control:

A mandatory regulatory activity of enforcement by national and local authorities to provide consumer protection and to ensure that all foods during production, handling, storage, processing and distribution are safe, wholesome and fit for human consumption – conforming to safety and quality requirements and which are honestly and accurately labelled.

Food insecurity:

When an individual or community has no physical or economic access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life (World Food Programme [WFP] Manual, 2006).

Food security:

When a family has enough food for all of the people that live in that household. Every person in the household is taken care of and does not go hungry.

Food security intervention:

Policies, projects and programmes at all scales and all other human activities intended to mitigate food insecurity.

Food utilisation:

Refers to the final use of food by individuals at household level.

Hazard:

A physical situation with the potential for human injury, damage to property, damage to the environment or some combination of these. It is a potentially damaging phenomenon and only

has the potential to become a disaster event when it occurs in populated areas where it can cause loss of life or major economic loss (Allen, 1992).

Household:

A social unit composed of individuals with family or other social relations among themselves, eating from one pot and sharing a common resource base (World Food Programme [WFP], 2002).

Hunger:

Refers to the recurrent involuntary lack of access to food.

Infant:

A child from birth to 12 months of age.

Integrated Development Planning (IDP):

A 'principal strategic planning instrument which guides and informs all planning and development and all decisions with regard to planning, management, and development, in the municipality' (Municipal Systems Act 32, 2000, Chapter 5 and 35 1[a]).

Immunocompetent:

Having normal capacity to develop an immune response to infection-causing antigens.

Immunosuppressed:

Having a suppressed immune response to infection-causing antigens, including deliberate suppression of the response in order to control autoimmune diseases.

Job satisfaction:

'[A] worker's attitude about various aspects of the job' (Kruger, 1986: p.5).

Local Economic Development (LED):

A participatory process that encourages social dialogue and public-private partnerships in a defined geographical area. LED enables local stakeholders to jointly design and implement a development strategy that fully exploits local resources and capacities and makes best use of the area's comparative advantages (International Labour Organization (ILO)).

Livelihood goals or outcomes:

The goals people pursue by drawing on the resources available to them. These goals may include increasing the time available to them for working, poverty reduction, well-being and improvement capabilities.

Livelihood strategies:

The way people use the resources available to them in pursuit of livelihoods goals. These may include intensification and/or agricultural intensification, livelihood diversification or mitigation.

Malnutrition:

A broad term commonly used as an alternative to undernutrition, but which also refers to overnutrition. People are malnourished if their diet does not provide adequate nutrients for growth maintenance or if they are unable to fully utilise the food that they eat due to illness (undernutrition). They are also malnourished if they consume too much energy (overnutrition) but are also at risk of micronutrient deficiencies.

Needs:

Are gaps between what is and what should be (Tabezinda & Mc Calsin, 2007).

Older infant:

Children between six and twelve months of age.

Opportunistic infection:

An infection that takes advantage of a weak immune system. These are common in people with HIV and vary from TB and persistent diarrhoea to pneumonia and Kaposi's sarcoma.

Oxidative stress:

A disturbance in the equilibrium of pro-oxidant or antioxidant systems of intact cells. Oxidative stress in HIV may be caused by both the overproduction of reactive oxygen intermediates (ROI) and a simultaneous deficiency of antioxidant decencies.

Poverty:

The poor characterise poverty as isolation from the community, lack of security, low wages, lack of employment opportunities, poor nutrition, poor access to water, having too many children, poor educational opportunities and misuse of resources, among other things.

Poverty alleviation:

‘[A] shorthand for an intervention aimed at a sustained improvement in the economic status of the poor, by raising incomes and creating new opportunities for employment, which in turn bring about increased consumption, savings and investment’ (Riddell, 1990: p.48).

Poverty eradication:

The Concise Oxford Dictionary of Current English (1982) describes ‘poverty eradication’ as ending deep poverty and bringing the general poverty rate down to address income adequacy to meet the basic necessities of life rather than to rely on programmes that make the poor responsible for their poverty.

Researcher:

This term has been used interchangeably to refer to the author of this thesis and the researcher of the study reported on, in the thesis.

Resilient community:

A resilient community is one that takes intentional action to enhance the personal and collective capacity of its citizens and institutions to respond to, and to influence the course of social and economic change (The Community Resilience Manual, 2000).

Risk:

The probability of harmful consequences or expected losses (death, injuries, damage to or loss of property, loss of livelihoods, disrupted economic activity or environmental damage) resulting from interactions between natural and human-induced hazards and vulnerable conditions (Government Gazette, 2005).

Risk of hunger (also known as ‘at risk of hunger’):

Consistent access to adequate food is limited by a lack of money and other resources at times during the year; includes the limited or uncertain availability of nutritionally adequate and safe foods, as well as involuntarily cutting back on meals or food portions, or not knowing the

source of the next meal. Includes categories of low and very low food security, indicating degrees to which food intake is reduced or normal eating patterns disrupted because of lack of money and other resources for food.

Social security:

The assistance provided by the government for those in need through being unemployed, ill or disabled.

Strategy:

A broad plan or policy for achieving something or the planning and directing of the whole operation of a campaign.

Vulnerability:

A characteristic of a person or group and their situation that influences their capacity to anticipate, cope with, resist and recover from the impact of a natural hazard (Blaikie et al., 2004).

Wasting:

In children, weight for height more than two standard deviations below the median reference level; in adults, involuntary weight loss of at least 10.0% of body weight.

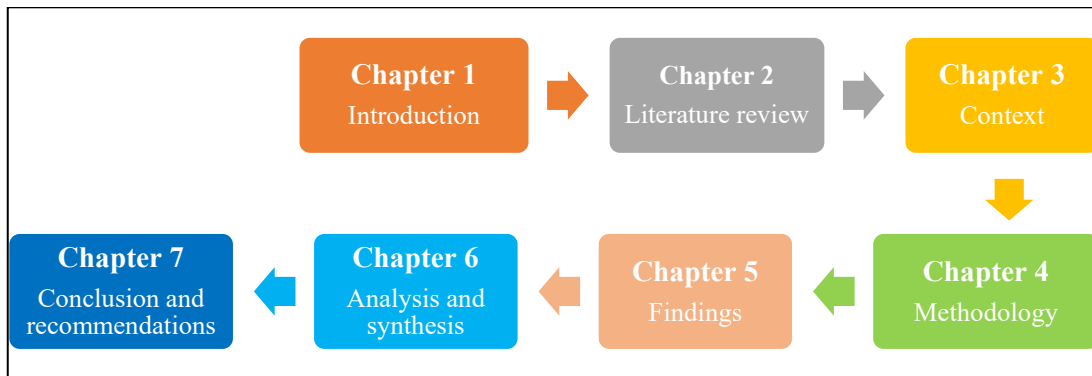
Young child:

A child between the age of twelve and thirty-six months.

1.12 Outline of the chapters

An overview of the research is illustrated in Figure 1.3 below, which represents a summary of each chapter conducted by the researcher under the supervision of Professor E.N. Khalema and co-supervisor Professor T.I. Nzimakwe.

Figure 1:4 Thesis overview



Source: Researcher's own construction

1.12.1 Chapter 1: Introduction

This chapter presents the study's contextual background and rationale for the research. It provides a statement of the problem and the aims of research. It presents the research questions used to guide the study, the goal and objectives of the study, the definition of the key terms used in the study, and the methodology used to gather information for analysis.

1.12.2 Chapter 2: Literature review

This chapter will present the first part of the literature review, which will display the theoretical framework that informs the study. Both international and national literature that link with the studied phenomena will be reviewed in this section.

1.12.3 Chapter 3: Context

This chapter will give context that aims to provide some perspective, introducing the research area through a discussion of its history and socio-economic profile. Beginning with an outline of the provincial state of affairs, the chapter will move on to discuss the history of the broader research area, the Amathole District Municipality (which is the study's location).

1.12.4 Chapter 4: Research methodology

This chapter will present the research methodology used in the study. The research paradigm, approach and design will be explained as they apply to the study. The study population, sampling procedures and research instruments used to collect and analyse the data will also be explained.

1.12.5 Chapter 5: Findings

This chapter will present the data that relates to the studied phenomena; the study's findings will be revealed by the data analysis.

1.12.6 Chapter 6: Analysis and synthesis

This is the discussion chapter where the findings are evaluated in light of related literature to establish links with the lessons learnt from what has been experienced. The chapter will further give the summary of the findings in relation to the problem, as unearthed by the methods used to extract the findings from the data and in relation to the themes extracted from the sub-questions raised.

1.12.7 Chapter 7: Conclusion and recommendations

The conclusions and recommendations reached, as well as their implications, conclude the chapters of this study. Finally, this thesis will end with a complete bibliography of sources, followed by appendices, which include the questionnaires and letters of introduction, and research permission letters from local municipalities of ADM.

1.13 Conclusion

This chapter has provided the conceptual understanding of food insecurity and vulnerability in the Amathole District Municipality. The chapter outlined the study's background as well as an overview of the study. The research topic was contextualised, and the objectives of the study stated. The significance of the study as well as the problem statement and related research questions were also explained. A summarised demarcation of the study was presented, and the structure of the thesis and operational definitions were provided.

Key operational definitions used in this study were identified and clarified to give meaning to the relevance of such terms and concepts of this study. In the next chapter, the literature on food insecurity and vulnerability will be discussed in detail. This will be from both an international and an African perspective. The theoretical framing context for this study, practice and the relationships among the aforementioned will also be discussed.

CHAPTER 2 : REVIEW OF RELATED LITERATURE

‘While humanity shares one planet, it is a planet on which there are two worlds; the world of the rich and the world of the poor.’ (Raanan cited in Tofik, 2012: p.173).

2.1 Introduction

Chapter 1 introduces various issues that are related to global food security, insecurity and vulnerability. Among these issues is the concern as to whether world can implement development policies without harming the environment – on which human life and that of all other organisms thrive; thus, promoting sustainable development. The introduction to Chapter 1 points out key issues: that despite increasing poverty levels in the country and heightened vulnerability of the poor to food insecurity, it seems that there is very little recognition of the scale and enormity of the challenges that the poor face on a daily basis.

This chapter will present both a theoretical framework and a literature review for this study. Silverman, as quoted by Yuejin Li (2012), states that without theory, there will be nothing to research. The significance of theory in social science research cannot be contested. It provides the background and framework for understanding social research (Bryman, 2008). Even though the researcher should make use of theory in his research, he should also exercise care in its application, since no single universal theory suits all research in social science – and this thesis is no exception to that rule. However, this thesis will start by explaining some theories that will be used in this chapter as a starting point. It will then describe the history and definition of food insecurity as well as the situation of food insecurity in the world (in particularly in Africa, South Africa, the Eastern Cape and the Amathole District Municipality) by drawing on the relationship between state policies and actual grassroots practises.

Concepts that are discussed here:

- the definitions and discourse of food insecurity
- vulnerability and food sovereignty
- theories of poverty that is, political economy theory
- Tweeten’s (1997) Three Dimensions on Food Security
- a conceptual model of food access
- the Rural Food System Conceptual Framework
- the views of social scientists and food system’s commentators

- the South African context
- civic society organisations

Both international and locally produced literature that links to the studied phenomena are reviewed in this chapter. The main purpose of reviewing literature during research is described by Leady (1989) as, to assess the research completed in the related area. Reviewed literature provides the guidelines to plan and accomplish proposed research studies in light of the conclusions drawn from the previous works. Further, it also checks and avoids unnecessary repetition. Thus, the review of literature aims to provide a base upon which the future research is to be built (Borg & Gall, 1989).

Wide-ranging literature is available on both food security and insecurity as well as on vulnerability and resilience. Some commentators have approached the theme of food insecurity from purely theoretical viewpoints, while other commentators and researchers of the subject have reported the wide-ranging findings after fieldwork. The current literature reviewed for the purpose of this study is an attempt to review both primary and secondary data on food insecurity and vulnerability, specifically referencing the ADM. While the geographical focus for this study is the ADM, in addition, several other relevant publications were revisited. The reviewed data includes academic and research publications, annual and quarterly reports (produced by government officials), civil society and academics (doing research in the area), and media houses that are dispensing local news. It should, however, be highlighted that there is a lack of credible technical and academic work in the above-mentioned publications. In this chapter, the relevant literature concerning the research under investigation is reviewed to guide and influence the study.

Before reviewing the related literature, a brief presentation of theoretical background on food insecurity, vulnerability, and food sovereignty is in order. Theoretical explanations emphasise the coordinating phenomena to a limited number of concepts (linked by both hypothetical and verified statements about their interrelationship). According to Dahri (2007), theory serves essentially the same purpose as a road map and travel plan for the journey – Chapter 7 will be the destination of this thesis (that is, the summary of findings and concluding remarks). Furthermore, Dahri (2007) states that it also provides a base for information to carry out the proposed research, with a practical field study further aiding the research of others and ensuring continuity and integration.

2.1.1 *Theoretical background*

There are many ways of looking at any phenomena. Everyone is probably familiar with the old story about the three blind men as retold by Dahri (2007) who encountered an elephant for the first time. The first man ran his hands over the animal's broadside and described that the elephant was like a wall. The second blind man felt one of the creature's huge legs, and described that the elephant was similar to a tree. Finally, the third blind man, whilst handling the beast's flexible trunk declared that the elephant resembled a large rope. Anyone may be amused at the ludicrous conclusions of the three blind men, but they aptly illustrate that people tend to 'see' and interpret things within their own frame of reference – that is, based on limited personal experience and inclination. These diverse viewpoints that people may have, are perspectives or approaches. The discussion below focuses on the theories related to both food insecurity and vulnerability (theoretical frameworks on food security). It will look at the four theories of food security, namely: (1) Political Economy Theory, (2) Tweeten's (1997) Three Dimensions on Food Security, (3) Sharkey et al.'s (2010) Conceptual Model of Food, and (4) Stubblefield et al.'s (2010) Rural Food System Conceptual Framework.

2.1.2 *Political economy theory*

According to Keen (1994) as cited in Collinson (2003), the distribution of power and wealth between different groups and individuals and the processes that create, sustain and transform these relationships over time can be viewed through the lens of the Political Economy Theory. Further, Keen (in Collinson, 2003) avers that the Political Economy Theory looks at vulnerability in terms of powerlessness rather than simply examining the material needs of a society. People are the most vulnerable when their livelihoods and coping strategies are deliberately undermined. Of the contemporary authors (Lecoutere et al., 2009) connected Political Economy Theory with the complex interaction of food insecurity and conflict and/or war. Further, they (Lecoutere et al., 2009) argue that food insecurity is a political phenomenon, not only caused by lack of food production or market irregularities, but also due to political powerlessness. Thus, rather than keeping to the availability of food and people's access to food as the only means out of food insecurity and famine, Political Economy Theory proposes that interventions have to focus on state reconstruction, good governance and accountability. Devereux (1993) advocates that in many ways, governments contribute to the occurrence of famine and food insecurity.

According to Devereux (1993), there are four ways that the government contributes to the occurrence of famine, and lists them as follows:

- inappropriate policies (the Sahel famine)
 - failure to intervene (the Chinese famine of 1958–1960, the Bangladesh famine in 1974 and the Ethiopian famine in 1974 and 1984)
 - by-products of war (Mozambique and Chad in 1980, Ethiopia in 1985 and Somalia in 1990)
 - intentional creation of famine by the government (Soviet famine in 1933 and Dutch famine in 1994), e.g., the Ethiopian famines in different years as mentioned by Vadala, (2009) are strongly associated with the government's failure to overcome and manage the situations
- Devereux (1993) purports that famine could not be explained exclusively in terms of resource shortage, as he regards politics as no less important, but to a large extent it play a part in the bigger picture on managing world and/or human relations during power politics.

2.1.3 *Tweeten's three dimensions on food security*

Tweeten's (1997) Three Dimensions on Food Security argues that the concept food security is defined in terms of three dimensions: food availability, food access and food utilisation.

2.1.3.1 *Food availability*

Food availability is concerned with the supply of foodstuffs in a particular country. The manifestation of this supply may take place in the form of production or imports. This implies that there is a 'bread basket' of food, which is available to be consumed by a country's population (Scanlan, 2001). According to Burchi and De Muro (2012: p.2), this view is in agreement with Malthusian's (1789) approach, which focuses on the equilibrium or disequilibrium between a population and the available food in the country.

The argument here is that in order to maintain this equilibrium it is necessary to balance the country's population and its capacity to produce food. Thus, the food availability growth must not be less than the rate of growth of the population (Bajagai, 2013: p.4; Muro, 2012: p.2). This is because if the population grows more than the quantity of available food, then food insecurity will take place in a country.

Furthermore, among the means of providing a solution to this matter is that the appropriate authorities (be it government, NGOs or the private sector) need to take the necessary steps to

ensure that the balance between the country's population growth and its production capacity is maintained. One of the approaches is to embrace the maintenance of the balance between the demand and supply mechanism, which is usually used in the field of economics. According to Burchi and De Muro (2012: p.2) the demand side is concerned with the necessity of reducing the rate of a country's population growth; for instance, birth-control measures. On the supply side, the appropriate approach would be increasing a country's food production capacity so that it becomes harmonious with the population's growth rate. Therefore, maintaining a balance between the country's population rate and its capacity to produce food is one means of mitigating the challenge of food insecurity.

This discussion provides a constructive perspective on issues about food availability and population growth. It highlights the necessity for authorities to find a means of creating a balance between food availability and population growth. However, it does not provide a solution to the context of South Africa, where government gives mixed messages with regard to minimising the population's growth through child birth control measures. The government encourages the practise of child birth control measures, thus, minimising the population's growth (especially among young people). By contrast, the government is also encouraging population growth (through increasing the pregnancy rate of young females), by providing incentives to them in the form of child support grants. Unfortunately, becoming pregnant has been misinterpreted as a means of gaining access to financial incentives from the government by some young South Africans. This ultimately contributes to increasing the population's growth. As indicated, such a situation is likely to result in disequilibrium between the increasing population and insufficient food in the country.

2.1.3.2 Food access

In addition to making food available in a particular country, it is also necessary to make it accessible to the citizens of a country (that is, food access). Scanlan (2001) points out that food may be available, but that does not necessarily imply that it is accessible to all the citizens in different parts of the country. Bajagai (2013) supports this view by pointing out that the availability of food at national level or at territory level does not necessarily imply that all the households or individuals in a country or territory have enough food to consume. Therefore, it is necessary to consider when questioning their access to food, whether a household or individuals have enough resources to obtain the appropriate quantity of quality foods.

However, the perspectives of Bajagai (2013) and Scanlan (2001) are not informed by the fact that gaining access to food sometimes becomes a question of whether one has economic or

political power or not. In most cases, in countries like South Africa, those individuals that have economic and political power are the ones who have the means of production – like government jobs and tenders. These means of production become the method of gaining financial resources in order to gain access to food. In most cases, there are only a few individuals who have access to these means of production through government – while the majority of people do not. Hence, the majority of people become vulnerable by having no access to food.

Food needs to be made accessible for consumption by purchasing, production or through public assistance. However, despite the availability of these options, food is not always accessible to all the citizens in a particular country. Such a situation results in the creation of the challenge of food insecurity. Scanlan (2001) supports this view and argues that food security is concerned with more than merely an expansion in agricultural productivity; it must also be concerned with approaches that must be embraced regarding food distribution to the majority of the population. Unfortunately, South Africa and other countries worldwide are dominated by unfair food distribution and other means of production, which results in the perpetuation of food insecurity. Food insecurity is associated with poverty. Brand, De Beer, De Villiers and Van Marle (2013: p.273) describe both the problems of food insecurity and poverty as a manifestation of injustice in society, as a result of the lack of economic and political power by underprivileged people.

This lack of economic and political power makes underprivileged people have insufficient access to fundamental living resources, for instance, food, water, housing and health care. Thus, in order to address the challenges of food insecurity and poverty it is necessary to first deal with this inadequate economic and political power faced by poor people.

2.1.3.3 Food utilisation

One significant dimension of food security is food utilisation. The argument is that gaining access to food is not enough. It is also necessary to consider the both quantity and quality of food that is consumed by people, as well as what and how they consume it. This includes the manner in which food is prepared and distributed across households, as well as water, sanitation and health care practices (Bajagai, 2013). Scanlan (2001) further supports this by pointing out that food may be available to individuals who have access to it, but the deficiency of vitamins or health problems may be the outcome of an imbalanced diet. Thus, food might be available and accessible, but the manner in which it is utilised has a significant role to play.

If the quantity of food is inadequate and the quality is poor, then such food is synonymous with food insecurity. However, the discussion by Scanlan (2001) and Bajagai (2013) has some limitations; it is not informed by the fact that poverty and unemployment has a negative effect on food utilisation. For instance, South Africa as a developing country has the majority of its people living in conditions that are clouded by poverty and unemployment. Consequently, many households' members end up consuming food that is in the form of an imbalanced diet and this results in the deterioration of health in people.

The Eastern Cape is reported to be one of the poorest provinces (out of nine provinces) in South Africa. It is characterised by consistent unemployment and a population that is relatively large and rural in nature. In 2001, the province had a population of 7 million people, while the official rate of unemployment was at 32.5% (that is, 594 000 people) (News, 2003). The existence of unemployment results in the continuation of poverty in many households. Remarkably, poverty and unemployment seem to be persistent despite the fact that the provincial government has initiated many policies that are aimed at providing solutions to these challenges. The policies are implemented by making use of different development agencies like government departments, municipalities and non-governmental organisations.

Therefore, the dominance of poverty and unemployment in South Africa (and in the Eastern Cape in particular), forces poor people to prioritise having food in their stomach and disregard whether it is a balanced diet or not.

2.1.4 *Conceptual model of food access*

Sharkey et al.'s (2010) Conceptual Model of Food Access reveals that gaining access to healthy food is the consequence of the relationship between the retail food environment and potential consumers.

The retail food environment is characterised by various factors, namely:

- the number, type, size and location of food stores
- the availability (or the supply) of categories of food (for example, fresh fruit)
- the diversity of items within a category of food (for example, different types of fresh fruit)
- the price and quality of such food items

Regarding potential consumers, this includes factors like:

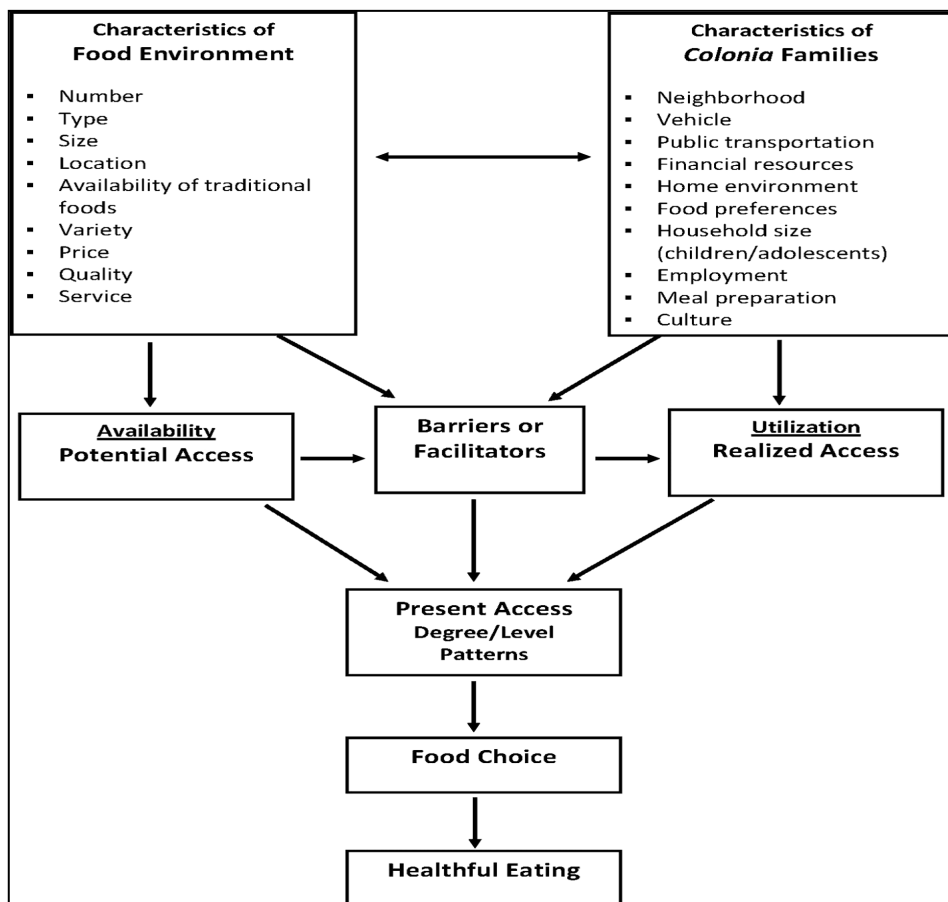
- the neighbourhood of residential areas
- accessibility of motor vehicles or public transport between the residential areas and the retail food environment
- accessibility to financial resources (type, amount and timing of financial resources)
- the environment at home (for example, ownership or non-ownership of refrigeration food storage, the area for preparation of meals, etc.)
- preferences for food by household members
- the size of a household
- the status of health, employment, culture, etc.

Sharkey et al.'s (2010) analysis is similar to the one of a marketing and business environment, which is characterised by customers and a company. According to Kotler and Armstrong (2005: p.109), a company's marketing management team has the responsibility of building a relationship with its customers, by creating customer value and satisfaction. The company must make its customers happy with its products or services in order for the daily business of the company to become sustainable. In terms of customers, there are five types of customer markets: consumer, business, reseller, government and international. This study focuses on consumer markets: the individuals and households that are more likely to buy goods and/or services for their personal consumption. Consumer markets as customers have the potential or interest in a company and therefore have the ability to influence that company in terms of achieving its objectives (Kotler & Armstrong, 2005: p.109). In other words, they decide whether to buy the products and/or services of a particular company. If more customers buy products from a company, then that company is more likely to earn profit and then develop; if the opposite happens then the company does not develop.

The same principle applies to consumers – the manner in which a company makes its products or services available to the consumer, influences the consumer's ability to buy such products and/or services. For example, if the price of products and/or services is high, or the company is located geographically far away from consumers, then it is more likely that consumers would experience difficulties accessing these products and/or services. Thus, there is an interaction (relationship) between a company that sells its products and/or services to potential customers. Furthermore, this discussion highlights Sharkey et al.'s (2010) belief of the Conceptual Model of Food Access. Despite this relationship between the retail food environment and potential consumers, for consumers to gain access to healthy food does not

occur automatically. Sharkey et al.'s (2010) says that healthy eating and food choices are influenced by barriers or facilitators that are linked to the food's environment, and/or consumers who may influence the selection of food purchase opportunities at a certain moment. If certain household members have limited refrigeration then they may have to undertake sporadic and costly trips in order to buy perishable food items in a retail food environment, or they may buy less healthy food items from a retail store that is located closer to their home (Sharkey et al., 2010). See Figure 2.1 below of Sharkey et al.'s (2010) Conceptual Model of Food Access.

Figure 2:1 Conceptual Model of Food Access



Source: Sharkey et al., 2010

Sharkey et al.'s (2010) Conceptual Model of Food Access analysis appears to be the most relevant within the South African context. In comparison to other African countries, South Africa is blessed with having food availability. According to Scanlan (2001), the supply of foodstuffs in a particular country for the population to consume can either be the result of production within the country or importation from other countries. One of the big challenges

in SA is that food is available in large quantities, but it is not necessarily accessible to its population (Scanlan, 2001). That is why it is necessary to consider that gaining access to food security is influenced by resource distribution or a country's wealth, and especially, the means of production – like job opportunities or tenders from government. Scanlan (2001) supports this view by pointing out that food security is concerned not only with growth in agricultural productivity, it is also necessary to consider the manner in which production means and resources are distributed among a country's citizens. In most cases in South Africa there are few individuals and their associates (mostly politicians and government officers), who are in control and ownership of the government's resources, while the majority of the citizens in the country remain poor and have no access to food security. Bajagai (2013) supports this view by pointing out that because of the intensity of the situation (that is, the unfair distribution of resources), members of some households cannot afford to gain access, and to eat balanced meals. Consequently, they have to rely on inexpensive non-nutritious food. Unfortunately, sometimes such food is acquired through socially unacceptable means such as buying food on credit, charitable assistance and even stealing the food.

The challenge of having insufficient access to food security goes together with poverty; the inaccessibility to food security results in poverty in many households. Brand et al. (2013: p.273) defines poverty as characterised by insufficient access to basic living resources (like housing, food, water and health care). Their argument is that poverty and food insecurity are the consequence of the lack of political and economic power by the ordinary citizens of a particular country. This is why they put forward an argument that poverty is injustice. Karplus (2014) adds that poverty, famine and food security are issues that are concerned with power imbalances in southern Africa. The causes of these challenges are poor access to productive assets (such as water, land and capital) because they are controlled and owned by complex systems of tribal and local laws, the government and international development agencies like the International Monetary Fund (IMF), the World Bank, etc.

In certain instances, these systems are in conflict with one another over issues like land allocation, tribal versus local laws, jurisdictions of the state against those of development institutions, etc. As a result of these conflicts, the resources that were supposed to be used in providing solutions to the challenges of food insecurity and poverty end up being wasted. Therefore, the proposed solution on this challenge is to deal with the inadequate economic and political power that is faced by the majority of the country's citizens. This is because relying

the approach of technical and managerial solutions is not necessarily the solution to the challenge of food insecurity and poverty (Karplus, 2014).

In conclusion, Sharkey et al.'s (2010) Conceptual Model of Food Access is invaluable in providing an understanding some of the causes of insufficient access to food security. It uncovers that gaining access to healthy food by consumers, is the result of the relationship between the retail food environment and potential consumers. However, this model does not provide much insight into the fact that gaining access to food security is also determined by having access to economic and political power. The majority of South Africa citizens do not have this economic and political power; instead, it is in the control of the few government officials and politicians. Thus, many people in underprivileged areas (like rural areas and semi-urban areas) live in environments dominated by the lack of food security.

Sharkey et al.'s (2010) Conceptual Model of Food Access does not provide insight about the fact that sometimes-poor people also contribute to the perpetuation of the challenge of insufficient access to food security. The problem is not necessarily a lack of resources; instead, it is laziness that causes deficient access to food security. The researcher has observed that there are many cases in rural areas, where the ordinary people are the owners of huge plots of land, but such land remains unutilised to produce food (e.g., vegetables). The production of food from land such as this could be subsistence and commercial farming and therefore, alleviating the challenge of having no access to food security in many households. Instead, people continue to blame the government for not providing sufficient social grants and not assisting them with enough means to alleviate the challenge of having poor access to food security. Hence, Sharkey et al.'s (2010) Conceptual Model of Food Access does not provide insight into the view that having no access to food security is sometimes the consequence of the laziness in people.

2.1.5 *Rural food system conceptual framework*

This theory focuses on the Rural Food System Conceptual Framework of Stubblefield et al. (2010). The argument about this concept is that it is composed of five elements: local capacity for food, food access and food security, community health, the economy and the environment. These elements are discussed below.

2.1.5.1 Local capacity for food

The concept of 'local capacity for food' encompasses the local area's capability to produce food, which includes importing and processing the food. Firstly, the local capacity includes products that are produced locally and on a reasonably large scale (for example, apples, potatoes, etc.). Secondly, the local capacity for food production refers to food that is produced on a smaller scale in gardens for communities and individual household members. There is a relationship between the local capacity and food security. In cases where an area has inadequate local capacity, the food security in such an area is more likely to be insufficient according to Stubblefield et al., (2010: p.1). The value of the concept of local capacity has some learning areas to highlight. It uncovers that the local authorities mostly in local government have the responsibility to make efforts to produce food on a large scale, in order to regulate food security for communities (for instance, through projects like agricultural projects, small enterprises, etc.). However, this framework assumes that food production on a smaller scale (in gardens and for communities as well as individual household members) takes place automatically. Unfortunately, there are many cases where community members are in possession of resources (like ancestral land), but they do not take advantage of such opportunities and to use them to produce food for themselves. Instead, they blame the government for many things – mainly for not doing enough to help them with food security, while this is a sign of laziness on their side.

2.1.5.2 Food access and food security

The concept of food access refers to people's ability to gain access to healthy food. This includes not just the availability of healthy food but consists of food that is affordable and culturally appropriate to individuals. 'Food security' implies gaining access to enough food, by all the people, at all times, in order to have a lifestyle that is active and healthy (Stubblefield et al., 2010: p.1).

These perspectives present ideal situations, which are not always the case in underprivileged communities in many remote and rural areas of South Africa. Therefore, these definitions do not provide enough insight into gaining access to food (that is, food access) and food security, is influenced by whether one owns the means to production (like job opportunities, small businesses, etc.). Such individuals or groups who do not own these means of production are more likely to live with no access to food and food insecurity.

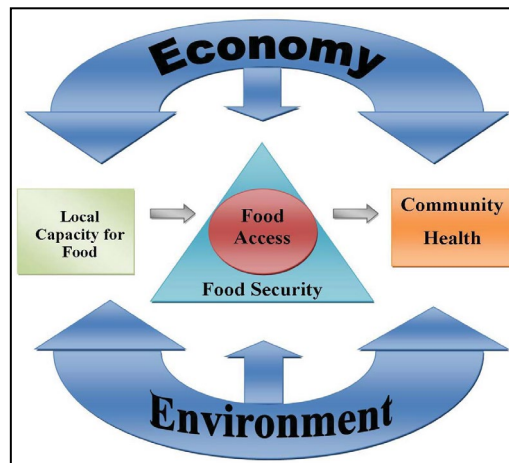
2.1.5.3 *Community health*

The concept of community health implies the general health of a certain region or area. That is, defining the well-being of a community according to its economic, physical and social characteristics. The numerous factors that have an effect on community health are the economy, environment and food security. For example, a region that has a robust economy and fertile environment (that is favourable to various agricultural production) is more likely to have good food security (Stubblefield et al., 2010: p.2). Thus, the community's health status in such a region or area is good.

2.1.5.4 *The economy and environment*

Gaining access to food security is influenced by the economy and environment. An economy refers to the general flow of commercial activities in an area. This is composed of the production flow and distribution of goods and services, which result in many opportunities – like local jobs, entrepreneurship, retail establishments, lending institutions, etc. The economy of a certain area has an influence on the general food security of people and their access to food. For example, communities that have higher incomes are more able to select diverse, healthy and nutritious foods, than communities in poorer areas (Stubblefield et al., 2010: p.2). The environment depicts the physical context of an area, which includes aspects like the area's climate, the nature of topography, the crops that grow best in a region, soil types that exist in a region, etc. (Stubblefield et al., 2010: p.2). This discussion is helpful in terms of understanding the role of the economy as it interacts with the environment and its influence in gaining access to food security. It does not, however, provide insight into instability in the political climate of a particular area that contributes to creating economic instability. An economic instability results in the disruption of business activities that ultimately causes the lack of access to food security.

Figure 2:2 Rural food system conceptual framework



Source: Researcher's own construction

Given the multiplicity and complex nature of food insecurity and vulnerable situations facing communities in the world, it is difficult to pinpoint a single theory that we can promote fully to understand the plethora of causes that are responsible for the food insecurity and vulnerability that are facing us today. According to specialists working on the path of vulnerability as quoted by Indian philosopher and economist, Sen (2017), famines have multiple institutional causes and do not necessarily correspond to production crises. Further, Sen (2017) stresses a Malthusian theory, which predicts that populations grow geometrically and outgrow resources; thus, famines can be attributed to demography.

2.1.6 Conceptual review: the meaning of food security

Defining food security precisely is difficult. According to Bajagai (2016), there are more than 200 definitions and 450 indicators of food security. For the purposes of this research the definition given by the World Food Summit (WFS, 1996) will be used. The Food and Agriculture Organization (FAO, 1996) defines food security as a situation that exists when all people, at all times, have physical, social and economic access to sufficient, safe and nutritious food that meets their dietary needs and food preferences for an active and healthy life. If we are to take the current FAO definition of food security (agreed at the 1996 World Food Summit) as an evolving concept, the first food security summits of 1950s and 1960s equated food security with self-sufficiency in major staples. In 1974, the World Food Summit defined food security as access to sufficient food where four fundamentals of food security could be construed. Seemingly, food security is one of the major elements of development and poverty alleviation and has been the goal of many international and national public organisations as

supported by Bajagai (2016), who mentions that the issue is important. According to the world state of food insecurity in 2012, the FAO's publication revealed that 870 million people (852 million of which were from developing countries) are estimated to have been undernourished in the period between 2010 and 2012. In addition, Bajagai (2016) agrees that the phrase 'food security' is being used widely; however, the definition and concept of food security is elusive, and evolves and expands over time. According to the Millennium Development Goals Achievement Fund (MDGAF), there are four fundamentals that can be deduced from the current working definition of food security. These fundamentals are commonly referred to as the four pillars of food security and its determinant factors. The four pillars of food security can be identified as 'dimensions' of food security. These dimensions include the physical availability of food, economic and physical access to food, food utilisation and the stability of the other three dimensions over time (stability of supply and access).

2.1.6.1 Physical availability of food

Food availability addresses the supply of food security and is determined by the level of food production, stock levels and net trade.

2.1.6.2 Economic and physical access to food

An adequate supply of food at national or international level does not in itself guarantee household level food security. Concerns about insufficient food access have resulted in a greater policy focus on incomes, expenditures, markets and prices in achieving food security objectives.

2.1.6.3 Food utilisation

Food utilisation is commonly understood as the way in which the body makes the most of various nutrients in food. Sufficient energy and nutrient intake by individuals is the result of good care and feeding practices, food preparation, and diversity of diet and intra-household distribution of food. Combined with good biological utilisation of food consumed, this determines the nutritional status of individuals.

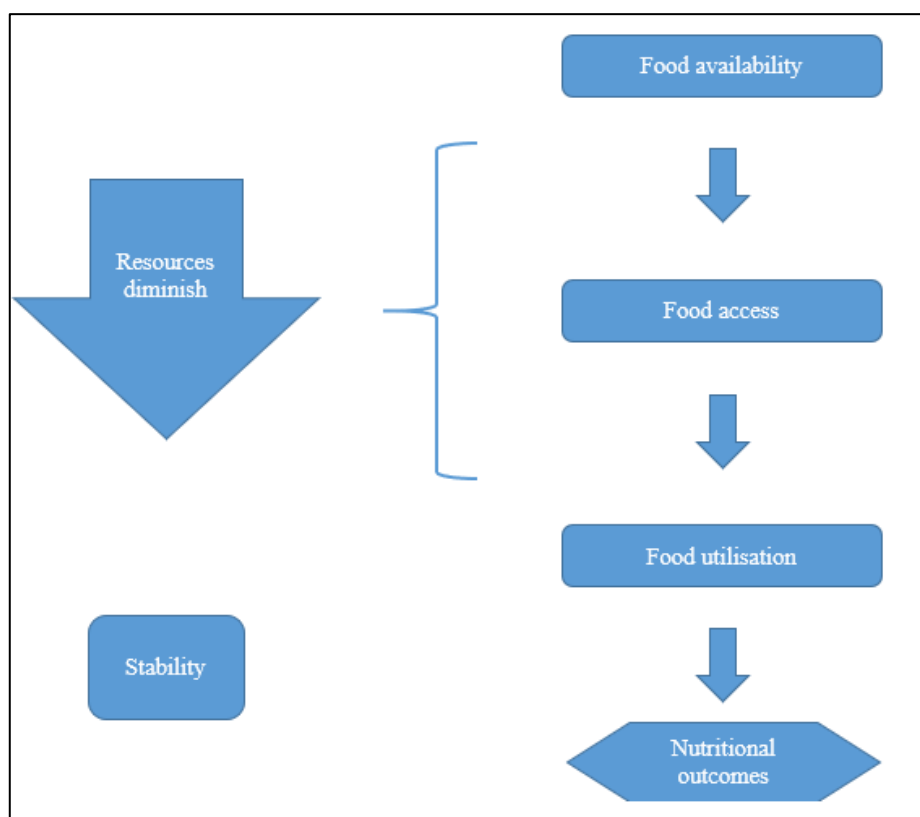
2.1.6.4 Stability of the other three dimensions over time (stability of supply and access)

If a person's food intake is currently adequate, they are still considered to be food-insecure if they have inadequate access to food on a periodic basis – thereby risking a deterioration in

their nutritional status. Adverse weather conditions, political instability and/or economic factors (such as unemployment, rising food prices, etc.) may have an impact on their food security status. It is clear that for anyone to fully realise their food security objectives in all four dimensions of food security as purported by the 1996 World Food Summit, there must be a simultaneous convergent agreement of the four pillars. The above remains true as supported by the World Health Organization’s (WHO) statement that reveals that one cannot simply improve food availability (that is, access to food) without guaranteeing the stability of supply and access, as well as food utilisation.

When considering the 1996 World Food Summit definition of food security and its dimensions, one notices that there are some missing elements not included in the four dimensions of food security (for example, food preference for an active and healthy life). According to Simon (2012), the food security elements related to food preferences could be the object of some further thinking, global debates, and research, which at household and individual level could be comparable to what food sovereignty is at country level.

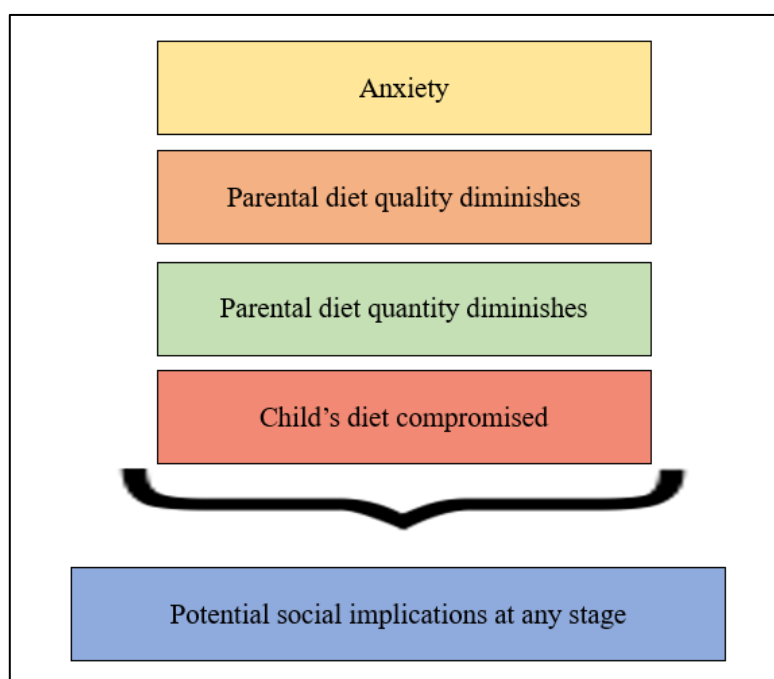
Figure 2:3 A visual representation of food security dimensions



Source: Simon, 2012

2.1.7 Household food security

Figure 2:4 Consequences of food insecurity in households



Source: Adapted from Hamelin et al., 1999

Food security can be described as a complex phenomenon with multiple determinants (e.g., political, economic, social, technological, environmental and legal) that contribute to the already complex social phenomena facing the world. These phenomena show no signs of ceasing – there are many challenges arising everywhere in the world; hence, world initiatives like the Millennium Development Goals (MDGs) and a recent move to Sustainable Development Goals are on a quest to fight hunger the world over. According to the Aspen Institute’s Food Security Strategy Group (FSSG, 2016), food security is a condition related to the supply of food and individuals’ access to it. Concerns over food security have existed throughout history. Further, the Aspen Institute (FSSG, 2016) reveals that food security concerns have long been part of mankind’s history with overwhelming evidence of the granaries that were in use over 10 000 years ago. Ancient China and Egypt were known to release food from storage in times of famine. The 1996 World Food Summit as quoted by the FAO (2016) declared that ‘food should not be used as an instrument for political and economic pressure’. Whilst the International Centre for Trade and Sustainable Development (ICTSD) upholds that failed agricultural market regulation and the lack of anti-dumping mechanisms cause much of the world’s food scarcity and malnutrition. According to the Global Food Security Index (2017), food security indicators and measures derived from country level

household income and expenditure surveys to estimate per capita caloric availability. Quoting from the Global Food Security Index (2017), the objectives of food security indicators and measures are to capture some or all of the main components of food security in terms of food availability, access and utilisation or adequacy.

2.1.8 Food insecurity

Food insecurity is best captured by the FAO's definition and quoted by Simon (2012) as a situation where some people do not have access to sufficient quantities of safe and nutritious food and hence do not consume the food that they need to grow normally and conduct an active and healthy life. Food insecurity is then seemingly due to the following:

- lack of food = no availability
- lack of resources = no access
- improper use = no proper utilisation
- change in time = no stability

In reconciling the two phenomena, it is clear that food security and food insecurity are both situations, and to change from one to the other, movement is needed. When analysing food security, one must look at this change and at the probability of occurrence. Also worth noting from the two definitions above of food security and insecurity, is that it is hard to measure food security. Therefore, it is usually food insecurity that is measured, assessed or analysed with a view to determining the factors that may have caused this situation (or may cause it in the future), and to decide on corrective measures. Matching the two situations and by judging according to the four pillars of the World Food Summit, 1996, it is clear and generally agreed, that food security is a complex, sustainable development issue linked to health through malnutrition and also to sustainable economic development, environment and trade. While researching the available literature from the WHO and various poverty commentators, it is clear that there is a great deal of debate around food insecurity. These debates include the following arguments:

- there is enough food in the world to feed everyone adequately and that the problem is distribution
- future food needs can or cannot be met by the current levels of production
- national food security is paramount or no longer necessary because of global trade
- globalisation may or may not lead to the persistence of food insecurity and poverty in rural communities

The WHO's (2013) proclamation on the above statements – as widely supported by the available literature (issues such as whether households get enough food, how it is distributed within households and whether that food fulfils the nutrition needs of all members of the household) – show that food security is clearly linked to health, and will always be in both rural and urban settings and especially in the developing world. The WHO (2013) firmly believes that agriculture remains the largest employment sector in most developing countries, and international agriculture agreements are crucial to any country's food security strategic plans. However, some critics argue that trade liberalisation may reduce a country's food security by reducing agricultural employment levels. Understandably, genuine concerns about this have led a group of World Trade Organization (WTO) member states to recommend that the current negotiations on agricultural agreements allow developing countries to re-evaluate and raise tariffs on key products to protect national food security and employment (WTO).

According to critics of the WTO, these WTO agreements that push for the liberalisation of crucial markets are threatening the food security of whole communities. Furthermore, the WTO agreements bring with them related issues that need additional interrogation and appraisal for pivotal changes in the food security narrative, which are sustainably safe and less vulnerable. The related issues of the agreement that are threatening food security and leading to unsafe vulnerable communities are raising questions – more so than answers to the already complex and structurally-diverse challenges of international trade agreements – which are supposed to bring comfort from unemployment, hunger and vulnerability (that result from poor management of such agreements and partnerships). Some of these questions include:

- What is the net impact of the further liberalisation of food and agricultural trade (considering the widely differing situations in developing countries)?
- To what extent can domestic economic and social policies and food, agricultural and rural development policies offset the diverse (and possibly negative) impacts of international policies – such as those relating to international trade?
- How can the overall economic gains from trade benefit those who are most likely to suffer from food insecurity?
- Do gains 'trickle down' to enhance economic access to food for the poor?
- How can food, agricultural production, and trade be restrained from the over-exploitation of natural resources that may jeopardise domestic food security in the long-term?
- How do we ensure that imported food products are of an acceptable quality and safe to eat?

2.1.9 *History of food insecurity and types*

In delving into food security, it is wise to research the international and local history. The context of South Africa and other African countries will be also revisited in order to get a clearer picture of the scourge of poverty faced by humanity. Although often overlooked by most food security and/or insecurity researchers, the evolution of food insecurity plays an important part in the internecine challenge of food insecurity. This thesis does not pretend to aim at providing an exhaustive picture of the concerns for food insecurity through humankind's history, but rather, to put things into perspective in order to alleviate the global scourge of food insecurity confronting the world today.

It is not easy to highlight important steps in the recent evolution of concepts and facts which relate to hunger, malnutrition and food insecurity (as well as the efforts undertaken to limit their effects, when trying to bring forward sustainable solutions to problems confronting and delaying development of the human race); food insecurity is a disaster that is also hampers development – especially in the third world countries. The history of food security can be traced back to the 1974 World Food Conference which Maxwell (1996) says conceptualised three important and overlapping paradigm shifts. These three shifts are:

- from global and national, to household and individual
- from a 'food first' perspective to a livelihood perspective
- from considering of objective indicators to considering of subjective perception

According to Maxwell and Frankenberger (1995), concern for food security can be traced back to the world food crisis of 1972–1974, and even before that, from the Universal Declaration of Human Rights in 1948, which recognised the right to food as a core element of what can be defined as an adequate standard of living. The concept of food security has evolved, developed, expanded and diversified in recent years, as the result of the diverse nature of the problem, the Overseas Development Institute (ODI) cited (Drimie & Mini, 2003).

Sen (1981) initiated the paradigm shift that moved the issue of access to food to the centre stage. Since the early 1980s, it has been impossible to speak credibly of food security as being a problem of food supply without referring to the importance of the issues of access and entitlement (Devereux & Maxwell, 2001). Sen (1981) states that in terms of his 'entitlement approach', ownership of food is one of the most primitive property rights and is governed by rules in every society. The entitlement approach concentrates on each person's entitlement to commodity bundles (including food) and views starvation as resulting from the failure of

entitlement to a bundle, including enough food. Sen’s (1981) view is a clear shift from seeing food security as a food supply problem, which deals with issues from national self-sufficiency and proposals for world food stock or import stabilisation schemes, to seeing such security as covering the access to food allowed to individuals in a household; a view that entitles people to demand that they have food, so that they can avoid having to suffer from the effects of starvation and famine.

2.1.10 Types of food insecurity

Thus far, two known types of food insecurity have been identified:

- chronic food insecurity
- acute or transitory food insecurity

2.1.10.1 Chronic food insecurity

Chronic food insecurity can be described as the lack of minimum requirements of food for a sustained period due to extended periods of poverty, as well as the lack of assets and inadequate access to productive or financial resources.

2.1.10.2 Acute or transitory food insecurity

Acute or transitory food insecurity is defined as the sudden lack of food, or reduction in the ability to produce or access the minimum requirements of food due to short-term shocks and fluctuations in food availability and food access (including year-to-year variations).

2.1.11 Intergrated food security phase classification

Figure 2:5 Phases of food security according to IPC Phase Classification

Intergrated Food Security Phase Classification (IPC)	
1 (A and B)	Generally Food Secure
2	Moderately or Borderline Food Insecure
3	Acute Food and Livelihood Crisis
4	Humanitarian Emergency
5	Famine or Humanitarian Catastrophe

Source: Hamelin et al., 1999

2.1.12 *Effects of food insecurity*

Chronic (that is, permanent) food insecurity is defined as the long-term persistent lack of adequate food supply, and in this case, households that are constantly at risk of being unable to acquire food to meet the needs of all members. Chronic food insecurity and transitory food insecurity are closely linked since their reoccurrence of transitory food insecurity can make households more vulnerable to chronic food insecurity.

Famine and hunger are both rooted in food insecurity. Further, chronic food insecurity translates into a high degree of vulnerability to famine and hunger, ensuring food security presupposes elimination of that vulnerability. According to the entry on food security on the WFS, many countries experience ongoing food shortages and distribution problems. These problems result in chronic and often widespread hunger amongst a significant number of people. The human population responds to chronic hunger and malnutrition by decreasing body size known in medical terms as ‘stunting’ or ‘stunted growth’. This process is caused by the nutritious state of the mother during pregnancy and continues approximately throughout the third year of life. This condition directly leads to higher infant and child mortality but at rates far lower than rates during famine, according to the entry on food security in the WFS preamble (1996).

Another condition is the limiting of body size as a way of adapting to low levels of energy (calories) adversely affecting health in three ways:

- Premature failure of vital organs during adulthood. For example, a fifty-year-old might die of heart failure because their heart suffered structural defects during the early stages of human development.
- Stunted individuals suffer a higher rate of disease and illness than those who have not experienced stunting.
- Severe malnutrition in early childhood development often leads to defects in cognitive development.

2.1.13 *Vulnerability*

‘Vulnerability’ is defined as the degree of exposure to a number of factors that threaten the well-being, as well as the extent to which individuals, households and other social groups can cope with these factors. In the case of vulnerability to food insecurity, an important distinction is drawn between transitory and chronic food insecurity. Transitory food insecurity occurs when there is a temporary inability to meet food needs, usually associated with a specific shock

or stress such as drought, floods or civil unrest. Drimie (2005), states that chronic food insecurity occurs when people are unable to meet their minimum food requirements over a sustained period. This is usually associated with slowly changing factors, which have increased people's exposure to shocks, or else decreased their ability to cope with the effects of these shocks – thus essentially increasing their vulnerability.

The meaning of vulnerability to food refers to the full range of factors that place people at risk of becoming food-insecure. The extent of vulnerability in individuals, households, or groups is determined by their exposure to the risk factors and their ability to cope with, or to withstand stressful situations. Food security and poverty are both used to describe the welfare state of people at the present time. Vulnerability complements this static picture with a dynamic, forward-looking perspective that is used to predict how the welfare of individuals and households may change in the future as a consequence of not being able to face adverse events that may occur. Again, Simon (2012) supports the notion that vulnerability can be expanded to capture a more complex relationship between risks, ability to cope (actions taken before, during and after shocks), that affect food security. According to Simon (2012) when viewed in relation to the probability of experiencing welfare loss caused by uncertain events, it also depends on the ability to reduce risks before a shock occurs (i.e., proactive) and response effectively during and after they occur (i.e., reactive).

The United Nations (UN) FAO defines 'vulnerability' as the presence of factors that place people at risk of becoming food-insecure or malnourished including those factors that affect their general ability to cope under stressful situations that they find themselves in. The WFP (2009) retains the following definition: 'the vulnerability to food insecurity is made of all factors that constitute a risk for people to become food-insecure including factors that affect their capacity to face the difficulty they meet'. In other words, vulnerability to food insecurity relates to situations where there is a risk in certain circumstances or following some events or shocks (e.g., drought, famine, disease, civil disturbance) that future food intake will be inadequate. The following definition is simpler: 'conditions that increase a household's susceptibility to the effects of hazards' (WFP, 2009, p.172). It is a function of a household's exposure to a hazard and its coping capacity to mitigate the effect of that hazard (WFP, 2009, p.172).

Reliable food is closely linked to notions of sustainability and vulnerability. The Food Insecurity and Vulnerability Mapping Systems (FIVIMS, 2006) refers to 'vulnerability' as the full range of factors that place people at risk of becoming food-insecure. Further, the FIVIMS

(2006) asserts that the degree in vulnerability of individuals, households, or groups is determined by their exposure to risk factors and their ability to cope with, or to withstand stressful situations. Benson (2004: p.8) points out that when people are unable to acquire sufficient food even though they use their regular means to access food (for example, because of poor crop production or lack of income), they will employ a sequence of coping strategies to meet their food needs.

These strategies may include the sale of land, other productive assets, or the withdrawing of children from school to go to work. Vulnerability results when a household has to sacrifice the long-term ability of its members to acquire sufficient food in order to meet current, short-term needs. Food security incorporates the notion that a household does not have to sacrifice their long-term ability to be food-secure for short-term needs (Benson, 2004: p.8). In Simon's (2012) opinion, vulnerability (which is a risk, and hence a probability) may be measured, but in relative terms. As there are no unique indicators to measure the three food security dimensions (i.e., availability, access and utilisation) there is no unique indicator to measure vulnerability. Vulnerability to food insecurity comprises two concepts: vulnerability and food insecurity.

Food insecurity describes a situation where people lack adequate access to food that meets their dietary needs and food preferences (Devereux et al., 2004; Lecoutere et al., 2009). While, vulnerability refers to people's 'susceptibility to fall below predetermined food security threshold levels' (Knowels & Lóvendal, 2007). Food insecurity exists when one or more of the food security components (availability, accessibility and/or utilisation) are not fulfilled. Vulnerability is concerned with the measurement and characterisation of the likelihood of consumption to fall below some acceptable level. Thus, vulnerability has two sides (Chambers, 2006):

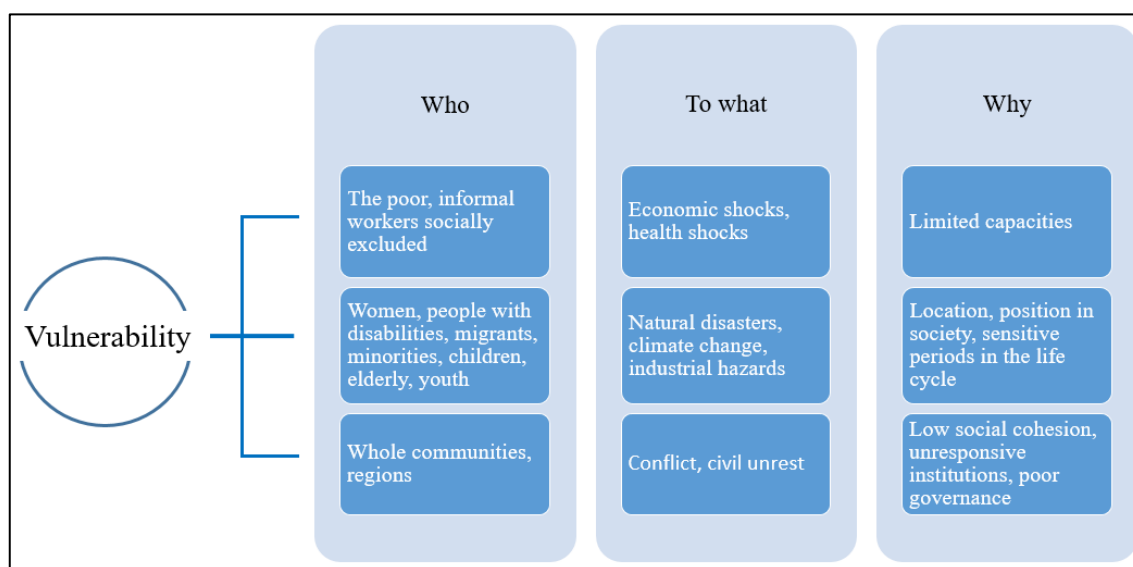
- an external side of risks, shocks and stress which an individual or household is subject to
- an internal side which is defencelessness (lack of means to cope without damaging loss)

Loss can take many forms, such as being physically weaker, economically impoverished, socially dependent, humiliated or psychologically harmed (Chambers, 2006; Philip & Rayhan, 2004; Schoon, 2005). Combining the two terms, Devereux (2006: p.3) defines vulnerability to food insecurity as 'being at risk to become food-insecure'. Households with livelihoods that do not enable accumulation of the assets required to cope with shocks will gradually deplete assets, thereby increasing their level of vulnerability to, and their experience of, severe food

insecurity (Hart, 2009). In this instance, food insecurity is an outcome of vulnerability. Vulnerability may also apply in situations when time for food production is traded for that for food hunting. For example, food-insecure households may spend more time gathering food, water and fuel and less time in their fields producing future food than others. However, Chambers (2012) advises that people’s vulnerability to a particular shock depends not only on their own resilience, but also on others’ treatment of those who suffer from adverse events.

Chambers (2012) also mentions that social institutions that are able to provide support to those in adversity include a range of social and governmental institutions that may be local, national or international. Social institutions are those where people act collectively; they exclude profit-making market institutions and instead include family networks (including global family networks), community and non-governmental organisations. Vulnerability as a concept can seem overly broad and abstract; most people and societies, who are at different levels of development, are vulnerable in many ways to adverse events and circumstances (which cannot all be prevented or anticipated). However, the concept can be less abstract if it can be broken down into manageable phenomena like who is vulnerable, what are they vulnerable to, and why are they vulnerable?

Figure 2:6 Who is vulnerable, to what and why?



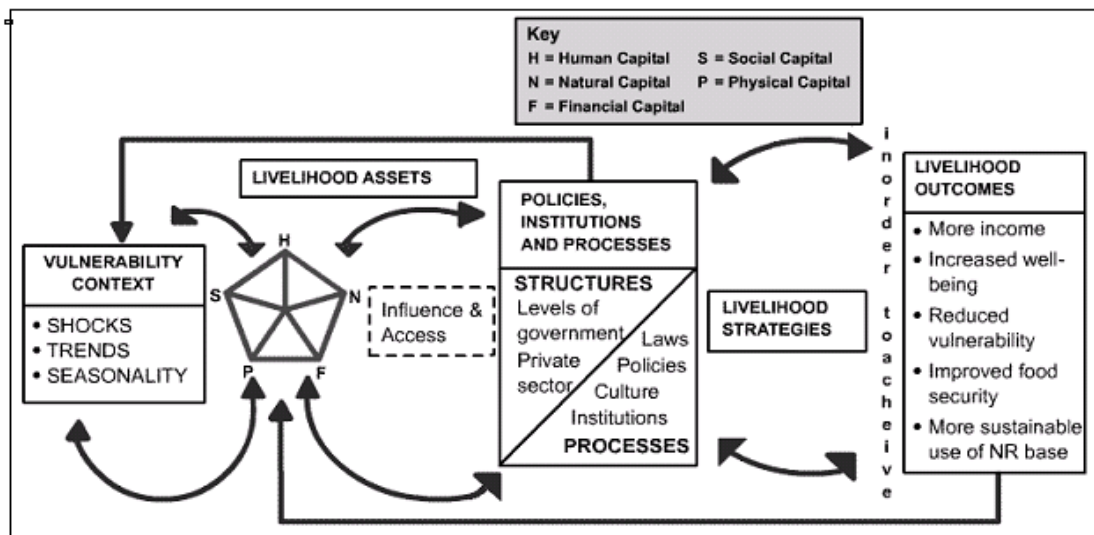
Source: Human Development Report Office, 2014

Figure 2.6 makes it clear that the concept of vulnerability as supported by Wisner et al. (2004: p.50) involves varying magnitudes – some groups of people or households are more prone to damage, loss and suffering than others are. The more vulnerable groups are those that find it

hardest to reconstruct their livelihoods following a disaster, which in turn makes them more vulnerable to the effects of subsequent hazardous events.

The main contributing factor behind the varying magnitudes of the differing hazardous impacts is solely determined by the differences in social standing – but not largely limited to wealth, occupation, ethnicity, gender makeshift, disabilities, health status, age, immigration status and the nature and extent of social networks. Wisner et al. (2004: p.55) strongly affirms that in any given situation a disaster happens when a number of vulnerable people experience a hazard and suffer severe damage or disruption of their livelihood systems in such a way that recovery is unlikely without external assistance.

Figure 2:7 The Sustainable Rural Livelihoods (SRL) Framework



Source: Department for Internal Development (DFID) cited in Shahbaz, 2008

Demography, health, education, crop and livestock production, size of farmland, savings and credit are indicators commonly used for the analysis of vulnerability to food insecurity (Deressa et al., 2008; Devereux et al., 2003; Ellis, 2003; Scaramozzino, 2006). These variables can be grouped into livelihood assets to explore household vulnerability to food insecurity (Figure 2.7) above. Evidently, ownership of productive assets significantly influences livelihood outcomes of rural households. Matshe (2009) indicates that vulnerability to food insecurity is linked to livelihood assets, strong institutional support and a favourable external environment. Devereux et al. (2003) notes that vulnerability is closely linked to asset ownership; thus, a lack of assets is the main driving force pushing households to vulnerability to food insecurity. The greater the erosion of household assets, the more exposed to

vulnerability of food insecurity (HDI, 2014). As Chambers (2006) indicates, low assets ownership would be a good indicator of vulnerability to food insecurity. Likewise, Moser (1998) indicates that vulnerability is closely linked to asset ownership; the more assets people have, the less vulnerable they are. Thus, the greater the erosion of people's assets, the greater their food insecurity.

Ellis (2003) stresses that livelihood assets and strategies together constitute the single most important factor in understanding vulnerability to food insecurity. Deressa et al. (2008) indicates that the determinant variables that affect rural households' vulnerability to food insecurity are physical assets (livestock i.e., number of oxen, housing units); financial assets (access to credit, off-farm employment); social assets (savings and credit associations); human assets (education, health, age, sex composition, family size) and natural assets (rainfall, rainfall deviation and farm size). Likewise, Khoshnoodifar et al. (2012) and Tagel (2012) note that farmers': 'capacity to cope with drought and food insecurity depends on ownership of access to a wide variety of resources'. These include land ownership, farmers' income, farm size, educational level, gender, access to insurance, housing quality, health, access to technology, access to credit, social networking (social capital) and public support programme. Dercon (2001) also equates vulnerability with capital assets and notes that it may be worthwhile to use quantitative measures of different capital assets (including physical capital, human capital, public goods and social capital), to proxy vulnerability to food insecurity. This is because assets are likely to assist the ability to cope with shocks.

Knowels and Lóvendal (2007) argue that regardless of the choice of the dependent variable and in line with the proposed framework, indicators of vulnerability to food insecurity have to be based on information about assets and the existing food security status of the households. Scaramozzino (2006) links vulnerability of food insecurity to limited access of asset ownership including intangible assets, such as social capital. As Shahbaz (2008) indicates, the rural population's access to, and ownership of certain livelihood assets may have a significant impact on their level of vulnerability to risks. This is because the limited access to livelihood assets increases their defencelessness and exposure to shocks and stress, i. e. risks. Philip and Rayhan (2004) also list the contributing factors of vulnerability to food insecurity, which includes diminishing access to social protection, rapid population growth, poor health, low levels of education, gender inequality, fragile and hazardous location, lack of access to resources and information, as well as limited access to political power. McDevitt (2012) states

differently that the vulnerability of the poor is generally seen as resulting from limited access to assets combined with physical exposure to predicted climate-related hazards.

Markos (1997) concludes that households fall into vulnerability of food insecurity when they are unable to meet their consumption requirements throughout the year due to scarcity of land, lack of off-farm incomes, dependence on food aid, having few or no livestock (lack of oxen), and meagre assets. Thus, the asset-based approach in the analysis of vulnerability to food insecurity describes poverty and food insecurity as it is caused by inadequate access to tangible and intangible assets. The link between the vulnerability context and people's capital assets enables us to consider which assets are most affected by this context, and how people are supported to build up their livelihood assets and thus resilience to vulnerability of food insecurity (Baumann, 2002).

2.1.14 *Who is vulnerable and why?*

The UN's Development Programme's Human Development Report (HDR, 2014: p.2) reveals that most people across the world are vulnerable to shocks to some degree (e.g., natural disasters, financial crises, armed conflicts, and long-term social, economic and environmental changes). Furthermore, the UN's Development Programme (UNDP) report (2014) states that economic weaknesses undermine the social contract – even in advanced industrialised societies – and it seems that no country will be immune to the long-term effects of climate change. Yet, some populations are more vulnerable than others are. In many cases, it is generally believed that discriminatory social norms and institutional shortcomings exacerbate vulnerability, leaving certain groups without the household, community and state support needed to boost their coping capacities. According to the HDR (2014), those living in extreme poverty and deprivation are among the most vulnerable, despite the widely reported progress in poverty reduction in some countries. The report further reveals that more than 2.2 billion people are close to living in multi-dimensional poverty: this means that more than 15.0% of the world's population remain vulnerable to multi-dimensional poverty. To sum up, the extent to which households face food insecurity and the level of vulnerability are not homogenous (Knowels & Lóvendal, 2007). Within similar environments, some households are chronically food-insecure while others are not. This shows that households are not equally vulnerable to the same shocks or stresses because of variations in asset ownership. As an example, poorer households might be forced to sell productive assets earlier to cope with external shocks than better-off households.

2.1.14.1 Vulnerability factors

Both Anderson et al. (2011: p.597) and Tanislas et al. (2009: p.133) are in agreement that vulnerability relates to the potential and future jeopardy of the implications, or likelihood that some kind of crisis may occur which will damage one's health, life or property and resources – on which health and life depends. Further, this shows that people with limited core capabilities and restricted choices are prevented from coping with the above-mentioned threats. At a certain stage in their life, cycle capabilities may be restricted due to inadequate investments and attention at appropriate times, yielding to vulnerabilities that may increase and intensify. The Human Development Index Report (2014) raises an argument that says even the lack of development of cognitive and non-cognitive skills in early childhood affect labour outcomes, and drug and alcohol use later in life. Further, the report (Human Development Index Report, 2014) mentions that among the facts that condition how shocks and setbacks are felt and tackled, are circumstances of birth, age, identity and socio-economic status – circumstances over which individuals have little or no control.

Human vulnerability is not new but is increasing due to financial instability and mounting environmental pressures (such as climate change), which have the growing potential to undermine progress in human development. The world is changing rapidly, and the scope and scale of connectivity and related insecurities is accelerating – as are the threats of contagion and exposure of natural disasters and violent conflicts. Lack of national policy space to enhance coping capabilities is becoming more constrained as globalisation is deepening at an alarming rate, at the expense of the wider communities that are being plunged further into crisis mode of living. Globally, integrated supply chain can be disrupted at one point, and can trigger severe, local problems elsewhere. The types of public goods both nationally and globally that are needed to build long-term coping capabilities and resilient societies are underprovided and can cause people across the world to feel insecure.

2.1.14.2 Social vulnerability

Social vulnerability is explained by Levine (2009: p.396), as a multi-dimensional concept that can be used to identify those characteristics and experiences of communities and individuals that enable them to respond to, and recover from hazardous situations.

According to Wisner et al. (2004: p.22), social vulnerability relates to the characteristics that are identifiable with persons or groups of people that are lacking the capacity to anticipate,

cope with, resist and recover from the impact of a hazard. Wisner et al. as supported by the CDRSS (2006: p.73) sees such a population segment as occupying hazard-prone zones, living and working in less hazard-resistant structures within those zones that have lower rates of pre-impact intervention – such as mitigation, emergency preparedness and recovery. They have lower rates of post-impact emergency and disaster recovery response. Therefore, as Lindell and Prater (2003) mention, they are more likely to experience casualties, property damage, psychological, demographic, economic or political impact, as direct, indirect, or informational effects. Social factors are mostly linked to the level of well-being of individuals, households or communities. It considers aspects of basic needs like literacy levels and level of education, peace and security, access to basic human rights, systems of governance, social equity, positive traditional values, knowledge structures, customs and ideological belief systems and an overall organisational system as seen by Philo (2005: p.442) This was supported by the Economic Capacity Building (2006) when it was said that a lack of awareness and access to information can increase levels of vulnerability.

2.1.14.3 Political vulnerability

Looking at political vulnerability among other things, Wisner et al. (2004: p.55) confidently mention it as a situation that is composed of a set of deep-rooted socio-economic elements which include the denial of basic human rights, a lack of access to power structures, education and employment opportunities, land tenure systems, natural resources, basic services and access to information. Further, Wisner et al. (2004: p.55) stress that all of the above-mentioned issues create and maintains extreme levels of susceptibility to the impact of hazards. Judging from Wisner et al. (2004), political vulnerability is then embedded into a complex vicious cycle of issues that cannot point only to any specific government, but to a number of actors (if not causes) that are not necessarily man-made, but also beyond redemption. The World Bank (2007), and echoed by Nadel (2007), brings to fore that human capacities include human rights, a voice, and some public influence over public policies and political priorities. Both the World Bank (2007) and Nadel (2007) fully agree that food insecurity and poverty means being in a state of powerlessness, and a lack of representation and freedom. Further, they both contend that by elaborating powerlessness other dimensions of poverty are aggravated.

Of major importance to note is that the poor often suffer from a number of diseases associated with poor living (i.e., lack of sanitation, clean drinkable water, overcrowding, as well as living and working in poorly ventilated environments). Certainly, these conditions that the poor and food-insecure communities find themselves in, can be attributed to the fact that they have no

voice and no power to influence decisions on issues that affect them. Politically speaking, the weak and vulnerable communities are always without any political reforms or secure access to resources that they require to rise out of poverty or food insecurity. All of those involved in the development and social welfare of humankind, must by any means or standards protect the participation of all of the people concerned in the rhetoric of official policies and project designs. Eyben and Ladbury (1997), as well as Soussan (2000) fully agree that many funders and governments have enshrined participation rhetoric in their official policies and project designs – to the extent that they have been translated into robust and replicable development practises – without wasting resources that are always in short supply the world over. It can then be argued and generally agreed to, that public participation and greater involvement of all parties (especially the poor) – both at the policy planning and at the implementation phase – can have a greater possibility to influence decision-making under conditions of good governance that encourages participation, inclusiveness, consensus-oriented, responsive to the population’s needs, efficiency, transparency and accountability. Finally, it is tempting to support the generally held belief that deprivation of basic political freedom or human rights is a major aspect of poverty that results in food insecurity.

2.1.14.4 Economic vulnerability

According to Wisner et al. (2004: p.55), the economic status of any nation or population has an influence on their ability to cope and recover from adverse effects. The resourced section of the population may survive the impact of a hazard without suffering any adverse effects, or they are able to recover quickly from the situation in which they find themselves. On the other hand, the poor – or those with fewer resources – are forced to build temporarily in crowded, unsafe dwellings in dangerous locations. Kynia et al. (2008) reveals that vulnerability is not poverty, but the poor tend to be much more vulnerable compared to the resourced section of the population. The economic status of most nations, communities, households, and individuals greatly influences their level of vulnerability. This relates proportionately to higher losses in the case of a disaster and a lower capacity to recover, as realised by Anderson et al. (2011: p.596).

The poor are seen as more vulnerable than the economically better-off sectors of the society. Further, Wisner et al. (2004: p.55) states that the economic factors of vulnerability include levels of reserves, debt and degrees of access to credit and loans, as well as to insurance. Equally, inadequate access to critical and basic socio-economic infrastructure such as communication networks, utilities, supplies and transportation facilities increase these

people's exposure to risk. Wisner et al. (2004) also state that the lack of access to basic services such as water, forces people to use unsafe sources for cooking and drinking, placing them at risk of epidemics and disease. Then again, the absence of electricity or other sources of power will force people to cut down trees for firewood which in turn lead to environmental degradation and thereby increasing exposure to flooding and other hazards (Marulanda et al., 2010: p.553).

2.1.14.5 Environmental vulnerability

Ecological factors that influence many disasters are either caused or aggravated by environmental degradation. The creation of drought conditions is a natural phenomenon but this may be exacerbated by poor cropping patterns, overgrazing, stripping of top soil, poor conservation methods and depletion of both surface and sub-surface water supplies, as well as unchecked urbanisation (Eeckhaut et al., 2010: p.348; Nathan, 2008: p.340). According to Wisner et al. (2004: p.56), the main issue of environmental vulnerability includes the extent of natural resource depletion, state of resource degradation, loss of resilience of the ecological system, loss of biodiversity, as well as exposure to toxic and hazardous pollutants.

2.1.14.6 Physical vulnerability

Communities that live in hazard-prone (e.g., mudslide areas, wet weather areas and extremely dry desert-like) areas, may be susceptible to the negative impacts of hazards – by conditions determined by physical factors. These physical factors encompass the aspects of location and susceptibility of the built environment. Kynia et al. (2008: p.4) describes physical vulnerability as the susceptibility of individuals, households and communities to the physical environment in which they find themselves. Further, Kynia et al. (2008: p.4) reveals that it relates to aspects such as access to suitable land, land use, land planning, housing design, building standards, materials used for building houses and accessibility to emergency services.

According to Wisner et al. (2004: p.56) and supported by Mc Entire et al. (2010: p.58), physical vulnerability also entails remotely located settlements, lack of access to service infrastructure and lack of information. In summary, physical vulnerability denotes exposure to hazards, living in harmful ways or being in the wrong place at the wrong time.

2.1.14.7 Life cycle vulnerability

'Life cycle vulnerability' refers to threats that individuals face on a daily basis across different stages of their lives, i.e., from infancy throughout youth, adulthood and old age. Focusing on life cycle vulnerability and the formation of life capabilities, the HDR (2004) draws attention to sensitive phases when a person may be particularly susceptible; inadequate attention during such periods can limit capabilities and heighten vulnerability. The report (HDR, 2004: p.55) also reveals that earlier and continual investments make the formation of life capabilities more robust. This approach helps in identifying interventions and policies that build human resilience (a topic for other research).

2.1.14.8 Structural vulnerability

This form of vulnerability as explained by the HDR (2004: p.55) is embedded in social contexts. Structural vulnerability focuses on drawing attention to individual and group characteristics (including group identity) that are associated with a higher vulnerability to adverse circumstances. The reduced ability to bounce back can be traced to inadequate investments in building capabilities not only for today, but throughout the entire life cycle, to disability, geographical remoteness and other isolation or societal barriers that prevent people from realising their potential – even if they have similar capabilities such as, exclusion of women and discrimination. Further, the report (HDR, 2004) reaffirms that social institutions (including norms) do shape the capabilities and choices that are afforded to individuals. Norms such as discrimination against certain groups, weak rule of law, systems of recourse and settling of disputes through violence can severely curtail the freedom that individuals enjoy. Structural factors can also subject people or groups to multiple disadvantages. Group-based discrimination and exclusion exists across multiple dimensions like political participation, health care, personal security and education, to name a few, and generate chronic and overlapping vulnerabilities for minorities and other excluded groups by limiting their capabilities and their potential role in larger society.

2.1.15 Food sovereignty

The approach known as food sovereignty views business practices of multinational corporations as a form of neocolonialism. This approach contends that multinational corporations have the financial resources available to buy up the agricultural resources of impoverished nations (particularly in the tropics). Looking closely at this approach, one

notices that it also has the political clout to convert these resources to the exclusive production of cash crops for sale to industrialised nations (outside of the tropics) and, in the process, the poorer people are squeezed out of the more productive lands. According to the entry on food security on WFP (2016), subsistence farmers are left to cultivate lands that are as marginal in terms of productivity as to be of no interest to the multinational corporations. Further, this approach states that food sovereignty holds it to be true that communities should be able to define their own means of production, and that food is a basic human right. The advent of numerous multinational corporations suddenly pushing for agricultural technology in developing countries (improved seeds, chemical fertilisers, pesticides and crop production), has become an increasingly analysed and debated issue. According to Burnett and Murphy (2013), food sovereignty can be seen in action as many communities protest the imposition of Western technologies on their indigenous systems and agencies.

The current working definition of food sovereignty is best captured by the Declaration of Nyeleni 2007 (First Global Forum on Food Sovereignty, 2007)¹. The concept of food sovereignty was first developed in the early 1990s – born out of the mobilisation of a group of small-scale farmers all around the globe who were finding that they could no longer make a living from farming. The concept was presented by an alliance of small-scale farmers and other food producers, calling themselves, La Vía Campesina, at the 1996 World Food Summit ([http://www.voiceoftheturtle.org/library/1996 Declaration of Food Sovereignty.pdf](http://www.voiceoftheturtle.org/library/1996%20Declaration%20of%20Food%20Sovereignty.pdf)). Much of the initial impetus came from farming networks in Latin America, and ‘food sovereignty’ is a direct translation of the Spanish *soberanía alimentaria* that emphasises the decision-making power of the people.

Looking closely at the definition above, one is tempted to agree that food sovereignty is a movement growing from the bottom up; from the farmers, fishermen, indigenous people and landless workers most impacted by global hunger and poverty. Food sovereignty goes well beyond ensuring that people have enough food to meet their physical needs. According to the Declaration of Nyeleni 2007 (First Global Forum on Food Sovereignty, 2007), it was made clear that people must reclaim their power in the food system by rebuilding the relationships

¹ “Food sovereignty is the right of peoples to healthy and culturally appropriate food produced through ecologically sound and sustainable methods, and their right to define their own food and agriculture systems. It puts the aspirations and needs of those who produce, distribute and consume food at the heart of food systems and policies rather than the demands of markets and corporations.” – Declaration of Nyéléni, the 1st Global Forum on Food Sovereignty (Mali, 2007)

between people and land, and between food providers and those who eat. First framed by the international peasant movement La Vía Campesina at the 1996 World Food Summit, food sovereignty is rooted in the ongoing global struggle over control of food, land, water and livelihoods. As we might have noticed in recent years, big food corporations are making record profits, even as more people struggle to feed their families, farmers struggle to stay on their land and globally, peasants and indigenous communities struggle against land grabs that threaten their livelihoods – and even their lives. Further, the First Global Forum on Food Sovereignty (2007) alleged that while corporations and governments profit from top-down, market-driven policy approaches, food sovereignty is an approach focused instead on people and communities, based on the following principles.

2.1.15.1 Focuses on food for people

Food sovereignty puts the right to sufficient, healthy, and culturally appropriate food for all at the centre of food, agriculture, livestock and fishery policies.

2.1.15.2 Values food providers

Food sovereignty values all those who grow, harvest and process food, including women, family farmers, herders, fishermen, forest dwellers, indigenous peoples, and agricultural, migrant and fishery workers.

2.1.15.3 Localises food systems

Food sovereignty brings food providers and consumers closer together so that they can make joint decisions on food issues that benefit and protect all.

2.1.15.4 Puts control locally

Food sovereignty respects the right of food providers to have control over their land, seeds and water, and rejects the privatisation of natural resources.

2.1.15.5 Builds knowledge and skills

Food sovereignty values the sharing of local knowledge and skills that have been passed down over generations for sustainable food production, free from technologies that undermine health and well-being.

2.1.15.6 *Works with nature*

Food sovereignty focuses on production and harvesting methods that maximise the contribution of ecosystems avoid costly and toxic inputs and improve the resilience of local food systems in the face of climate change.

2.1.15.7 *Food is sacred*

Sacred food refers to food as offering and is a concept within anthropology regarding the study of food (as it relates to religious ritual). Many religions have prescriptions about the correct preparation and cooking of food, besides the taboos about forbidden subjects.

Of the Seven Pillars of Food Sovereignty stated above the first six pillars were developed at the International Forum for Food Sovereignty in Nyéléni (Nyéléni, [s.a.]) Mali, in 2007. The seventh pillar (Food is Sacred') was added by members of the Indigenous Circle during the People's Food Policy process (IYPAD, 2011). Studying and assessing the Declaration of Nyeleni 2007 (First Global Forum on Food Sovereignty, 2007), it is clear that food sovereignty allows communities control over the way food is produced, traded and consumed (this is supported by Burnett & Murphy, 2013). It could create a food system that is designed to help people and the environment rather than earn profit for multinational corporations. Food sovereignty is the right of people to healthy and culturally appropriate food, produced through ecologically sound and sustainable methods, and the right to define their own food and agricultural systems. According to the Declaration of 2007 Nyeleni (First Global Forum on International Forum for Food Sovereignty, 2007), food sovereignty is an attempt to put those who produce, distribute and consume food at the heart of food systems and policies rather than the demands of markets and corporations.

Of note is that food sovereignty offers a strategy to resist and dismantle the current corporate trade and food regime, directions for food, farming, pastoral and fishery systems determined by local producers. Food sovereignty seems to prioritise the local and national economies and markets, and empowers peasant and family farmer-driven agriculture, artisanal-fishing, pastoralist-led grazing, food production, distribution and consumption – based on environmental, social and economic sustainability. Food sovereignty promotes transparent trade that guarantees a just income to all people, and the rights of consumers to control their food and nutrition. Food sovereignty activists confidently present themselves as advocates of food insecurity and promote new social relations free of oppression and inequality between

men, women, people, racial groups, social classes and generations. It further upholds the right to use and manage the land, territories, water, seeds, livestock and biodiversity and place them in the hands of those who produce food.

Food security activists strongly believe that neoliberalist big business dominates the global food system. A small handful of larger corporations control much of the production, processing, distribution, marketing and retailing of food. This concentration of power enables big businesses to wipe out competition and dictate tough terms to their suppliers. It forces farmers and consumers into poverty and hunger. Under this system, approximately 1 billion people are hungry and approximately 1 billion are obese or overweight. Movements of people across the world are fighting for food sovereignty. *La Via Campesina* is regarded as one of the largest social movements in the world, and brings together more than 200 million small- and medium-scale farmers, landless peoples, female farmers, indigenous peoples, migrants and agricultural workers from seventy countries. Every year 17 April is regarded as the international day of action for the peasant struggle and on this day, Global Justice joins hundreds of demonstrations (<http://viacampesina.org/map/17april/map.html>) for food sovereignty across the globe. In 2014, the Landworkers' Alliance (2017) staged a massive demonstration outside the United Kingdom's (UK) Department for Farming, Environment and Rural Affairs in pursuit of farming systems where the landowners and workers are part of the solution for to food systems. The struggle for food sovereignty tries to convince us that food security is a goal, while food sovereignty describes how to get there. They differ in some key ways that can be best summarised as:

Food sovereignty is rooted in grassroots food movements.

- Food sovereignty highlights the need for a democratic food system, one that involves inputs from citizens as well as producers.
- Food security is concerned with the protection and distribution of existing food systems.

2.1.16 *Empirical review: global perspective on food insecurity and vulnerability*

According to Sullivan, the major hazards that have affected many parts of the world since the twentieth century is famine (Sullivan). Sullivan further maintains that the frequency, severity, and geographical extent of drought have increased over the years. Whereas droughts have been the primary source of food shortages (especially in the developing world), the developed world has over a long period been producing extra food (Shelton, 2005). In order to fulfil human rights and the need in food deficit areas, food is shipped from surplus regions and distributed

as aid. Food has been distributed in some countries for periods spanning more than 30 years and such interventions have saved lives and reduced suffering. However, according to Shelton (2005) there are concerns that if food aid is implemented over prolonged periods to the same communities it causes disincentives in food production and ultimately dependency.

According to the UN's FAO (2006), too many men and women across the globe struggle to feed their children a nutritious meal every day. Further, the FAO (2006) reveals that in a world where we produce enough food to feed everyone, 795 million people (or, one in nine people) still go to bed on an empty stomach each night and one in three suffers from some form of malnutrition. Eradicating hunger and malnutrition is one of the greatest challenges of the current time. Not only do the consequences of inadequate or wrong food cause suffering and poor health, it also slows progress in other areas of development like education and employment. Sullivan (2004) highlights a number of factors that contribute to food insecurity in certain regions of the world: global warming is one factor responsible for drought and flooding and negatively affects agricultural production. Other factors are persistent problems in cultivating food, from lack of seed, arable land and tools, poverty, AIDS, the globalising system of food production and military conflicts. According to Wisner et al. (2004: p.3) statistics gathered for a nine-year period (1990–1999), indicated that drought or famine accounted for more than 86, 9% of human deaths as a result of world-wide disasters.

Drought, by nature is a slow onset disaster and affects people gradually through malnutrition and starvation. The worst recorded earthquake disaster (in 1976) caused the deaths of about 240 000 people in Tangshan, China, but in the twentieth century is dwarfed by famines that have caused the deaths of more than 1 million people (Wisner et al. 2004: p.127). Wisner et al. (2004) give examples of famines: 1.5 million people who perished in Bangladesh in 1974, between 900 000 and 2.4 million people in North Korea between 1995 and 1999, and between 14 and 26 million people in the Chinese 'Great Leap Forward' famine of 1958–1961. From the statistics, they (Wisner et al., 2004) assert that no other type of disaster has caused as many deaths as famine. Therefore, it can be said that famine is one of the major challenges for disaster management, requiring appropriate and adequate intervention strategies to help save lives and build resilience to further incidents or shocks. The strategies should be able to address short-term survival as well as long-term food security needs. Historically, South America, large areas of east, central and southern Africa and regions of South Asia have had high prevalence of hunger and starvation (Sullivan, 2006). As of 2006, the hot spots that had suffered the greatest degree of starvation were Niger, Haiti, the Horn of Africa, Afghanistan,

Pakistan, North Korea, the Democratic Republic of Congo (DRC) and southern Africa. Sullivan (2004) argues that it is a well-known fact that there is enough food in the world to feed every human being on earth. The Cable News Network (2003) quoted the UN's WFP as confirming this fact, as well as the hot spots for hunger and starvation.

According to Sullivan (2004), malnutrition and hunger sadly still afflict one out of every seven people in the world today – from a statistical perspective, the current world population is 4,712,200,000. The number of malnourished is 798,900,000. Therefore, 17% of the world population is currently malnourished or starving.

According to the UN WFP report (quoted by CNN, October 17, 2003), an estimated 840 million people went hungry in 2002, a rise of 25 million compared to 2001. The African Green Revolution (2005) states that the UN FAO estimated that 200 million Africans were undernourished at the turn of the millennium compared to the 133 million twenty years earlier. There are disparities in the world in terms of climate, economic, industrial and technological development that result in some countries, or parts of the world, producing food in excess, while others experience shortfalls.

The FAO Trade Policy Technical Notes (2002) reveal that in the 1950s the accumulation of food surpluses (mostly cereals) in some developed countries gave way to the idea that those surpluses could be disposed of in such a way as to improve the food security situation in vulnerable countries. This led to the FAO Principles of Surplus Disposal (the Principles, 2014) 'a code of International Conduct that encourages the constructive use of surplus disposal of agricultural commodities while at the same time safeguarding the interest of commercial exporters and local producers'. In 1962, the UN's WFP was established under the joint auspices of the UN and FAO and marked the beginning of multilateral food aid. The Food Aid Convention was signed in 1967 by food aid donors; it aimed to enhance the capacity of the international community to respond to food aid needs by guaranteeing a predictable flow of food every year, irrespective of price or supply fluctuations.

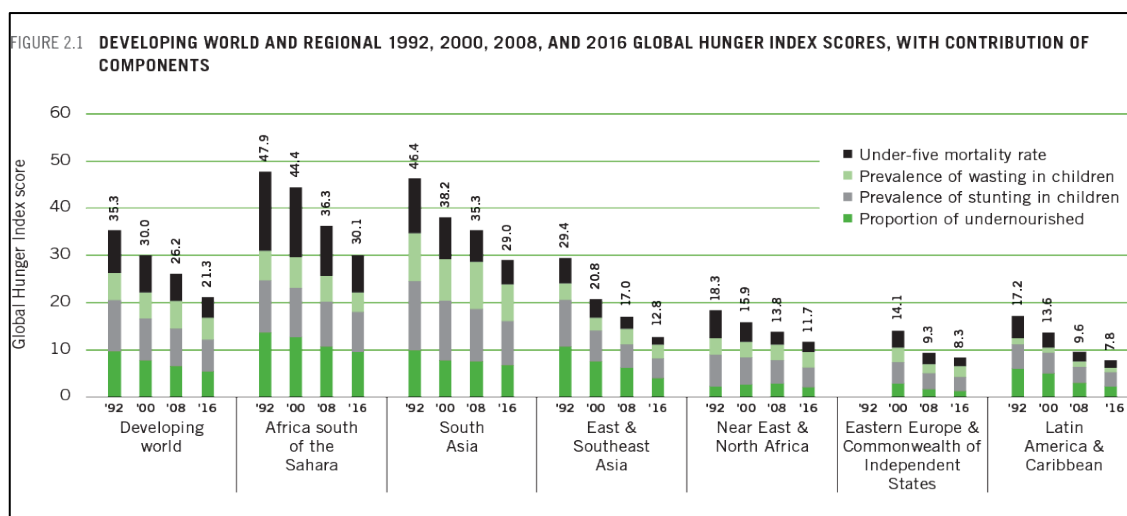
The formation of the WFP and the signing of the Food Aid Convention instituted a framework for food aid, making it the only appropriate and immediate short-term response to food shortages. There are countries that have received food aid for protracted periods spanning up to thirty years (such as Ethiopia, Kenya, Uganda, Haiti and Swaziland). According to Kehler (2004), despite thirty years of food aid, Ethiopia's food security has steadily worsened, and

relief aid food has become an institutionalised response. According to the African Green Revolution (2017), a combination of low agricultural productivity and adverse environments have made Africa the prime recipient of food aid. The World Food Summit (1996) aimed to reduce the world's number of hungry people by half by 2015 but by eight years later nothing had happened (Shapori & Rosen, 2004). The countries in the developing world usually experience food shortfalls and would require free food assistance to save the lives of their people. According to Harvey and Lind (2005) the negative effects of food aid are usually dubbed dependency – the term itself is widely used but rarely defined. It is used by humanitarian agencies as justification for reducing or stopping aid. Greste (2006) asserts that the direct, long-term impact, attributable to food aid solely is difficult to establish.

World food index and scores

Looking at global, regional and national trends, the FAO (2011) reports that since 2000, significant progress has been made in the fight against hunger. The 2000 GHI score was 30.0 for the developing world, while the 2016 GHI score was 21.3, representing a reduction of 29.0% (Figure 2.8). To put this into context, the higher the GHI score, the higher the level of hunger. Scores between 20.0 and 34.9 points are considered serious. Thus, while the GHI scores for the developing world are also referred to, the global GHI scores for 2000 and 2016 are both in the serious category; the earlier score was closer to being categorised as alarming, while the later score is closer to the moderate category (FAO, 2011). Seemingly, underlying this improvement are reductions since 2000 in each of the GHI indicators, especially in the prevalence of undernourishment, child stunting (low height for age), child wasting (low weight for height), and child mortality.

Figure 2:8 Developing world and regional 1992, 2000, 2008 and 2016 Global Hunger Index (GHI) scores (with contribution of components)



Source: FOA, 2017

Large regional differences

According to the FAO (2011) report, the global averages mask dramatic differences among regions and countries. Africa (south of the Sahara) and South Asia have the highest 2016 GHI scores, at 30.1 and 29.0, respectively and both reflect serious levels of hunger. In contrast, the GHI scores for East and South-East Asia, Near East (also known as the Middle East) and North Africa, Latin America, Caribbean, Eastern Europe and the Commonwealth of Independent States range between 7.8 and 12.8 and represent low or moderate levels of hunger.

Best and worst country level results

In comparing the situation as understood by reading from FAO's (2011) assertion, it can be deduced that from the 2000 GHI to the 2016 GHI, twenty-two countries made remarkable progress, reducing their GHI scores by 50.0% or more. Seventy countries made considerable progress with scores that dropped between 25.0% and 49.9%, and twenty-two countries decreased their GHI scores by less than 25.0%. Despite this progress, fifty countries still suffer from serious or alarming levels of hunger. Since 2000, Rwanda, Cambodia and Myanmar, positioned at the top of Figure 2.8, have seen the largest percentage reductions in hunger of all of the countries categorised as 'serious' or 'alarming', with 2016 GHI scores down by just over 50.0% relative to the 2000 scores in each country.

Each of these countries has experienced civil war and political instability in recent decades, and the improvements may in part reflect the increased stability. Seven countries still suffer from levels of hunger that are alarming. The majority of those are in Africa (south of the Sahara): The Central African Republic, Chad, Madagascar, Sierra Leone and Zambia, with the exceptions listed as Haiti and the Republic of Yemen. The Central African Republic and Chad, in the lower right-hand corner of Figure 2.8, are obvious areas of concern. These countries have the highest GHI scores in the current report (2017), coupled with relatively low percentage reductions in hunger since 2000. In the Central African Republic, violence and mass displacement resulting from a four-year-long civil war have taken a heavy toll on food production (FAO, 2016a). Chad, which has also had a long history of civil war, has faced deteriorating food security, due in part to the recent influx of refugees and extreme weather events (FAO, 2016b). The examples of these countries underscore the fact that despite the significant progress in reducing hunger globally, violent conflict, poor governance and climate-related impact on agriculture ensures that hunger continues to plague the planet and requires a transformative plan of action.

The FAO (2017), reveals that due to insufficient data, 2016 GHI scores could not be calculated for thirteen countries; however, based on available data, as well as on the information from international organisations that specialise in hunger and malnutrition, and the existing literature, ten of these countries are identified as cause for significant concern: Burundi, the Comoros, the Democratic Republic of the Congo (DRC), Eritrea, Libya, Papua New Guinea, Somalia, South Sudan, Sudan and the Syrian Arab Republic. In the absence of GHI scores, it is critical to analyse the available food security and nutritional data to understand the situation in these countries to the greatest extent possible, particularly given that levels of child undernutrition and child mortality (in some of these countries) are among the highest in the world. Furthermore, it is vitally important that up-to-date data is made available for these countries without delay.

Subnational hunger and undernutrition

In close examination of the individual GHI indicators at the subnational or state levels, it is revealed that disparities within countries are a cause for concern in terms of both absolute values and changes over time. Variations in GHI indicator values can exist within countries at all levels of the GHI Severity Scale.

For countries that have low hunger and undernutrition levels nationally, examination of data at the subnational level can help identify areas of the country that lag behind – such as Mexico and Jordan where stunting rates are shown to vary substantially between states. Subnational data (from the GHI Severity Scale) for the alarming countries can reveal areas that are in crisis. For example, in Zambia and Sierra Leone, GHI indicators vary widely within each country. In Cambodia, which has seen an impressive reduction in its GHI score since 2000, improvements have been uneven between provinces. Such examples of subnational disparities serve as a springboard for further research into the specific causes, circumstances and challenges of hunger at the subnational level. In estimating the prevalence of undernourishment (FAO, IFAD and WFP, 2015), the FAO considers the composition of a population by age and gender, taking into account the range of physical activity levels of the population, and the range of healthy body mass for attained height to calculate its average minimum energy requirement. This requirement varies from country to country from about 1 650 to more than 1 900 kilocalories per person per day for developing countries from 2014–2016 (FAO, 2016c).

What is the Global Hunger Index (GHI)?

The FAO, in partnership with other international organs of the UN, IFAD and WFP best describes the GHI as a tool designed to comprehensively measure and track hunger globally, regionally, and by country (FAO, 2017). Each year, the International Food Policy Research Institute (IFPRI) calculates GHI scores in order to assess progress, or the lack thereof, in decreasing hunger. The GHI is designed to raise awareness and understanding of regional and country differences in the struggle against hunger. By calling attention to the issue, it is the hope that this thesis will help to increase the commitment and resources dedicated to end hunger worldwide.

How do you interpret a Global Hunger Index (GHI) score?

An increase in a country's GHI score indicates that the hunger situation is worsening, while a decrease in the score indicates an improvement in the hunger situation.

What are the scores based on?

The scores are based on source data for the four component indicators. The data for these indicators is continually revised by the international organisations that compile them and each

year the GHI report reflects these revisions. The 2016 GHI reflects country-level data and projections spanning the period 2011–2016.

What are the four components used in the GHI formula?

The FAO indicates that the four component indicators are under nourishment, child wasting, child stunting and child mortality. All of these indicators are part of the MDG goals and have been included in the SDG goals since they play a pivotal role in the development of any country's future generations.

- **Undernourishment:** The proportion of undernourished people as a percentage of the population (reflecting the share of the population with insufficient caloric intake).
- **Child wasting:** The proportion of children under the age of five who suffer from wasting (low weight for their height, reflecting acute undernutrition).
- **Child stunting:** The proportion of children under the age of five who suffer from stunting (low height for their age, reflecting chronic undernutrition).
- **Child mortality:** The mortality rate of children under the age of five (partially reflecting the fatal synergy of inadequate nutrition and unhealthy environments).

Why are scores based on these four indicators?

Because hunger is a complex problem, the scores are based solely on these four indicators. There are a variety of terms used to describe the different forms of which hunger takes. To reflect the multidimensional nature of hunger, the GHI combines the four component indicators into one index. There are several advantages to measuring hunger using this multidimensional approach. It reflects the nutrition situation of not only the population as a whole, but also of children – a vulnerable subset of the population for whom a lack of dietary energy, protein or micronutrients (essential vitamins and minerals) leads to a high risk of illness, poor physical and cognitive development or death. It also combines independently measured indicators to reduce the effects of random measurement errors.

Which countries have GHI scores?

The 2016 GHI has been calculated for 118 countries for which data on the four component indicators are available and where measuring hunger is considered most relevant. GHI scores are not calculated for some higher-income countries where the prevalence of hunger is very low. However, even for some high-income countries, hunger is a pressing concern among a

portion of the population, yet the methodology of the GHI is not necessarily appropriate for these countries, nor is the necessary data available for the calculations.

Where does the data come from?

The scores are based on source data that is continuously revised by the international organisations, which compile them, and each year the GHI report reflects these revisions. While the revisions result in improvement in the data, it means that the GHI scores from reports of different years are not comparable with one another. The 2018 report contains 2016 GHI scores and scores for three reference periods – 1992, 2000 and 2008 – all of which have been calculated with revised data. To track the progress of a country or region over time, the 1992, 2000, 2008 and 2016 scores within this report can be compared.

How current is the GHI?

The GHI is only as current as the data for its four component indicators. The 2016 GHI reflects the most recent country-level data and projections available between 2011 and 2016. Therefore, it reflects hunger levels during this period rather than solely capturing the conditions in 2016.

What time periods does the data cover?

The 1992, 2000, 2008, and 2016 GHI scores presented in the 2018 report reflect the latest revised data for the four component indicators of the GHI. The 1992 GHI scores are based on data from 1990–1994, the 2000 scores are based on data from 1998–2002, the 2008 scores are based on data from 2006–2010, and the 2016 scores are based on data and projections from 2011–2016. Where original source data was not available, the estimates for the GHI component indicators were based on the most recent data available.

What is new about the current formula?

The current formula was introduced in 2015 and is a revision of the original formula that was used to calculate GHI scores between 2006 and 2014. The revision replaces child underweight, previously the sole indicator of child undernutrition, with two indicators of child undernutrition – child wasting and child stunting – which are equally weighted in the GHI calculation. The revised formula standardises each of the component indicators to balance their contribution to the overall index and to changes in GHI scores over time.

Could GHI scores be calculated for all countries?

No, due to insufficient data, 2016 GHI scores could not be calculated for thirteen countries.

What is needed to solve the data gap problem?

Further improvements in collecting high-quality data on hunger and undernutrition will allow for a more current and complete assessment of the state of global hunger, which can in turn better guide efforts to end hunger. According to recent estimates, undernutrition is responsible for 45.0% of deaths among children younger than five years old (Black et al., 2013). The latest undernourishment estimates from the UN's FAO (2015) and in agreement with Black et al. (2013) include projections for 2014 to 2016, which are used in the calculation of the 2016 GHI (FAO, IFAD and WFP 2015).

Noted African efforts and response to food security

Africa as a continent has not been silent on food security and has taken a series of initiatives to address the challenge. Although some commentators and policy analysts have led us to believe that food aid has traditionally been the domain of international donors, African governments – including the South Africa government – have often contributed too. Comparative advantage in this instance resides partly in the policy focus, and partly in the volume of the financial resources of the donor. What is mostly needed now in the region is to help bring about better governance and thus yet another important role for South African Government. South Africa's initiatives in respect of the New Partnership for Africa's Development (NEPAD) and its support for the African Union (AU), clearly demonstrate its recognition of the importance of this role; although the manner in which this has been played out in practise in Zimbabwe has been the subject of much debate. All of these initiatives require prioritization and funding from the former colonialist countries and the world donor bodies who are strategically placed to help Africa where resources were depleted by colonialists and internal strife. Needless to say, regional investment to land, agriculture, economies of scale as well as peace and stability will play a huge role to lessen hunger and poverty in the region.

Sustainable Development Goals through African lenses

In September 2015, the UN (through the General Assembly) adopted the 2030 Agenda for Sustainable Development that includes seventeen SDGs. The MDGs – not met by most

countries, and which were aimed at improving life in the world – were replaced by the seventeen SDGs.

At the global community meeting of 2015, where the world leaders adopted global goals for sustainable development to improve people's lives by 2030, the most notable goal of the seventeen goals is Goal 2 (Zero Hunger), which pledges to end hunger, achieve food security, improve nutrition and promote sustainable agriculture, and is the priority of the World Food Programme (WFP). Every day, WFP and its partners work to bring us closer to a world where there is zero hunger. By its various humanitarian food assistance programmes, the WFP is trying hard to provide nutritious food to those in urgent need. Meanwhile their complementary programmes address the root causes of hunger and building the resilience of communities, so that the same lives do not need to be saved each year. The world, in the eyes of the WFP (2018), has made great progress in reducing hunger: there are 216 million fewer hungry people than in the period 1990–1992, despite a 1.9 billion increase in the world's population since then. However, there is still a long way to go, and no single organisation can achieve zero hunger if it works alone. If we want to see a world free of hunger by 2030, governments, citizens, civil society organisations and the private sector must collaborate to invest, innovate and create lasting solutions.

The seventeen SDGs were built on the principle of leaving no one behind – the new agenda where the emphasis is on a holistic approach to achieving sustainable development for all. The SDGs also explicitly include disability and persons with disabilities, eleven times, as they are always left out when talking development in most countries. Disability is referenced in multiple parts of the SDGs, specifically those related to education, growth and employment, inequality, accessibility of human settlements; also, data collection and the monitoring of the SDGs. Although, the word disability is not cited directly in all goals, the goals are relevant to ensure the inclusion and development of persons with disabilities. However, when giving any form of statistics, this thesis tries at all times to include them. According to the UN (2015), the newly implemented 2030 Agenda for Sustainable Development holds a deep promise for persons with disabilities everywhere. The year 2016 marked the first year of the implementation of the SDGs. It is critical right from the onset to point out that Envision 2030 promises to work hard to promote the mainstreaming of disability and the implementation of the SDGs throughout its fifteen-year lifespan. Its objectives are to raise awareness of the 2030 Agenda and the achievement of the SDGs for persons with disabilities, to promote an active dialogue among stakeholders on the SDGs with a view to create a better world for persons

with disabilities, and the establishment of an ongoing live web resource on each SDG and disability.

Despite the current measure where most people live on less than \$1.25 a day, the 2030 Agenda for Sustainable Development strongly believes that by 2030, extreme poverty for all people everywhere should be eradicated. This seems extremely ambitious, given that the current global poverty line is at 850 million people. However, it is pleasing to note that the world body is committed to reducing the proportion of men, women, and children of all ages living in poverty at least by half, in all of its dimensions according to national definitions by the same 2030 boundary. These will be achieved through the implementation of nationally appropriate social protection systems and measures for all; by 2030 substantial coverage of the poor and the vulnerable is to be achieved. By the same year, they will also ensure that all men and women (particularly those poor and vulnerable), have equal rights to economic resources and access to basic services, ownership and control over land (and other forms of property), inheritance, natural resources, appropriate new technology and financial services (including microfinance). Furthermore, SDG promises to build the resilience of the poor (and those in vulnerable situations) and to reduce their exposure and vulnerability to climate-related extreme events and other economic, social and environmental shocks and disasters. SDGs will also ensure significant mobilization of resources from a variety of sources (this includes through enhanced development cooperation), in order to provide adequate and predictable means for developing countries (in particular least developed countries), to implement programmes and policies to end poverty in all its dimensions. A meaningful and sustainable way of achieving the above will be done through creating sound policy frameworks at the national, regional and international levels, based on pro-poor and gender-sensitive development strategies, to support accelerated investment in poverty eradication actions.

It is, however, safer to say that for any progress to be made on the SDGs, all of the goals will have to be achieved. If all countries collaborate creatively and systematically at the same time, the effort will yield better results for the entire world.

Africa's response to food insecurity and vulnerability

Africa's efforts into food security has long been forgotten and surpassed by short- to medium-term challenges facing the newly independent countries. According to Mbeki, M. (2016) the first short- to medium-term challenge was the consolidation of political power and achieving domestic stability and peace. This narrative totally talks to the Tweeten Theory – which is one

of the theories that this thesis supports. The second issue according to Mbeki (2016) – which he regards it as a medium- to long-term challenge – was how to transform their countries' economies from their colonial format as suppliers of raw materials. These raw materials were produced through the colonialist exploitation of cheap, unskilled (and in most cases deskilled) labour of the indigenous population. Mbeki further mentions that the African story is extremely complex; many old conflicts continue to this day, for example those within Sudan, or those between Ethiopians and Eritreans – which also render the conflict food-insecure and resource disturbed. As new conflicts continue to erupt on a huge scale and with ferocity, the African economy is surely going to slide backwards and be unable to feed the ever-growing continent's population; that would make food security a pipe dream in the modern day.

The food problem has deeper historical roots in developing countries than is usually appreciated. Colonial agricultural policies of the past were such that food production was not given priority at central government level. Kalibwani, (2005) makes mention that during the entire colonial period, food production was not a priority for capital investment in most African countries. Land, labour and other resources of the colonies were diverted away from the production of food into the production of industrial raw materials. The infrastructural development that took place during this period – and for decades after independence – was mainly aimed at servicing the production, transportation and marketing of industrial crops, such as cotton, tobacco, coffee and cocoa (Kalibwani, 2005). Agricultural policy must in future contribute to national economic growth objectives, reducing income inequalities and eliminating poverty through increased agricultural production, increased incomes for the poorest groups, creation of additional employment opportunities and improved household food security (SA, 1998, 2000 cited in Hendriks & Lyne, 2003).

In Africa, agriculture seems to be the main economic sector in the region and lies at the heart of the issue of food security. Furthermore, the agricultural potential of the region is immense, far exceeding present and future needs as articulated by SADC, (2013). Unfortunately, over the past twenty years, agricultural growth in the SADC region has been slow, with an estimated annual growth of 1.5% (SADC, 2013). Agricultural growth is lagging demographic growth, leading to increased poverty and hunger in the region (SADC, 2013). The major reasons for this are the increasing frequency of natural disasters, the inadequate political support granted to the sector, a lack of investment in the sector, the instability of the world market and an increasingly unfair trade environment faced by the African continent – due to protectionist behaviour by European countries over their own products and markets (SADC, 2013).

Furthermore, civil strife and conflicts have for a long time prevented SADC member states from reaching their full potential regarding agricultural output (SADC, 2013).

Agriculture can potentially contribute to growth as food, a provider of livelihoods, a market for producers of other goods and services, a source of raw materials to downstream industries, an earner of foreign exchange, and a producer of savings surplus, as argued by Maxwell, (2001).

Food insecurity in southern Africa became pronounced when the region experienced two major food crises over a period of ten years (1991–1992 and 2001–2003). After the first crisis, there was much expectation that new thinking on food security in the context of structural adjustment and market liberalisation aimed at generating economic growth would make the countries and populations of the region less vulnerable to food crises in the future. The result was not as substantive as expected, as evidenced by the 2001–2003 crisis (FFSSA, 2004, cited in Kalibwani, 2005). There were two types of food insecurity in the region: chronic and transitory. According to Sadoulet and De Janvry (1995) and Valdes and Konandreas (1981, as cited in Nichola, 2006), chronic food insecurity refers to situations where, on average, food availability is below the required level, where the root cause is poverty. The short-term decline in food supplies due to drought, fluctuations in income, or unrealistic pricing, is referred to as transitory food insecurity.

In Devereux and Maxwell (2001), the world concept of food insecurity has evolved substantially since it was first introduced into the development discourse in the 1970s. The two argued that the most significant aspect of this empirically and theoretically-driven advancement, is the awareness that ‘food security is no longer seen simply as a failure of agriculture to produce sufficient food at the national level, but instead, a failure of livelihoods to guarantee access to sufficient food at the household level: pp1–12’ – in line with Sen’s (1981) famous ‘entitlements approach’. According to Abdalla (2007), food security policies in developing countries can be broken down into three main categories: right pricing, optimal storage and supply enhancement, and further mentions that there are economic and political dimensions to all of these policies. According to him there were two interacting parts of the food security policy and research agendas at the Southern African Development Coordination Conference (SADCC) where he mentions them as first, food availability through domestic production, storage and/or trade, and second, access to food through domestic production, the market, or food transfers. There is considerable agreement among both scholars and policy-

makers about long-range strategies to cope with the food problem. According to Abdalla (2007), such strategies can be grouped into three main interrelated categories:

- population control, which is required for economic assistance aimed at improving the social and economic conditions of the poor and reducing their motivation to have large families
- economic growth, the counterpart of population control as far as the relationship between food and mouths to feed goes; with a higher rate of economic development, poverty and undernutrition will steadily be pushed back, whereas, if present trends continue, poverty will affect an ever-larger number of people
- income distribution, which focuses on the reallocation of existing wealth, and which is more difficult to implement; the most difficult measure is that of agrarian reform, due to the patterns of landownership which occurs in many developing countries

Despite the argued challenges facing the African continent, some strides have been taken through a series of protocols and treaties: Maputo Declaration of 2003, Agenda 2063, AU flagship projects, Continental Frameworks e.g., the Comprehensive Africa Agricultural Development Programme (CAADP), the Infrastructure Development in Africa (PIDA), Alfalfa Mosaic Virus (AMV) programmes etc. In an effort to rid Africa of hunger and poverty, at the 50th Anniversary Solemn Declaration, the African leaders (heads of state and government) committed to the continent's accelerated development and technological progress.

Maputo and Malabo declarations

The Maputo Declaration (Maputo, Mozambique July 2003) was a meaningful way of returning agriculture back into the centre of the African development agenda. The founding statement of the declaration was a clarion call for the implementation of the new Pan-African flagship programme for the New Partnership for Africa's Development (NEPAD) and CAADP. The CAADP was mostly viewed as nothing but the vehicle to stimulate production and to bring to the fore food security amongst the population of the continent. In essence, these days the Maputo Declaration is mostly known for its commitment in allocating at least 10.0% of national budgetary resources to agriculture in order to achieve a 6.0% growth of the agriculture economy. NEPAD (2018), reported that in hindsight the CAADP implementation shows many achievements – like agriculture which has risen to the top of the political agenda in Africa. This also shows that amongst its partners, Africa has agriculture at the centre of the political

spectrum; of those countries, forty have signed a CAADP pact and two thirds of those had formulated a National Agriculture Investment Plan or a National Agriculture and Food Security Investment Plan. Under the declaration, and especially the CAADP, Africa shows some improvement. There is, however, a lot of variation between countries – growth is often not equitable as persistent food insecurity and poverty levels persist unabated due to a myriad of challenges facing the African continent. Whilst on the crest of a wave, the Maputo Declaration has managed to put agriculture at the centre of the African agenda. Of note is that since its inception, private investments from the corporate world and foreign governments have failed dismally to stimulate private investments in agriculture. It is generally believed that agriculture is needed to sustain growth in Africa if the CAADP (2013) ten-year implementation report by Maputo Declaration is to be believed. The report further highlights a setback in that the agriculture sector cannot force ministries of finance to commit 10.0% of public funds to agriculture. For any investment to transpire, the precise business environment needs to be put in place, including attractive interest rates and favourable import and export regulations. However, these conditions cannot be created by the ministries of agriculture, for agriculture alone. The recent statement from the AU assembly (2018) gave pleasing relief when they concurred that agriculture and food security was still at the top of the agenda and further reiterated that they cast their view to beyond the sector – in the hope of more effectively addressing the obstacles that continue to beset agricultural growth on the continent.

On the accelerated agricultural growth, transformation for shared prosperity and improved livelihoods, the Maputo Declaration further reaffirms a more specific and clear range of commitments in agriculture. The range of these commitments includes the increased irrigation and mechanisation or curtailing post-harvest losses among others. On the face of it, the Malabo Declaration is in total contrast to the Maputo Declaration since it contains much more commitment in areas like infrastructure, natural resources, land tenure, trade and nutrition. All of these areas are most important to agriculture – although they not all fall within the ambit of the agriculture ministries in most countries of the continent. Hence, the Malabo Declaration is seen to be wider than the Maputo Declaration, although in the same vein it continues to view CAADP as the main vehicle for implementation of its commitments (as was the case in Maputo Declaration). One is tempted to arrive at the conclusion that the Malabo Declaration is wider than the Maputo Declaration both in scope and in commitment. The Maputo Declaration can be categorised as single-sectorial whilst the Malabo Declaration is seen as multi-sectorial – and shows some commitment from most of the countries who have signed the document. The most pleasing part of these declarations is that they are founded on the premise that they have

confidence in the participatory consultative process and that they are signed by all member states where they have agreed to be held accountable – with a rider that allows for biennial review.

In terms of the declarations, it is worth mentioning that the Malabo Declaration has managed to influence many countries' vision of 'twenty-something' through their respective NDPs (mostly of their five-year development plans). However, the agricultural sector is nearly always characterised by a plethora of policies, laws and legislations – and mostly of conflicting interest. What is most important is to increase the scope and to get the relevant policies that promote food security, to push hunger further away from African households in the modern day.

Agenda 2063

According to the Agenda 2063's vision, the emphasis is to build an integrated, prosperous and peaceful Africa, driven and managed by its own citizens and representing a dynamic force in the international arena. The Agenda 2063 identified seven aspirations to serve as pillars for the continent in the foreseeable future, to be free of poverty and hunger, as well as to be conflict-free amongst other the ideals, with strong, and well-functioning regional institutions. According to the Agenda 2063, it is clear that the Africa we want should be based on the seven aspirations, with a prosperous Africa to be based on inclusive growth and sustainable development. This includes leading the pack when African leaders talk of the continent being able to finance and manage its own growth and transformation – without interference from foreign governments (who are protectionist in approach when it comes to sound investments in their own backyards).

Despite efforts and achievements to poverty reduction and maintaining food security at micro, national and macro levels, challenges remain as millions of people – particularly those living in developing countries – are still chronically undernourished. The reason for this is that the food problem has deeper historical roots in developing countries than is appreciated. Colonial agricultural policies were such that food production was not given priority at central government level. Although agriculture is not the only sector responsible for maintaining food security at all levels, it is the main economic sector and rests at the heart of food security in the SADC region, where the agricultural potential is immense and far exceeds present and future needs. The Agenda 2063, amongst other things, spoke well about another initiative that the African continent has engaged in – to promote Africa's shared strategic framework for

inclusive growth and sustainable development for the continent's transformation. The trust is that the Agenda 2063 is a programme of social, economic and political rejuvenation that links the past, the present and the future to recreate a new generation of Pan-Africanists that will harness the lessons learnt and use them as building blocks to consolidate the hope and promise of the founding parents for a true renaissance of Africa, (AU: 2013). What one can read (and the emphasis from the agenda's aspirations) that they are good to hear and all need to be put into practise as they seem to be a true embodiment of the Africa that we want to see. Worth noting is aspiration one and six – although all seem interrelated and equally important for the continent's renewal and rebirth, free from poverty and hunger.

The seven aspirations are:

- A prosperous Africa based on inclusive growth and sustainable development
- An integrated continent, politically united based on the ideals of Pan-Africanism
- An Africa of democracy, respect for human rights, justice and the rule of law
- A peaceful and secure Africa
- An Africa with a strong cultural identity, values and ethics
- An Africa of people-driven development relying on the potential of its women and youth
- Africa as a strong, resilient and influential global player and partner

Although we will not examine the aspirations in every aspect and detail, for this thesis we will take a closer look at a select few (one, four and six), to bring closer to home the argument that food security is a complex issue that needs multiple efforts and commitment by all – at all times of deliberation and intervention.

A prosperous Africa based on inclusive growth and sustainable development

In the African Development Bank's (2013) view, Africa's growth has dismally failed over past decades and has not benefitted anyone on the continent. The bank's assertion is also that Africa has failed both in terms of human development and in contributing to the worsening of the extreme disparities in basic life-chances and staggering inequalities that are preventing millions of Africans from realising their potential. Thus, Africa's challenge is to harness economic growth to a more equitable distribution of opportunity and human needs. It can be deduced that this aspiration is also talking to the SDGs as well as to Agenda 21 in Africa. If it can be adopted by all countries of the region, poverty and hunger can be dealt with – it is one of the handicaps of the endeavours of development and growth at present. This aspiration in a South African context is mainly viewed as focusing on inclusive sustainable development as a condition for prosperity for the country, and the continent. This view is further visible on the

National Framework for Sustainable Development (2011). The National Development Plan Vision 2030 has as its focus the importance of sustainable inclusive development for the people of South Africa, (Department of International Relations and Cooperation (DIRCO), 2015). Africa's aspirations seem to say that there is a greater need to eradicate poverty in Africa beyond the scope of the SDGs and towards Agenda 2063 – whose target is to reduce poverty to below 3.0% by 2063.

A peaceful and secure Africa

In this aspiration, the African Union Agenda 2063 strongly articulates that by the year 2063 Africa shall have:

- an entrenched and flourishing culture of human rights, democracy, gender equality, inclusion and peace
- prosperity, security and safety for all citizens
- mechanisms to promote and defend the continent's collective security and interests

Although Africa is not doing well on peace and security, over the past two decades coups have lessened, while it has been noted that there have been opposition parties active in most African countries. We know that the merging trend of fundamentalist conflict and violence are not only a threat to development on the continent, but also a stifling encounter that causes vulnerability and hunger with the family structure being disturbed. According to the DIRCO (2015), a peaceful and secure Africa is one which is in harmony with itself and the global community and that will guarantee the African people prosperity where they live longer and better, free of hunger and poverty. Most of these wars were intrastate vs. interstate, vying for control of the state and resources that are a means of existence. Throughout the African continent there is a noted weakness in addressing domestic issues like poverty, unemployment and inequality, due to conflict and corruption and this is crippling the hard-earned freedom – won back from former colonialists. DIRCO reveals that even South Africa is of the view that it might have reached its limit as an inspiring influence and role in the continent; this is due to unending challenges facing the continent as a whole – with poverty, peace and stability on the rise and with weather that is erratic and hard on the continent. If this aspiration can be taken seriously by all on the continent, new opportunities and possibilities in investment can flourish enormously since the enabling environment will welcome all sorts of investors. It is only through peaceful, stable Africa that agriculture and investments can come together and try to fight the scourge of food insecurity.

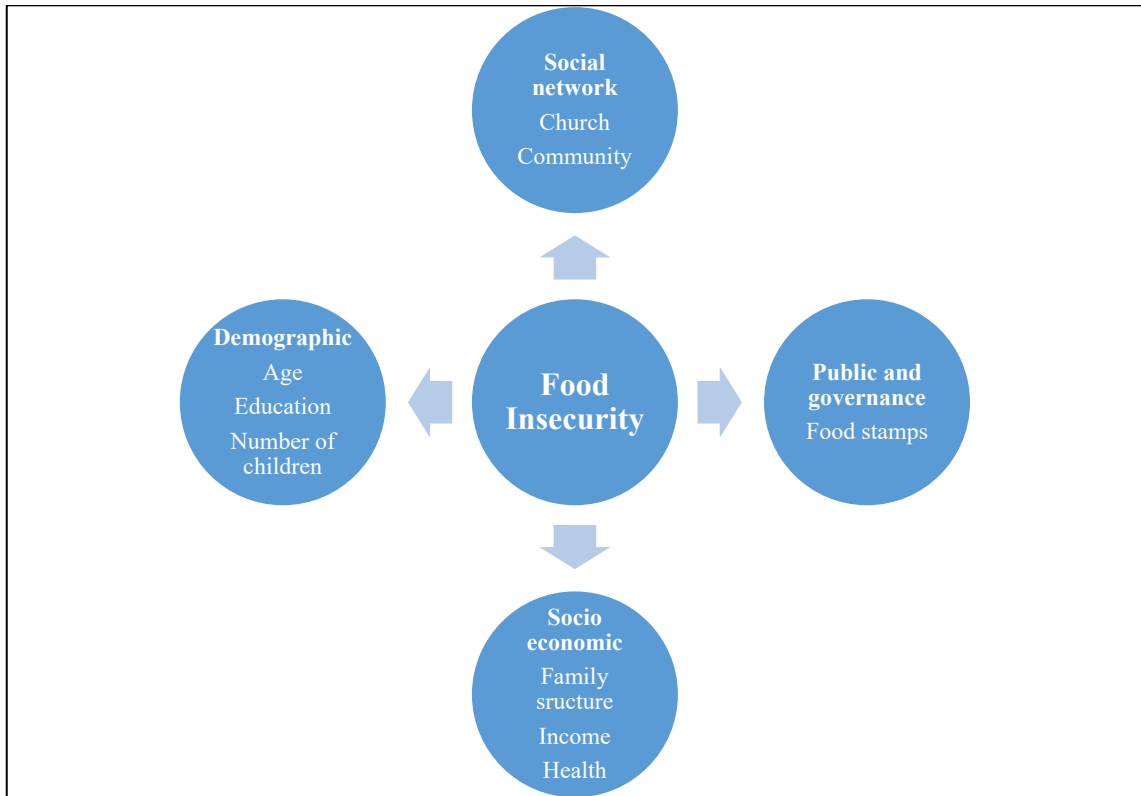
An Africa of people-driven development relying on the potential of its women and youth

For a new emergent and integrated Africa to be realised, it is advisable to take into consideration its demographic advantage (composed of a large population of youth and women) who need to be mobilised and equipped to help drive the continent's integration, peace and development agenda. This aspiration rides on the belief that for any strong accountable leadership to be successful, there should be strong united communities who are active participants capable of protecting their own legacies by building resilient structures – that will be both sustainable and democratic for buy-in and transparency; this has mostly been absent in the African development trajectory. By involving youth and women, creativity and innovations are encouraged. The youth will be the next generation leaders, who will have to deal with the past gaps, created by the current leaders – where poverty and hunger was not necessarily on the agenda but later added due to pressure from many corners of the world.

Unfortunately, agricultural growth is lagging demographic growth in the region, resulting in increased poverty and hunger. When formulating food security policies for the region, it is crucial to consider the two essential elements of food security: the availability of food and the ability to acquire it. The balancing of both the supply and demand sides of the food security equation is important in overcoming food insecurity in southern Africa.

More often than not, the researcher's observation is that when reference is made to 'food' on many occasions on the subject of 'food security' the problem is identified as essentially agricultural, but it would be incorrect to characterise the focus as being exclusively on agriculture. According to South Africa's Integrated Food Security Strategy (IFSS), its primary objective is to overcome rural food insecurity by increasing the participation of food-insecure households in productive agriculture sector activities, since approximately 70.0% of the country's households live in rural areas. Increasing domestic agricultural production may indeed be the valid mainspring of the strategies to reduce food insecurity in countries including several in SADC in which agriculture is still one of the leading contributors to GDP. Where this is no longer the case (South Africa) – and while it is true that agriculture has played an important historical role in putting food on the table for low-income households and continues to do so, and it will contribute more than it presently does – it is essential to premise policy on the clear understanding that household food security is primarily a function of total household income, (however derived). It is much less a function of the food that individual households produce for their own consumption. Generally, composite income estimates should therefore include the value of agriculture and other goods produced for own consumption.

Figure 2:9 Africa's theoretical approach to food security



Source: Connard and Novick, 1996

2.1.16.1 Brazilian experience of poverty, food security and/or insecurity

Brazil is regarded as a key agricultural and industrial power with the strongest economy in Latin America at present. However, despite recent improvements in income distribution as revealed by *The Conversation* newspaper (2017), poverty remains widespread with income inequality a significant challenge at the root of rural poverty. Further, *The Conversation* mentions that approximately 35.0% of the Brazilian population lives on less than US\$ 2 per day in rural areas; that number increased to 51.0% in 2012 as reported by the International Fund for Agricultural Development (IFAD, 2012). Since approximately 19.0% of Brazil's population lives in rural areas, this means that Brazil has about 18 million poor rural people. The country's northeast region has the single largest concentration of rural poverty in Latin America. According to IFAD (2012), in the northeast region it is estimated that 58.0% of the total population and 67.0% of the rural population live in poverty. Brazil has approximately 4 million farms of all shapes and sizes, many of which are small and family-owned that produce at subsistence level. The small-scale agriculture reportedly accounts for about 70.0% of the country's food production, as well as a significant share of the country's food exports as

mentioned by IFAD (2012). Judging from the above, one can say that for poverty in Brazil to be effectively and to be efficiently addressed, these smallholders must play a central role. The same thing said about Brazil can be said of all developing economies of the world if they are to yield any positive development improvements over poverty and incessant food insecurity guarantees that seem to be crippling their economies.

Looking closely at the Brazilian situation, one arrives at the conclusion that two of the main causes of poverty in the country are: extreme inequality in land tenure and a lack of access to formal education and skills training. In recent years, the Brazilian government has actively established programmes designed to address these complex challenges – including the 2010 Technical Assistance and Rural Extension Law – which includes a national policy to provide support to smallholder production to drive poverty levels beyond Brazilian borders. In addition to both the arguments above and in response to recent global food crises, the country’s social assistance programme was extended to cover an additional 1.3 million households in 2009. The income ceiling for eligible households was raised from BRL 120 (US\$ 52) per person, per month, to BRL 137 (US\$ 60) per person.

The subsidies on the marketing and stocking of several key commodities like maize, wheat and milk were also increased in 2010 to reduce the impact of the global economic crisis on rural people who are hardest hit most of the time. According to FAO/Global Information and Early Warning System (GIEWS) (2012), it was reported that rice exports in 2011 were also temporarily suspended to safeguard domestic supplies. The FAO maintained that the maize crop of 2012 was anticipated to reach a record high of 38.5 million tons and the wheat output was expected to be lower at 4.9 million tons. Despite the increased maize output, maize production in the northeast region was severely affected by drought in 2012. It was anticipated that the drought would affect 4 million people. In response, government declared a state of emergency in several municipalities of the states of Pernambuco, Ceara, Maranhão, Rio Grande do Norte and Bahia. The Brazilian government also allocated US\$1.4 billion to assist affected families with water distribution and support for agricultural rehabilitation activities. In addition, the government created the Integrated Committee in the Fight against Drought as reported by FAO/GIEWS (2012)

2.1.16.2 Africa (South of the Sahara)’s response to food insecurity

The current status quo of food insecurity in Africa (South of the Sahara) is not healthy and shows strain to a level that has not been seen in the world. After years of steady decline, the

number of chronically hungry people around the world appears to be on the rise again. In addition, the challenge of malnutrition is getting increasingly complex, with many countries facing simultaneous burdens of undernutrition and obesity. These are two messages that were published by the FAO, IFAD, UNICEF, WHO and WFP in the latest State of Food Security and Nutrition in the World 2017 report (FAO, 2017). This annual report measures progress towards the Sustainable Development Goal Targets 2.1 and 2.2 (i.e., ensuring access to food for all and ending all forms of malnutrition). The report (FAO, 2017) uses two measurements of food insecurity – prevalence of undernourishment and food insecurity. The latter is a new measurement estimate using data collected for a representative sample of individuals, asking them about their ability to access food. It measures moderate and severe food insecurity along the so-called ‘Food Insecurity Experience Scale’ (FAO, 2017).

The report (FAO, 2017) purports to have found evidence of the existence of severe food insecurity between 2014 and 2016 and confirms the visible rise in food insecurity in 2016. In addition, the report (FAO, 2017) also assesses trends for multiple nutrition indicators, including child stunting, child wasting and child overweight. According to the report (FAO, 2017), chronic hunger rose in 2016 to 815 million people worldwide; this represents a significant increase from the 777 million hungry people in 2015, although it remains below the high of 900 million hungry people in 2000. Africa (South of the Sahara), southeastern Asia, and Western Asia have been particularly hard-hit by rising food insecurity. In 2017, four countries (i.e., South Sudan, Nigeria, Yemen and Somalia) faced famine or near-famine conditions, and an estimated thirty-seven countries are currently in need of food assistance. The prevalence of undernutrition was on the decline in most years between 2000 and 2013, falling from 14.7% in 2000 to 10.8% in 2013. However, since 2013 the report indicates (FAO, 2017) that the decline has stagnated and in fact, may have jumped back up to 11.0% in 2016. Undernutrition rates remain highest in Africa (South of the Sahara), with more than 243 million people (22.7% of the population) affected by hunger in 2016. Almost 520 million people in Asia and more than 42 million people in Latin America and the Caribbean did not have sufficient access to food in 2016.

Interestingly, the report by Kofi Annan, (Global Nutrition Report, 2016) further indicates that despite the recent increase in food insecurity, child stunting has continued its declining trend, both globally and regionally. The prevalence of child stunting fell from 29.5% in 2005 to 22.9% in 2016. Yet, progress remains too slow. At the current pace, there will still be 130 million stunted children worldwide by 2025, well short of the international set targets. In

addition, child wasting continues to affect 8.0% of children under five years old, worldwide. The overweight and obesity form another nutritional challenge and are on the rise around the world. The global prevalence of obesity among adults more than doubled between 1980 and 2014, and the problem is not limited to high-income developed regions. In Latin America and the Caribbean, around 25.0% of the adult population was reportedly obese in 2016; this number was 11.0% for Africa and 7.0% for Asia. In addition, an estimated 41 million children were considered overweight in 2016. The reasons for these mostly worrisome trends in malnutrition in all its forms vary, but the report (Global Nutrition Report, 2016) identifies several common threads, including conflict and weather-related shocks. Of the 815 million chronically hungry people worldwide, an estimated 489 million live in areas affected by conflict and civil insecurity.

In 2017, the FAO classified nineteen countries as experiencing ongoing food crises; all nineteen are also currently experiencing conflict and violence. This strife is also often compounded by weather-related shocks such as prolonged drought. These factors contribute to food security by destroying assets, damaging crops, disrupting distribution networks and eroding livelihoods. Most at risk are already vulnerable populations like smallholders and the rural poor, as many of today's conflicts are fought in rural areas. Further, the report (FAO, 2017) points out that loss of food security itself may become a trigger of conflict, as it may compound other grievances. This two-way relationship between conflict and development is increasingly being recognised. In fact, the 2030 Agenda for Sustainable Development (UN, 2016) mentions this link explicitly, emphasising the need for increased international collaboration in conflict prevention and resolution. This will require a multi-sectoral approach, focused on building more livelihoods that are resilient and will require looking beyond immediate humanitarian aid.

In the short-term, cash transfer programmes and other social safety nets can help protect households and help them to cope better with such shocks. For lasting resilience, strategies to adapt to climate change, including climate-smart agriculture and on- and off-farm diversification of livelihoods can help prevent drops in food production and subsequent rises in food prices, as well as help populations fare better against loss of income. Together, these short-term and long-term strategies can help households better manage risk and can encourage investment in agriculture and other income-generating activities; thus, improving livelihoods and enhancing overall resilience to future crises. Food crises and famine continue to plague many developing countries. Armed conflict and prolonged drought have left around 20 million

people at a risk of starvation and death in Somalia, South Sudan, Yemen and Nigeria, while several other African nations are also currently faced with food insecurity, largely as a result of climate-driven weather events. An estimated US\$4.4 billion in aid is needed to address these crises. At a recent International Food Policy Research Institute (IFPRI) policy briefing session (IFPRI, 2016), it became clear that lessons for building a more resilient global food system in order to prevent future famine is based on multiple actions that need a concerted effort from all fronts. The authors of the policy brief (IFPRI) revealed that the successes of countries like Bangladesh and Ethiopia point to promising solutions for other developing nations.

In Bangladesh for example, large-scale public investment in agricultural research, extension services and rural roads, combined with private investment in small-scale irrigation and increased availability of improved seeds and commercial fertiliser, have all led to increased food availability and stabilised food prices in the past two decades. These investments have also helped tens of millions of smallholder households increase their incomes – leading to improved food access and food security. The Bangladesh government also focused on providing food to needy households through well-targeted food-for-work and food-for-education programmes. Other programmes developed in recent years have focused on maternal and child health education, leading to substantial improvements in nutrition for children. Between the early 1990s and 2015, child stunting in Bangladesh has fallen from 72.0% to 36.0%.

In Ethiopia, public investment in agricultural research and extension, the promotion of fertilizer use and the expansion of the country's road network have sharply increased the country's cereal production over the past three decades. Ethiopia's Productive Safety Net Program (PSNP, 2015) provides a well-targeted system of food and cash transfers to needy families in exchange for a work requirement – for those who are physically able. This programme has largely replaced annual appeals for emergency food aid. Recently, the PSNP (2015) was expanded to include educational and nutritional programmes aimed at the nutritional needs of mothers and children. Ethiopia's case also shows the importance of policy changes to increased food security. Throughout the 1990s, Ethiopia experienced significant market liberalisation between regional boundaries, which allowed for increased private sector trade. As a result of this increased trade, in 2016, the price of maize remained stable even in drought-affected areas of the country.

The Ethiopian government also increased its wheat imports during this time for transfer to needy households through the PSNP. All of these investment and policy measures likely diverted a major food crisis in 2016, according to the IFPRI brief (IFPRI, 2016). Looking at both Bangladesh and Ethiopia as examples, the FAO policy authors argue that a multi-faceted set of public and private investment, sound policies and targeted interventions for vulnerable households are crucial to enhancing food security in other developing nations. The brief's policy discussions are particularly timely, as famine was declared in South Sudan in February 2017. An estimated 4.9 million people in South Sudan are facing food shortages, 31.0% of children under five years old are stunted, and 23.0% are wasted.

The brief (IFPRI, 2016) outlines a framework to help in the short-term to prevent widespread starvation in South Sudan and to build a resilient food system for the country over the long-term. In the short-term, food aid and targeted relief programmes provided by multilateral and bilateral donors are badly needed, since such programmes played a crucial role in the achievements of both Bangladesh and Ethiopia with regard to food security. However, the brief (IFPRI, 2016) emphasises that there needs to be a balance between the necessary short-term relief and long-term food security goals. However, in the long-term, building a resilient food system is key. This resilience building allows a country's food supply to bounce back to normal or even higher levels after a disaster. In order to achieve this goal, the commitment of national governments to rural development and food security is vital. In both Bangladesh and Ethiopia, the key to longer-term food security was the development of systems that reduced households' vulnerability to food crises and famine when a shock hit. Resilient food systems can withstand stress because they are adaptable. Resilience can include such things as substituting sweet potato production in place of maize during times of drought or drawing on local food sources during times of conflict when the transport of external goods is often prohibited.

In the case of South Sudan, the brief (IFPRI, 2016) finds that the county has a high potential to increase its cereal production, as currently only 5.0% of arable land is cultivated. Once peace-building begins, the South Sudan government could learn a lesson from neighbouring Ethiopia and expand agricultural extension services, provide educational programmes focusing on nutrition, provide farmers with improved seeds and fertilisers, and invest in rural roads and infrastructure. All of these actions would help increase agricultural production and make the country's food system more resilient, whether political conflicts or weather conditions that threaten stability. In addition, using local institutions like extension services or

schools in times of conflict to help distribute aid will sustain those institutions, which often fall apart during conflicts. By keeping these institutions useful, their resilience will be much stronger and they will be better able to continue implementing social safety nets during stable times. Identifying and strengthening weak elements in a country's policy-making process can build policy-making systems that are responsive and accountable, simplifying and shortening the decision-making process and resulting in swifter action during crises. By involving multiple sectors like agriculture, health, nutrition, water, sanitation and finance in the policy-making process, disaster responses will be more robust.

In addition, strengthening the capacity of communities to assess their own conditions and opportunities, and engaging those communities in building food system resilience may also contribute to prevent famine. The current crisis in South Sudan presents an opportunity to strengthen capacity of local institutions to carry out vulnerability measurements, mapping, monitoring and analysis to improve preparedness and response for future crises. However, Jenn Campus of *The Conversation* (Campus, 2017) emphasises that famine prevention should not only be seen as a one-country problem, as clusters of countries are often affected by a crisis. International and bilateral organisations have proven to be effective in helping governments to coordinate food security and nutritional interventions across borders, as well to share early-warning information. It will also be important to build regional institutions to support cross-border resilience. According to Campus (2017), experience shows that unless national response systems promote resilience to both natural and man-made shocks, they will always be putting out fires, so to speak. If emergency resources are repeatedly diverted to address annual cycles of drought and related disasters, countries will lose ground on long-term development. Based on the cases of Ethiopia and Bangladesh, Campus (2017) argues that investment needs to focus on providing both immediate relief and making communities and their food systems more resilient over the long-term. Saving lives through emergency assistance must come first in crisis-affected regions, but the next steps must sow the seeds for a more durable development process.

Twenty-nine out of thirty-seven countries currently in need of food assistance are in Africa, while seven are in Asia and one is in Latin America and the Caribbean. Continuing conflict that negatively affects agricultural production as well as markets, food access and overall food security in many places, in addition to faulty weather shocks like flooding and rampant drought, have further hampered food availability and access in many parts of the world. The

FAO's forecast (FAO, 2016) for global cereal production increased by 18.4 million tons from the last forecast released in July 2017 (Global Food Index, 2017).

This number puts global cereal production at 2 611 million tons, which is slightly above the 2016 record. Increases in wheat and coarse grain production are driving this rise, with global wheat production forecasts rising 8.9 million tons from July 2017 and coarse grain production forecasts are up by 9 million tons. Global rice production is also forecast to reach an all-time high of 503 million tons, up 0.5% from 2016 production. As a result of this increased production, according to a FAO report (FAO, 2017) global cereal stocks are expected to reach a new high of 719 million tons. Global wheat stocks will hit an all-time high of 262 million tons, largely on expectations of a build-up of inventories in the Russian Federation. Global coarse grain stocks are also expected to increase by 8.7 million tons (FAO, 2017), driven largely by increased maize stocks in Brazil. Global rice inventories are too expected to rise slightly by 0.3% to reach 171.2 million tons (FAO, 2017).

The envisaged prospects for cereal trade in 2017 to 2018 have also improved. Global cereal trade forecasts increased to a record 403 million tons in the most recent report (*The Conversation*, 2017), reflecting a growth of 2.2% from trade in 2016 and 2017. Stronger import demands by Brazil and India have increased the expected wheat trade, while trade in maize is expected to reach an all-time high of 144 million tons due largely to higher imports by China, the European Union (EU), the Islamic Republic of Iran, and Mexico (*The Conversation*, 2017). World rice trade is expected to rise marginally over 2016 and 2017 levels due to demand in the Near East and West Africa (*The Conversation*, 2017).

Regionally, the report (*The Conversation*, 2017) expects cereal production in Africa to increase by 12.0% to 183.3 million tons. This rise will be driven mainly by recovering production in northern and southern Africa. In West Africa, overall production forecasts remain positive despite flooding in localised areas. In Central Africa, conflict and civil insecurity continue to hamper production in some areas, but generally, favourable weather is anticipated to increase the region's aggregate cereal output (*The Conversation*, 2017). East Africa continues to face erratic rainfall that is hampering production and aggregate output prospects; however, the report (*The Conversation*, 2017) still anticipates overall production in East Africa to be above average. Several African countries continue to face unfavourable production prospects and significant food insecurity, including southeastern Ethiopia, northern Nigeria, Somalia, South Sudan and the Central Africa Republic.

Cereal production in Asia is forecast to be slightly higher than in 2018 and 2019, at 1 140 million tons. This increase largely reflects increased production of wheat and paddy rice in the Far East (*The Conversation*, 1 March 2017). Cereal production is also expected to increase slightly in the Near East due to favourable weather; however, conflicts in that area continue to challenge outputs (Global Agriculture, 2017). In Commonwealth of Independent States (CIS) countries, production is expected to remain high but will be lower than 2016's bumper crop (Global Agriculture, 2017). In Latin America and the Caribbean, aggregate cereal production is expected to reach 258.8 million tons which will be 20.0% higher than the levels of a year earlier and the previous five-year average (Global Agriculture, 2017). This significant increase is being driven by record maize outputs in Argentina and Brazil. In Central America and the Caribbean, Mexico is also anticipated to see above-average cereal production. However, in the Caribbean islands, Gustafson (2017) mentions that the damage caused by Hurricane Irma is expected to depress production prospects. Further, Gustafson (2017) mentions that development in finance, significant increases in the level of financial flows to low- and middle-income countries have been recorded over the past decade. The United Nations Statistics Division report (UNSD, 2017) argues that increasing financial investments in the agri-food sector as a whole, especially in low- and middle-income countries, will be key to achieving the SDGs. Governments will need to increase public spending while simultaneously creating effective, enabling environments that encourage private sector investments.

In addition, the report (UNSD, 2017) discusses the recent development of non-traditional investment sources, such as the UN's Green Climate Fund, and investment sources from middle-income countries themselves, such as the Asian Infrastructure Investment Bank (AIIB). Given all of the challenges articulated by Gustafson (2017), a number of key challenges need to be addressed in order to achieve a sustainable global food system:

- improve agricultural productivity while ensuring a sustainable natural resource base
- address climate change
- eradicate extreme poverty and reduce inequality
- end hunger and malnutrition
- make food systems more efficient, inclusive and resilient
- improve income-earning opportunities in rural areas
- build resilience to protracted crises
- prevent trans-boundary and food system threats
- address the need for coherent and effective national and international governance

One is tempted here to believe that the core theme resonating through all of these challenges is the need for a global shift to a sustainable food system that uses land, water and other inputs efficiently and that reduces waste. Achieving this will take increased investment across the agri-food sector, as well as social protection schemes and pro-poor investments (especially in productive activities in rural economies) that ensure food security and incomes for the poor.

2.1.16.3 Regional perspective on food insecurity and vulnerability

According to *The Conversation* magazine (www.theconversation.com 22.09.2017), some countries in the Horn of Africa (particularly Somalia, Ethiopia and Kenya) suffer from severe drought due to historically low rainfall and high temperatures that are experienced by the region (FEWS NET, 2017). The article further informs the reader that the Famine's Early Warning System network reports (USAID) state that the rainfall recorded during the short rainy season (from August to October 2016), and the main season (from March to May 2017), have been especially low in large areas. Some areas in Somalia are currently suffering the worst drought in the past 35 years. Supporting the already depressing state of affairs in Africa, the data recently released by USAID (2017) shows that the drought has led to a major food crisis in the region. Somalia and southern Ethiopia are the most affected regions. Certain areas of Somalia could reach a state of famine by the end of 2017, particularly if there is an interruption in humanitarian aid. While there is cause for concern in Kenya, it remains less critical. At first sight, there would appear to be a clear link between drought and famine; this is particularly true in a region where agriculture is mainly non-irrigated. Lack of rain results in poor harvests and livestock are left with no grazing land and water. The link, however, is not so direct, and the processes which lead to famine are much more complex.

It is essential to take a holistic approach to attempt to prevent such crises. Action needs to be taken on the socio-economic front (such as strengthening states, securing conflict zones, inclusive development policies, and environmental aspects). The recent lack of rainfall was accurately predicted during the Greater Horn of Africa Climate Outlook Forum in 2016 (http://www.icpac.net/wp-content/uploads/GHACOF44_Statement.pdf) and again in 2017. These expert meetings, which are held periodically for each African region, allow forecasts to be produced for the rainfall expected for the coming season.

The last Greater Horn of Africa Climate Outlook Forum report, released in February (2017), predicted, 'The seasonal forecast indicates that most countries in the regions will receive depressed rainfall during the March-April-May 2017 rainfall season.' It also specified that the

below average rains ‘will likely have a negative impact on food security and water availability in the region’ (2017). Similar forecasts were made for the famine in Somalia in 2011 and proved to be accurate. Unfortunately, while this advice to farmers is generally backed-up with statistics from the FAO the forecasts are not common knowledge in rural areas. Yet rural users could certainly benefit from the forecasts, as these would allow them to adapt their practices by, for example, choosing resistant plant varieties, and adjusting fertiliser purchases. What this means is that disseminating the information and ensuring that it is taken on board by farmers is essential. It is also unfortunate that these forecasts, combined with an assessment of the situation, do not allow swifter emergency action. This is a well-known problem and is often seen during natural disasters, especially floods; aid often arrives too late. This is exactly what happened during the August 2017 floods in Sierra Leone. However, solutions do exist.

2.1.16.4 What the philosophers have to say

Specialists working on the path initiated by Indian philosopher and economist Sen (http://staging.ilo.org/public/libdoc/ilo/1981/81B09_608_engl.pdf), state that famines have multiple institutional causes and do not necessarily correspond to production crises. According to the Malthusian (1789) theory (AAG Center for Global Geography Education, 2011), which predicts that populations grow geometrically and outgrow resources, famine can be attributed to demography. Recently, environmental causes (especially climate) have been blamed. Since the severe droughts of the 1970s, this aspect has aroused great interest in academic literature (<http://www.cambridge.org/us/academic/subjects/earth-and-environmental-science/climatology-and-climate-change/drought-and-hunger-Africa?format=PB&isbn=9780521368391>). Yet certain authors, such as the historian Slavin P (<http://wires.wiley.com/WileyCDA/WiresArticle/articles.html?doi=10.1002%2Fwcc.395>), argue that we tend to overestimate the climate’s role in creating famine or wars: this is what Climatologist Mike Hulme (2010) calls ‘climate reductionism’. It is obvious that climate parameters (i.e., rain, temperature) influence production levels, but climate shocks lead to shortages, such as major production deficits – not to famine. The transition from shortages to famine is related to anthropological and demographic factors. These include factors that prevent the implementation of conventional mitigation mechanisms (stocks, imports or external aid). In the food crisis affecting the Horn of Africa (November 2016 to October 2017), we must bear in mind that Somalia is highly prone to armed conflicts stretching back over the past twenty years. These have had multiple repercussions, such as difficulty in distributing imported food goods to make up for the production deficit. Similarly, the conflicts involve groups such as the al-Shabaab militants, which prohibit humanitarian aid being brought into

certain areas (Cairn.Info, 2018). Finally, Somalia's state structures are extremely weak; therefore, they are unable to manage this type of production shock effectively.

2.1.16.5 The answers

An innovative mechanism, forecast-based financing, has been developed, for example, by the Red Cross Centre on Climate Change (2017). It has been set up in various parts of the world and its usefulness was demonstrated in the 2015 Ugandan floods (<http://www.climatecentre.org/news/657/a-humanitarian-history-a-made-as-uganda-red-cross-launches-forecast-based-financing-for-real>). When a given forecast exceeds a defined alert threshold, funds – from a donor to an actor established in the zone (in this case, the Ugandan Red Cross) – are automatically released to provide the affected population with necessary aid (e.g., water sanitation kits). Although only in the development phase, this approach gives us cause to hope that aid could arrive more quickly in crisis zones in the near future. Nevertheless, it does require donors and authorities involved in distributing aid accept that the forecast may sometimes lead to action being taken in vain. Nevertheless, it is a political and economic cost that needs to be accepted.

A step has recently been made in this direction in Ethiopia with the creation in August 2016, of a special drought committee that aims to mitigate crises when they are forecast and imminent. Floods, droughts and heat waves are increasing and will continue to do so in Africa and south Asia. (Gettleman, 2017; Dai, 2018; Ceccherini, Russo, Ameztoy, Marchese & Carmona-Moreno, 2017; Chandler, 2017). Farmers and governments need to adapt to this changing climate, but this requires decisions to be made with high uncertainty, and often with incomplete knowledge. This makes planning and investing in it difficult (Singh, Daron, Bazaz, Ziervogel, Spear, Krishnaswamy, Zaroug & Kituyi, 2017).

There is an increasing demand for short-term climate information like weather advisories. They are commonly used to help people decide when to sow or irrigate their crops and seasonal forecasts are used for decision-making by governments, NGOs and some farmers. Long-term information (from seasonal forecasts to decadal climate projections), however, is not being used for planning – this includes anticipating and preventing disasters (Singh et al., 2017). There is increasing evidence from across many African and Southern Asian countries that contextual, timely climate information helps farmers manage the risks that they face. This is particularly true when it is integrated with other information such as disease outbreaks or market prices and demand. The information can guide decisions on which crops to grow, when

to plant them, what seeds to use, how to market the produce, and how to divide resources between farming and other livelihoods (Adaptation at Scale in Semi-Arid Regions (ASSAR) Project, 2017). Nonetheless, there is less demand for long-term climate information, primarily because it tends to be highly uncertain, and the scale of long-term climate projections tends to be too coarse. Furthermore, policymakers find it difficult to justify investment and action based on what might happen far into the future – there is typically a lack of institutional capacity to deal with long-term climate risks. Other barriers to climate information use include mismatches between personal or traditional beliefs and what climate information suggests, the availability of useful information at the right time, how it is communicated and to whom, and inadequate capacity to interpret the information provided (Singh et al., 2017). To overcome these problems, climate information providers must develop services tailored for different needs. This requires local, national, regional and international institutions to work together. They must also work closely with vulnerable communities so that relevant climate information can be codeveloped (Singh et al., 2017).

2.1.16.6 Notable exceptions

A number of initiatives in India and Africa illustrate the elements needed for the successful uptake and use of climate information. The Adaptation Learning Programme in Ghana, Niger and Kenya integrates national meteorological information with local rain data and traditional forecast knowledge (<https://careclimatechange.org/>). In India, the Watershed Organisation Trust's innovative advisories are crop-specific and include nutrient, water, pest and disease management recommendations (Lobo, Chattopadhyay & Rao, 2017).

What makes these initiatives successful is that they:

- use participatory processes to communicate and interpret climate information, including multiple stakeholders
(<http://www.walker.ac.uk/media/1114/picsa-field-manual-final-english-11-03-16.pdf>,
http://careclimatechange.org/wp-content/uploads/2015/05/ALP_PSP_EN.pdf)
- provide timely and scale-appropriate information, and link it to the potential effects on the lives of peoples and their livelihoods (Rajvanshi, Brownlie, Slootweg & Arora, 2011)

For long-term climate information to be used, decision-makers need to trust and understand the information. In addition, it must be tailored to the local context, fit for purpose and available in time. There must also be relevant governance and institutional structures in place and emphasis placed on the socio-economic value in subsequent decision-making (Singh et al., 2017).

2.1.16.7 *Benefits of short-term actions*

Short-term actions that farmers can take to cope with weather can help them adapt to long-term change. When people see progress, they learn how to plan. They may change their behaviour, restructure their systems and learn from extreme events like hurricane Harvey (Gettleman, 2017).

- **Behavioural shifts:** As an example, in western Kenya at the start of each rainfall season, seasonal forecast information is jointly produced by the Kenya Meteorological Services, sector experts and indigenous knowledge forecasters, to help communities plan for extreme rainfall.

([https://www.researchgate.net/profile/Gilbert_Ouma/publication/270877029_Community-](https://www.researchgate.net/profile/Gilbert_Ouma/publication/270877029_Community-based_climate_monitoring_services_and_early_warning_system_The_Case_of_the_Nganyoni_Community/links/54b651f60cf2bd04be31fb87.pdf)

[based_climate_monitoring_services_and_early_warning_system_The_Case_of_the_Nganyoni_Community/links/54b651f60cf2bd04be31fb87.pdf](https://www.researchgate.net/profile/Gilbert_Ouma/publication/270877029_Community-based_climate_monitoring_services_and_early_warning_system_The_Case_of_the_Nganyoni_Community/links/54b651f60cf2bd04be31fb87.pdf)). Climate projections that demonstrate a warming trend can motivate people to start growing temperature-tolerant crop varieties.

- **Restructuring the system:** An example in India shows that national investment in the mid-2000s helped develop a robust system of climate information services (Singh, Urquhart & Kituyi, 2016). The system produced forecasts, trained extension staff and held field demonstrations through regional agriculture universities. These investments slowly recognised the importance of climate information to manage risk. Forecasts are improving and the private sector sees the value it gets from investing in climate information delivery (Bhargava, 2016: [s.p.]). Climate information is increasingly being used in adaptation initiatives

(http://www.assar.uct.ac.za/sites/default/files/image_tool/images/138/Working_Papers/CARIAA%20Working%20paper%20april%202025.pdf).

- **Sudden change:** High impact extreme events, like Hurricane Harvey or flooding in Mumbai can motivate swift action to set up infrastructure, increase investment and build capacity (Gettleman, 2017). Once in place, these initiatives can lead to longer-term change. For example in India, the super cyclone in Odisha in 1999, which killed almost 10 000 people led to better early warning systems (Ray-Bennett, 2016: [s.p.]; Mohanty, Osuri, Tallapragada, Marks, Pattanayak, Mohapatra, Rathore, Gopalakrishnan & Niyogi, 2015). It also changed the way people thought and behaved. When Cyclone Phailin hit the Odisha coast in 2016, the death toll was drastically reduced to 45 people, with lower losses to property (Ray-Bennett, 2016: [s.p.]).

As the climate continues to change, there is an increasing need for long-term information to be incorporated into decision-making. When this information is tailored to local contexts, it can help people adapt.

2.1.16.8 South African perspective on food insecurity and vulnerability

South Africa is reported to have made remarkable progress – although not enough – since its transition to democracy in 1994. It has established a solid foundation for democratic governance and improved access to education, health services, water, electricity, housing and social protection for the historically disadvantaged. Currently, more than 14 million South Africans (including 10 million children) are receiving some form of assistance.

The South African economy, according to a recent STATS SA 2016 community survey (STATS SA, 2016), has also shown some growth. The provincial economy in 2016 grew at an annual average rate of 0.6%, lagging the national economy (which grew by 0.7%) and is returning to a steady, although fragile path of economic expansion after a recession in 2009. According to a report to the UNDP and the UN's Population Fund (2015), South Africa is making steady progress towards the SDGs. However, infant and maternal mortality rates, as well as the incidence of HIV/AIDS and related diseases, remain high, as progress has been slow and uneven. In Goal 8 of the SDGs, the challenge remains to conserve and protect South Africa's rich flora and fauna (nearly 10.0% of the world's types of plants and 7.0% of world's reptiles, birds and mammals) whilst combating negative externalities from growth (South Africa has the thirteenth highest emissions of greenhouse gases in the world).

From the outset, it must be understood that according to the literature consulted (2015) food security is a complex societal issue that requires urgent practical solutions and appropriate, targeted policies and multi-pronged interventions. According to the University of KwaZulu-Natal's (UKZN) African Centre for Food Security (23/01/2017), food security needs trans-disciplinary education and research, which includes among other things:

- searching for practical solutions to food security
- developing practical, reliable measures of household food security
- evaluating interventions
- influencing and impacting policy development and analysis in Africa

Clearly then if the above points are actively applied and the country's policymakers are to make a purposeful dent in food insecurity, new ways of research and advocacy on food security and related areas require greater integration of perspective in the identification, formulation and resolutions of shared problems – so that more efficient and comprehensive assessment and interventions can be provided. Furthermore, the insights gained here through the application of the livelihood framework to household vulnerability and food insecurity indicates the value of further research using this approach. According to the WHO (2013), every year there are about 4 billion cases of water- and food-borne diarrheal diseases globally. These illnesses exacerbate problems of malnutrition and reportedly account for 1.8 million deaths annually.

Further, the WHO (2013) states that unacceptable standards of food safety render food unfit for human consumption; thus, they impair food security and public health in general. It is then clear that food safety and nutritional quality are essential elements and an integral part of food security. All effective efforts that are employed to improve food security must occur in conjunction with efforts to improve nutrition security.

In addressing food security challenges, a thorough understanding of vulnerability and food insecurity conditions at household levels is required. The ability to identify those who are the most vulnerable and identifying their coping and survival strategies will help when designing appropriate relief and development intervention activities. In addition, food insecurity analysis at local level will help to identify the most appropriate combinations of intervention. Each intervention must be appropriate to local contexts and existing strategies for supporting food security, they must be relevant to the community they are trying to assist and must always be unique in their objectives and design.

Food security issues are the primary concern of the South African government. Despite government efforts and substantial international community assistance towards poverty alleviation strategies, the number of people who are food-insecure has continued to pose a challenge to the developmental democratic state that is striving hard to fight the triple challenges of unemployment, poverty and inequality. The magnitude and severity of the problem, as well as the area covered has increased. According to development experts and poverty commentators, the major challenge facing food insecurity, is effective interventions that lie inadequately in the food insecurity assessment and monitoring systems. This study is an attempt to investigate the dynamics of food security and insecurity in relation to the vulnerable groups (household members) in the Amathole District Municipality, as well as to

develop a framework for establishing an information system to monitoring food security, insecurity and vulnerability in the Eastern Cape. Moreover, contributing to the robustness of food insecurity monitoring and evaluation methods, to better design further appropriate relief and development interventions.

2.1.17 *Traces of food insecurity causes in South Africa*

2.1.17.1 *The Glen Grey Act of 1894*

This act was passed in 1894 in the Cape with three provisions, summarised as:

- districts were partitioned into allotments that were disfranchised
- introduction of taxation to African males who could not show that they worked three out of twelve months outside their area of jurisdiction
- introduction of a council system which served as a form of control of African labour and land

The Glen Grey Act of 1894 was the first legislative instrument used by the colonial government that legitimately forced people away from their ancestral land – to Africans that ancestral land was a symbol of wealth and and of power. The Act was initially meant for the black people of the Glen Grey district of the Northern Cape – where white farmers were eager for more land at the expense of the owners (who were also natives).

The Act was then extended to four districts in the Transkei, as it was aimed at forcing more Africans into the labour market where they would be producing for masters, and no longer be owners of their own livestock and land. This was illegal; the legalised land disposition of Africans was contended by the emerging class of educated Africans who had attended missionary schools and were becoming more competitive and a force to be reckoned with. Seemingly Act 25 of 1894 of the Cape parliament (SA History online, accessed 2016) was clearly a source of disenfranchisement for a section of the South African population; the series of regulations brought with them poverty and vulnerability to landowners who become workers, and who were powerless in the quest for food security. In essence this Act ended up being introduced beyond the Cape and resulted into being described as a bill for Africa which was even introduced to the land north of Limpopo – which in 1898 became known as Rhodesia after the annexation of Pondoland and the incorporation of Transkei districts into the Cape (SA History online: 26.04.2016). According to Rotberg as quoted in the entry on food security report by FAO (2016), the discovery of minerals and the accompanying industrialisation made access to vastly expanded African labour necessary for South African capitalism.

Further, Rotberg (2016) reveals that the act describes how it introduced individual tenure in a way that limited the growth of African agriculture, separated property ownership from political rights, and ensured that the landless majority would be forced into wage labour.

2.1.17.2 Hut tax and male tax

A further degradation of the African man that reduced their status into labourers after they were proletarianised was the introduction of hut tax. This type of taxation was introduced by the British colonialists in Africa on a per hut or per household basis (SA History online, accessed 2016). Hut taxes were generally introduced in stages. In Natal (currently KwaZulu-Natal), it was introduced under Law 13 of 1857, 14 shillings per hut occupied by natives. Natives that lived in European- style houses with only one wife were exempt from the tax whilst in the Cape Colony under Act 37 of 1884, 10 shillings per hut was taxed, with exclusions for the elderly and infirm. In the Transkei (currently part of Eastern Cape) 10 shillings per hut was charged. Hut tax was paid variably according to one's socio-economic standing at the time. The tax was supposed to be paid through monetary terms and/or through labour, grain or stock.

According to South African History online (2017), this kind of taxation clearly benefitted the colonial authorities in four related ways:

- through raising money
- it supported the currency
- it broadened the cash economy, further aiding development
- it forced Africans to labour in the colonial economy

Households that had survived on, and stored their wealth in cattle ranching, now sent members to work for the colonialists in order to raise cash with which to pay the tax. The colonial economy depended upon black African labour to build new towns and railways and to work in southern Africa in the rapidly developing mines that needed a workforce – as they relied on the labour-intensive machinery and margins for profits and margins for imports and thus survival.

2.1.17.3 Food insecurity in South Africa

While South Africa is generally described by FAO-STATS, and as quoted by Hart (2009), as the least rural of the fourteen countries found in the sub-Saharan African region, 42.0% of the

population is rural. However, South Africa appears to be relatively non-rural when considering the low contribution of agriculture to its GDP. According to STATS SA (2011), the percentage contribution to annual GDP by agriculture, forestry, hunting and fishing was reported at 2.5%, which is relatively the lowest of all the industries. Therefore, one cannot but summarise that agriculture and rural livelihoods are relatively unimportant in the food insecurity equation. However, it is wise to mention that the national accounts do not convey a clear picture of the importance of land access on the ground, as agreed by Hart (2009) and supported by Jacobs et al. (2008) – when he claims that close to 4.5 million black South African citizens participate in agriculture in one form or another, including livestock husbandry. Further, Aliber (2009) reveals that many of these agriculturalists are fully involved in farming (which is of low input and surely results in low output) and that provides a supplementary source of food, limited to their own household consumption. Aliber (2009) also maintains that this type of production may well account for a gross imputed value of about R2 billion in foodstuff for rural households in South Africa. However, when writing about food security policy issues in South Africa for the HSRC, food insecurity policy researchers like De Klerk, Drimie, Aliber, Mini, Mokoena, Randela, Modiselle, Vogel, De Swardt and Kirsten (2004) argue that, food security is not essentially only an agricultural problem.

Currently South Africa is struggling to write a new story where poverty and hunger is a thing of the past. According to the preamble of the National Development Plan (NDP) (2011), South Africa is a largely divided society. People are divided in terms of their class, gender, race and location, and their opportunities are largely determined by their social position and their networks. Social fragmentation manifests itself in various ways, including high levels of domestic violence, substance abuse, criminality, teenage pregnancies, hostility towards people of foreign origin, low levels of mutual respect, social solidarity and other behaviours that reflect a spirit of community, as well as a culture of irresponsibility. High levels of unemployment among youth and women also serve to perpetuate social fragmentation. While these manifestations of social fragmentation occur in all sectors of the society, there is a consensus that they are largely prevalent in those communities that are predominantly poor. Safety and policing programmes remain important to ensure development is taking place in a safe and peaceful environment. Community safety is premised on community mobilisation and participation, joint institutional collaboration and the embedding of sustainable partnerships. Safety and policing programmes should ensure a minimum of issues are addressed, including violent crimes and violence against women and children, stock theft, forced circumcisions and marriages, illegal evictions, forms of abuse and other crimes.

2.1.18 *National Development Plan (vision 2030)*

Since the dawn of democracy in South Africa, numerous robust debates have been held with a view to building sustainable democratic institutions, transforming public service, extending basic essential services and stabilizing the economy, to ensure that the country takes its rightful place as a progressive nation.

Despite these efforts, too many South Africans are still trapped in abject poverty and the country remains a highly unequal society. Too few people have access to work opportunities and the quality of school education for the majority is of poor quality – the state lacks capacity in these critical areas.

The National Development Plan's vision is that by 2030, South Africa shall be a working nation, with individuals and households engaged in meaningful social and economic activity, and vulnerable groups protected against the worst effects of poverty, with everyone able to live the life that they wish to lead.

The modus operandi of the NDP is to urge the present government to place empowerment of the citizenry at the centre when dealing with that which impacts their lives. As noted from the NDP, government strategies have partly failed in taking into consideration people's involvement and capacitation. Instead, the government is simply narrating how it will be giving food and seedlings to the food-stricken communities. Hence, the fundamental aim of the NDP narrative is to encourage government not to focus on service delivery exclusively – at the expense of the important mobilising and conscientizing of people who must finally be in control of their own destiny. In essence, the NDP aims for a situation where people will, (through their industriousness, and in partnership with their social circle and with government), extricate themselves from the poverty trap. By using local natural resources and indigenous knowledge and skills, (which are further enhanced by the government providing the relevant requisite technologies that promote sustainability), people will be able to build sustainable livelihoods and make hunger outdated. Government policy and programmes should seek to remove obstacles that hinder capabilities of people, and create suitable conditions for the fulfilment of human potential.

The plan further recognises the importance of providing safety nets for the most vulnerable, primarily through social grants. This is to ensure that the vulnerability associated with disability, age, and illness does not plunge poor households into destitution. Measures to

ensure income security for those without access to economic opportunities take two forms, namely, social insurance and social assistance. In South Africa, insurance schemes include both the state-run Unemployment Insurance Fund (UIF) and the Compensation Fund, and involve contributions from employers and employees to provide for members who are unable to work. There are also private medical aids and pensions. Social assistance mostly takes the form of social grants for those people who cannot work for an income. These include children, the aged, people with disabilities and some caregivers. In the Eastern Cape, social grants are the most significant component of government's anti-poverty strategy. In March 2011, there were over 2.5 million social grant recipients in the province. This equates to an injection of R1.2 billion per month into the economy of the Eastern Cape. The bulk of this is spent in the retail sector, and very little is saved or utilised for productive activities.

Unscrupulous money-lending institutions have exacerbated poverty that in some cases charge between 40.0% and 50.0% interest, thereby ensnaring individuals into poverty traps of money-borrowing cycles. However, evidence from South Africa and other countries show that people who are regarded as poor do possess the ability to save the little money they do have and to transform their lives. In the Alfred Nzo district, for example, the SAVEACT model of savings clubs has helped people in eradicating poverty and returning to them the confidence, dignity and respect that had been lost. The NDP proposes a campaign to promote saving and micro-lending at community level, particularly for the funding of individual and collective economic activities. This will be linked to cooperatives and SMME support programmes.

De Klerk et al. (2004) strongly emphasise that household food security is primarily a function of the total household income rather than a function of the food that individual households produce for their own consumption. The issue of food security as not only an agricultural function is further upheld by Scanlan (2003: p.89) who maintains that inequality is what leads to food insecurity. Thus, one can say that food security is not the consequence of agriculture alone but a multidimensional phenomenon, which requires a multidimensional approach such as that which is outlined in the IFSS of South Africa.

According to Maxwell (2001), agriculture is not only a means to an end when addressing food security, but a major contributor that is at the heart of it all. Maxwell (2001) outlines three strategies on agricultural development that are at the disposal of governments' broader scheme of operations, with each striving to achieve distinctly different objectives. Maxwell's (2001) first assertion is that the growth first strategy concentrates on agricultural investment where

research and extension are concentrated on high potential areas where returns are decidedly expected. According to Maxwell (2001), the food first strategy concentrates on maximising output in mostly high potential areas, but with a marked bias to food production. On looking closer, and understanding the food first strategy, one is bound to believe that food security's first strategy prioritises improving the ability of poor people to acquire food by way of production, purchase, exchange or gift in full food entitlement. The South African approach on food security as revealed by the IFSS and as quoted by J. Koch (2011) shows a greater preference for the first strategy with a total disregard for the other two. The failure of successful implementation of the IFSS in South Africa supports the narrative that states that the Department of Agriculture is in favour of commercial agriculture at national level (as the priority agricultural development initiative). Then the general belief is that the poor's ability to acquire food is further weakened, making them more vulnerable to food insecurity.

Hendriks, S and Maunder, E (2006) describe South Africa as a middle-income country with gross inequities in income distribution; a high proportion of the population has a low income. Most households rely on purchased foods, with only 33.0% of households engaging in crop production and only 25.0% of households engaging in animal production (Maunder & Labadarios, 2000). The lopsided distribution of income distribution is reflected in a skewed distribution of nutrient intakes (Steyn & Labadarios, 2000). While clinical malnutrition is rare in South Africa (South African Vitamin A Consultative Group (SAVACG), 1995), food poverty (that is, households spending less than the money estimated to buy a low cost food plan), and low energy availability (that is, the food available to the households from purchases and home production is insufficient to meet the energy needs of the household), were estimated by Rose and Charlton (2002) to exist in 43.0% and 55.0% of the population respectively – from the 1995 Income and Expenditure Survey (2010). The National Food Consumption (NFCS) (Maunder & Labadarios, 2000) survey shows that on average South African rural and urban households had only eight and ten bought items per household respectively in 1999. Stunting is present in 22.0% of the children aged one to nine years and intakes of a range of nutrients are low in a number of households (Gericke et al., 2000).

The subjective hunger scale showed 52.0% food-insecure, 23.0% at risk of food insecurity and only 25.0% as food-secure in 1999 (Labadarios, 2000). Aliber (2002) suggests that groups most vulnerable to food insecurity in South Africa are the rural poor, female-headed households, the disabled, the elderly, retrenched, or evicted farm workers, AIDS orphans, households with HIV sufferers, cross-border migrants and the street homeless. The prevalence of food insecurity in South Africa is not known, but Hendriks (2005) has reported that the

scant available data suggests that between 35.0% and 73.0% of South African households may experience food insecurity. Further, 15.9% consume less than adequate energy, stunting rates (National Figures, 1999) could be between 22.0% and 25.0%, wasting may occur in 3.7% of the population, and approximately 30.0% of households may experience hunger. Without an estimation of, and understanding the causes of vulnerability to food insecurity, South Africa is not able to target interventions to address hunger, and is not able to measure and report on progress towards the MDGs. In recognising this, the National Department of Agriculture embarked on the development of a South African Food Insecurity Vulnerability Mapping System (FIVIMS.ZA, 2003).

Nonetheless, the ongoing poverty and food insecurity in the country – especially in the Eastern Cape – is an anathema and is in contrast to achieving the right to food that is guaranteed in The Constitution of the Republic of South Africa. According to Tawodzera, (2016), food insecurity is not understandable if the constitution is actively adhered to, and especially by one of the poorest provinces in the country (Eastern Cape), where various studies have confirmed the existence of high levels of food insecurity in rural households. In Alice, which is in the Raymond Mhlaba Local Municipality (formerly known as the Nkonkobe Local Municipality), a 2014 survey (Dodd & Nyabvudzi, 2014) on the relationship between employment and food security, found that 21.0% of the unemployed were severely food-insecure, which was attributed to the high levels of unemployment in the area – and resulting in low monthly household incomes. In fact, 62.0% of the surveyed households reported earning less than R1 500 per month. Such a low-income level tend negatively to influence a food security in a household. Studying the factors that contribute to malnutrition in children (birth to sixty months) which were admitted to hospitals in the Northern Cape, De Lange (2010) also observed high levels of food insecurity – with most of the children consuming limited quantities of fruit and vegetables, and animal or alternative protein. Most households, which these children came from, reported, consume mostly maize and white bread.

With such an inadequate diet, these children ended up suffering from malnutrition as their diet consisted mostly of starchy foods and very little protein or other nutrients that are a prerequisite for proper growth.

2.1.19 *The agrarian question versus food insecurity and vulnerability*

Although often overlooked, land tenure is an important variable affecting vulnerability to climate related disaster. Chagutah, (2013) affirms that vulnerability sits alongside a gamut of

social, economic, political and environmental aspects that make up the matrix of factors that mediate vulnerability. Both Reale and Handmer (2011) agree that vulnerability can occur either where land tenure is perceived to be insecure or where insecure tenure results in the loss of land; especially, when alternative livelihood and housing options are limited. A study commissioned by the Economic Commission for Africa (ECA: 2003) confirmed the long held view that land tenure insecurity is still widespread in southern Africa and it manifests in a number of ways. The ECA (2003) also mentions that this view mostly appears in minority groups in Botswana and Malawi, in unclear or overlapping land rights and insecurity of farm workers and farm labour tenants in South Africa, in overcrowding (high population to land ratio) in Lesotho, Malawi, Mozambique and Zambia, and in inappropriate and exploitative administrative practices and limited women's land rights in most countries in the region. Further, Chagutah, T (2013) mentions in his arguments that there are two forms of land tenure systems found in southern Africa: customary and statutory tenure systems.

The customary land tenure system is governed by unwritten traditional rules and it is administered by traditional leaders. Active occupation or usage of a piece of land is the main evidence of ownership – or an existing interest – on the land. In this system, access to land is contingent upon tribal or community membership, controlled by the chief. Households have strong exclusive residential rights, seasonally exclusive rights to arable land, and shared rights to grazing land and natural resources. Undoubtedly, as argued by the ECA report (2003), land is not alienable from the community trust. According to Chagutah, (2013), the statutory land tenure system is governed by modern law and is supported by documentary evidence such as a title deed or lease certificate, and is administered by the government.

Land ownership under the statutory tenure system is often built on freehold or leasehold entitlements to the land, and offers exclusive rights to the owner that guarantee land tenure security. Land rights in freehold, includes the ability to sell the land, rent to others, and to use it as collateral for a mortgage. Colonial land expropriation was extensive in South Africa, Namibia and Zimbabwe, where the minority white settler population held 85.0%, 50.0% and 38.0% of the agricultural land respectively. Historically, the indigenous people of South Africa have had a direct relationship with land as the main means of production, and which supports their agrarian-based livelihoods; stock farming was mainly regarded as the means of wealth and well-being. The production of food crops and livestock (mainly cattle) were key livelihood activities that dominated the lives of the people during the 1800s. However, according to Mbongwa et al. (1996), and supported by Bundy (1979), the arrival of the white colonial settler

farmers brought with them a total destruction of the social construct and food stability within South African settlements. Their arrival completely dismantled the definitions of wealth, food security and power. The above also affected the communal way of living where a surplus crop was no longer exchanged as a form of social links, as was previously the norm. The period was a result of the pressure exerted by the new white settler farmers on the white colonial administration – due to stiff competition posed by the African farmers. The new arrangement brought with it colour as the basis of assigning social, political and economic rights to the people of South Africa. Furthermore, the arrangement brought all sorts of disparities and vulnerabilities into the country by introducing the Glen Grey Act of 1894.

2.1.20 *The Eastern Cape's perspective on food insecurity and vulnerability*

Lahiff (2014) describes the Eastern Cape as one of the nine provinces in South Africa, located in the southeast of the country along the seaboard of the Indian Ocean. The area was a site of prolonged struggle between native people (principally Xhosa-speakers), and European colonists (both Dutch and/or Afrikaners and British) throughout the eighteenth and nineteenth centuries, which saw the defeat and subjugation of the African chieftains and the loss of the majority of the territory to white settlers. In the twentieth century, and under policies of segregation and apartheid, the Eastern Cape was divided territorially into zones of white occupation, which formed part of the Republic of South Africa, and the native reserves (later known as African homelands or Bantustans) of the Transkei and Ciskei – which for a time achieved the dubious status of independent republics.

The separation of people along racial lines, as in the rest of South Africa, was accompanied by massive forced removal of African, Indian and Coloured people, widespread dispossession of land and other property and severe curtailment of social, economic, and political rights. The result was one of the most unequal societies in the world, with a relatively small white minority enjoying high standards of living and the greater majority of the black population consigned to a life of extreme exploitation and poverty (May, Woolard and Klasen, 2000: p.26).

Further, Lahiff (2014) states that the transition to democracy in South Africa during 1994, and the coming to power of a government led by the African National Congress (ANC), has begun to reverse the legacy of the past. Landlessness, vulnerability, unemployment, lack of basic services and, above all, poverty, remain central to the lives of the majority of the population of the Eastern Cape. While considerable progress has been made in many areas of social policy – such as provision of water, electricity and housing – especially in urban areas, the deep rural

areas of the former Ciskei and, especially, the former Transkei, have presented enormous challenges to the reform policies introduced by the state since 1994. According to Lahiff's (2014) argument, opportunities for migrant labour to the mining and industrial sector – on which the area has long depended – have fallen dramatically in recent years, and many local sources of employment (notably in the public sector), are also shedding jobs. Declining opportunities for formal employment have forced many households to turn to informal activities to obtain a livelihood, including an increased dependency on traditional land-based activities.

In South Africa, food security is a central feature of the present government since 1994 and testimony that the right to food is enshrined in the country's constitution (Constitution of South Africa, 1996: Section 27; Section 28(1c); Section 35[2e]). The National Policy on Food and Nutrition Security (NPFNS, Government of South Africa, 1994) is a recognition of the food security challenges and the need to do much more to fulfil the constitutional obligation of the right to food. Food insecurity in South Africa is experienced in both rural and urban areas and varies between provinces. This research seeks to provide a succinct overview of the food insecurity and vulnerability of the people of the Amathole District Municipality, emphasising the nature and extent of food insecurity and the determinants of food insecurity to develop a framework for establishing an information system for monitoring food security, insecurity and vulnerability in the Eastern Cape.

The economic region of the Eastern Cape in the South African was increasingly marginalised since the discovery of diamonds and gold in the centre of the country, in the late nineteenth century. With the emergence of the mining core of the economy in the twentieth century, the Eastern Cape's primary contribution to what became known as the 'minerals-energy complex' (STATS SA, 2016) was to supply unskilled labour through the migrant labour system. This structural relationship between the Eastern Cape region and the mining heartland of the national economy has not been significantly modified since 1994. People from the Eastern Cape continue to migrate out of the province to get employment (STATS SA, 2016). Since 1994, the three main economic centres of South Africa: Johannesburg, Durban and Cape Town have increased their share of the national population and GDP.

This history of the Eastern Cape as a labour reserve (rather than a productive base), continues to manifest in various ways, such as that the total fixed capital stock per person is only half of that which it is for the country. The GDP per person is just over a half of the GDP per person

for South Africa as a whole (about R26 000, compared to about R48 000 – 2010 figures (STATS SA, 2016) The Eastern Cape has higher rates of poverty and unemployment than the rest of South Africa. Typical household incomes in the Eastern Cape are very low: in 2010, the median monthly earnings of employees were R2 200, more than 20.0%, less than South Africa as a whole. Half of Eastern Cape households do not have a wage earner (compared to 37.0% for South Africa overall, and more than half (57.0%) of Eastern Cape households receive social grants, compared to 45.0% for South Africa generally.

There is evidence that the Eastern Cape's rates of capital accumulation and economic growth have been slightly less than that of all of South Africa. Prospects for future growth remain uneven. The former Bantustan economy remains largely unchanged, with key initiatives bottlenecked and prospects limited. Instruments to promote more inclusive economic growth have had a suboptimal impact, and an uneven wealth concentration – in both spatial and social class terms – persists. Changing this, must be the focus of the Eastern Cape and its partners going into the planning stage.

2.2 Creating economic opportunities and jobs

In order for mass poverty to end, the economy needs to generate employment opportunities. From the standpoint of economic and social sustainability, strategies to address income poverty can be ranked as follows:

- *full-time, reasonably paid and secure employment* – both wage labour and self-employment
- *public employment programmes* – which support social integration, build social capital and provide income relief
- *support for sustainable livelihoods* – where households combine low or insecure income-generating employment with non-cash production and often, grants

As mentioned here, the strategy does not propose intervention in the area of full-time wage labour or self-employment. Its key intervention in this area is public employment programmes, where the aim is to scale up the Expanded Public Works Programme (EPWP) and the Community Works Programme (CWP) significantly. Strategy rollout sites will also become CWP sites.

The Anti-Poverty Strategy uses the targets set by the Provincial Jobs Strategy and plans already in place for EPWP. Between 2010 and 2011, there were nearly 50,000 full-time equivalent EPWP jobs in the EC², including the CWP. This was targeted to triple over the next three years to over 150,000 jobs³. EPWP jobs were targeted to increase from 4.0% of present provincial employment (formal and informal) to nearly 12.0% by 2014. It is noteworthy that the EPWP full-time equivalent employment was set to become more than formal employment in the manufacturing industry by 2014. However, it is depressing to report that the targets have never been met and variance explanations given were haphazard at best, not informing on future planning at all.

The purpose of the CWP is to provide an employment safety net. It recognises that sustainable employment solutions will take time, particularly in reaching marginal economic areas. CWP aims to contribute to the development of public assets and services in poor communities and to improve the quality of life for people in marginalised economic areas by providing work experience, enhancing dignity and promoting social and economic inclusion. CWP will be used to strengthen implementation in rollout sites.

In the area of entrepreneurship, SMMEs and cooperatives promoting a range of government programmes already exist. Among these are:

- the Local Economic Development (LED) support programmes of the Department of Economic Development Environmental Affairs and Tourism for the Eastern Cape (DEDEAT)
- the Eastern Cape Local Government and Traditional Affairs
- municipalities
- SMMEs
- cooperatives programmes of DEDEAT
- provincial and national entities
- women and youth development programmes of the DSD
- income-generation programmes supported by other departments

² According to the EC Provincial Department of Public Works

³ According to targets set by the National Department of Public Works

Due to the existence of programmes in a number of departments, the strategy does not propose new interventions in this area. However, flagship programmes per rollout site will provide sustainable economic and job opportunities.

2.3 Better targeted access to basic services and assets

This pillar addresses, what has been termed a social wage, consisting of services such as subsidised housing, expanded access to water, electricity, refuse removal and sanitation, as well as a raft of free minimum basic services for vulnerable sectors of the population. It is an important principle that the inability to pay for basic services should not prevent the poor from accessing these services altogether. Ensuring the availability of clean water, adequate sanitation, light and heat, as well as decent housing, is critical in the fight to overcome poverty.

In the context of persistent inequalities and social divisions, considerable anger is generated in poor communities due to undignified living conditions. Living conditions are negatively affected by delays in obtaining services, lower levels of service and relatively high levels of disconnection. Basic services form an important part of a constitutionally guaranteed social safety net in South Africa. While there has been significant progress in providing basic services and community infrastructure in the Eastern Cape, there are still significant backlogs.

Access to assets provides economic and social stability, as well as a stronger basis for income generation. Current government programmes revolve around land, housing and community infrastructure.

Community infrastructure is an increasingly important form of assets for the poor. It is important that the major social services, starting with clinics, schools and community services centres, develop explicit and sustainable strategies to target the poorest regions and to reach remote areas. In addition, the relevant departments should explore ways to expand productive public assets, including rental housing, irrigation schemes, cultural and retail centres and workshop sites for mechanics.

Community infrastructure includes the provision of community roads to enable the public to access schools, clinics, hospitals, community halls and other social amenities. Current experiences show that while these social institutions are provided in some areas, accessing them remains a major challenge due the lack of, or impassable conditions of, the social roads network. This disparity highlights the importance of integrated planning, not only for the

provision of services, but also for facilitating interaction among people and between communities, thereby promoting human spirit and social cohesion, on the one hand, and helping local traders to access markets to contribute to local economic development, on the other.

The primary aim of this pillar is to ensure that constitutionally guaranteed services and assets are available to all of those who qualify. While no intervention is proposed, the anti-poverty steering committee should receive regular updates on the progress of ensuring delivery of basic services.

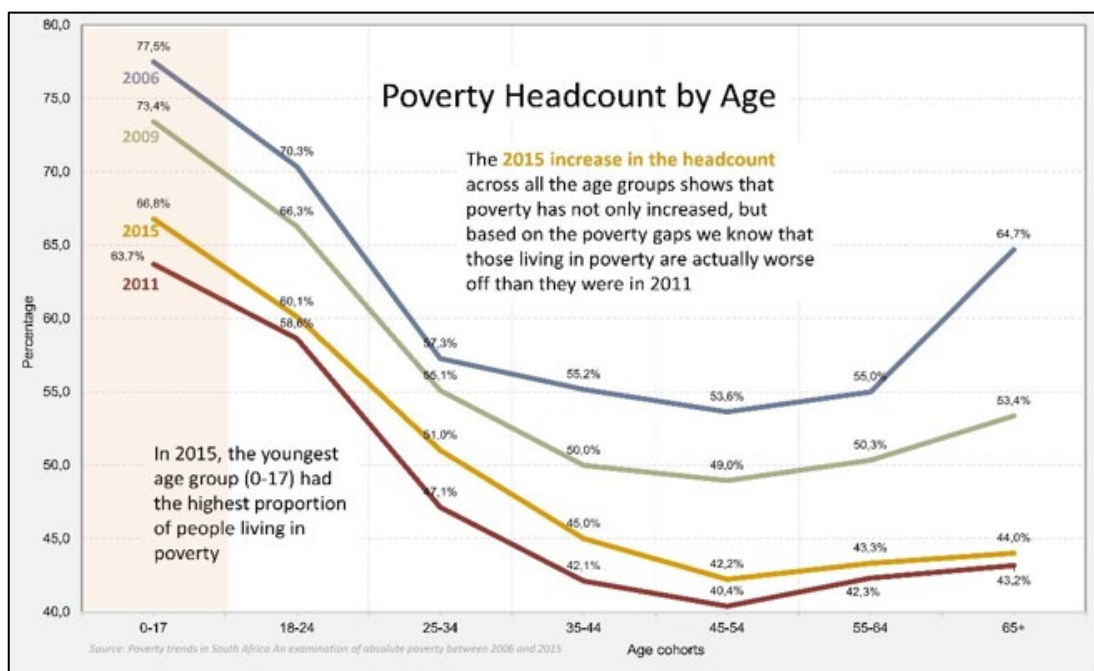
According to new data released by STATS SA (2018), poverty is on the rise again in South Africa. The latest Poverty Trends in South Africa report shows that, despite the general decline in poverty between 2006 and 2011, poverty levels in South Africa rose in 2015. More than half of the South African population was reportedly poor in 2015, with the poverty headcount increasing to 55.5% from a series low of 53.2% in 2011. The figures are calculated using the upper-bound poverty line (UBPL) of R992 per person per month at 2015 prices. This translates into over 30, 4 million South Africans living in poverty in 2015. While the recent increase in the headcount is unfortunate, we are still better off compared to the country's poverty situation from a decade earlier, when it was estimated that close to two-thirds of South Africans (66.6% or roughly 31.6 million people) were living below the UBPL in 2006.

Between 2011 and 2015, the South African economy was driven by a combination of international and domestic factors such as low and weak economic growth, continuing high unemployment levels, lower commodity prices, higher consumer prices (especially for energy and food), lower investment levels, greater household dependency on credit, and policy uncertainty. This period saw the financial health of South African households decline under the weight of these economic pressures and, in turn, has pulled more households and individuals down into poverty. In general, children mostly aged seventeen and younger (especially black Africans females), people from rural areas, those living in the Eastern Cape and Limpopo, and those with little or no education, are the main victims in the ongoing struggle against poverty, which results in food insecurity and vulnerability. In the figure below, STATS SA maintains that while poverty is the highest amongst children (especially from birth to seventeen years), poverty levels tend to drop as children get older and only start to increase again from the age of fifty-five. The poverty gap, as well as the severity of poverty, shows a similar trend to the poverty headcount for the birth to seventeen-year age group. The poverty

gap values highlight that not only are children more likely to be poor, but that they also reside in households that are closer to the poverty line.

Growing up in poverty is one of the greatest threats to healthy childhood development. Unfortunately, in 2015 this was a reality for over 13 million children living in South Africa, according to the latest Living Conditions Survey data conducted by STATS SA (2016).

Figure 2:10 South Africa's poverty headcount



Source: STATS SA, 2016

Key to sustainable food security in southern Africa

The contributing factors to food insecurity are numerous and interact in a complex way that makes it impossible to have a singular approach to it; hence, this thesis does not pretend to have a single approach that will be a one-size-fits-all method. Amongst other things, many of the challenges facing Africa – and the world – are social issues that in turn are linked to the cycle of poverty. As such, development of solutions and strategies to reduce food insecurity remains a slow process and will require action across all spectrums of development.

The particular configuration of poverty in many African countries and in South Africa is a first-hand consequence of colonial and apartheid engineering as seen by Aliber, M. (2012). In the case of South Africa, and according to Aliber (2012), the most salient elements of both

colonial and apartheid engineering were large scale land dispossession, the establishment of increasingly overcrowded and poorly-resourced homelands for the majority of the black population, and the migratory labour system that formed the backbone of most of the country's resource mining and industrial sectors. What this researcher regards as the single most important factor determining the level of development of any country, is the degree to which it is able to control its own political, economic and social space and therefore its policies. In most African countries social, economic, and largely, political policies are not controlled by Africans and more accurately, by African rulers, but they are controlled by foreigners who do so to the benefit of other foreigners. Among the most important non-African players, determining African policies are the following:

- Foreign multinational corporations, of which the most striking example today is the oil companies which run immense extractive industries in Africa, with almost no links to the local economies in which they operate – apart from a trickle of royalties that pay for imports which finances elite consumption and fuels corruption and repression.
- Multilateral financial institutions, which, by imposing various conditions, dictate the economic and social policies of African states.
- Other foreign state and non-state players, who through their role as donors and/or creditors, have extensive leverage (and therefore influence) over the social and economic policies of African states.

Apart from the narrative above, another important factor is determining whether a country develops its ability to generate a meaningful economic surplus and to direct a large part of that surplus to productive investment, rather than to private consumption.

2.3.1 *Climate and disaster resilience*

A changing climate and rapidly growing exposure to disaster risk, presents the world with an unprecedented challenge. For developing countries that are less able to cope with the impact and are more likely to be affected, the challenge is particularly severe. These countries face mounting losses from a range of natural hazards – from earthquakes and tsunamis, to severe flooding, storms and drought. The UNDP works to integrate issues of climate, disaster risk and energy at country level, and focuses on building resilience and ensuring that development remains risk-informed and sustainable. The UNDP maintains a US\$1.7 billion portfolio in climate change adaptation, mitigation and sustainable energy. Since 2005, at least US\$1.7 billion has been invested in disaster risk reduction and recovery. We face the threat of decades of development progress being rolled back and poverty becoming entrenched. Meanwhile,

climate change cuts across society, from agriculture to health, energy to water resources. The evolving climatic patterns characterised by cyclic drought, floods and cyclones have become more frequent in southern Africa (FAO, 2018). Their scale and complexities demand that all partners on the ground work together to help communities become more resilient to these threats. With agriculture regarded as a key driver in the economic growth of countries in the region, the adoption of policies, technologies and practices that build the resilience of agriculture-based livelihoods to potential threats is crucial.

The meagre agricultural season of 2015 and 2016, compounded by the poor harvest of 2016/17, left only two countries having surplus food to export and has greatly affected the food and nutrition security of millions of people. The lean season was expected to continue through April 2017, which would have a cumulative eroding effect on the production capacities of farmers in the 2016 and 2017 agricultural season. With 70.0% of the population in the region depending on agriculture for their livelihood, these same people not only produce food for themselves, but for the entire sub-region. Supporting these farmers will be crucial in avoiding protracted relief operations and increased vulnerability, which can lead to migration – as income and labour opportunities cease to exist.

2.3.2 *The devastating effects of 2015 and 2016 El Niño phenomenon*

Drimie (2005) of HSRC in South Africa describes the southern African region's food security crisis as the result of an extreme global El Niño event that was triggered by widespread drought conditions. The drought brought with it a sizeable reduction in regional food production although it did not lead to famine. It did, however, result in a range of interlinking crises, such as rainfall failure, widespread disruptions in food availability, failure in governance, extreme levels of prevailing poverty and the continuing erosion of livelihood strategies through HIV/AIDS. According to Drimie (2005), the brutal relationship between eroded livelihoods and weakened tradition safety nets, increasing vulnerability to food insecurity and the scourge of multiple waves of HIV/AIDS continues to raise difficult challenges for relief and development practice in the southern African region.

In 2015, the UN's FAO established a Global Task Team on El Niño, which focuses on coordinating the FAO's response to the impact on agriculture, food and nutrition security and the livelihoods of affected populations (FAO, 2016). In December 2015, the FAO's Global Information and Early Warning System issued a special alert on the effects of El Niño in the region. The 2015 and 2016 El Niño phenomenon has been one of the worst on record, severely

affecting the lives and livelihoods of more than sixty million people across forty countries. It has devastated crops and killed livestock, in some cases it has dried up water-sources, and in others caused massive flooding, driven malnutrition rates up, increased disease outbreaks and caused significant migration. The 2016 humanitarian appeal (US\$5 billion), whilst crucial to the life and well-being of millions, did not tackle the underlying vulnerabilities and risks. El Niño is not only a humanitarian challenge, but also a long-term development challenge.

Factors such as poverty, inequality, environmental degradation, competition over scarce natural resources, high population growth, rapid and uncontrolled urbanisation, as well as a weak risk governance, contribute to make countries and their people increasingly vulnerable to climate change – and the increased frequency and intensity of weather-related hazards. The poorest, who depend directly on natural resources for food, clean water, energy, shelter and income (and who do not have access to social safety nets), become the most affected by this phenomenon.

El Niño is a critical issue for the UNDP, at the heart of its resilience focus and development mandate. This thesis provides an overview of UNDP efforts at global, regional and country level, as well as its contribution to inter-agency advocacy to help communities affected by this climate-related phenomenon. The El Niño phenomenon poses a global threat to the agricultural livelihoods of millions of people (FAO, 2018). The 2015 and 2016 El Niño weather event, which meant reduced rains for most parts of the region, resulted in poor or failed harvests in most countries in 2016. According to assessment data from SADC (2016), some 16 million people in South Africa were worst hit by drought and needed emergency humanitarian assistance. In southern Africa, the impact of El Niño has been felt across all sectors (i.e., food security, nutrition, agriculture, water and sanitation, energy, health and education), which lead the vulnerable population to suffer and for the economy to contract. During 2015 and 2016, many countries in the region declared a national state of emergency due to drought, and all but one of South Africa's nine provinces (which account for 90.0% of the country's maize production), declared drought disaster areas. After consecutive years of drought, food insecurity is tightening its grip as southern Africa enters the peak of the lean season – that period before the next harvest in March and April when food stocks become increasingly depleted.

In mid-2016, the WFP categorised the southern African region as a Level 3 Corporate Response that is regarded as the highest level of emergency. Seven countries are covered by

WFP's emergency response: Lesotho (WFP, 2018), Madagascar (WFP, 2018), Malawi (WFP, 2018), Mozambique (WFP, 2018), Swaziland (WFP, 2018), Zambia (WFP, 2018) and Zimbabwe (WFP, 2018). Prices remain high for maize and other staple crops and are above average for the time of year (autumn due to pre-summer rains). Meanwhile, income for the poorest has been reduced by lack of casual labour opportunities, triggering various negative coping mechanisms as families struggle to feed themselves. The WFP is rapidly scaling up life-saving operations for the most vulnerable communities in the worst affected countries. The WFP is also working to reach the growing number of people, with food and cash-based relief while strengthening resilience building.

Based on this information, the southern Africa El Niño Response Plan 2016 (FAO, 2016) was drafted, and further benefitted from the SADC El Niño meeting held in Johannesburg, South Africa on 25 and 26 February 2016 (SADC, 2016). The recommended response actions from the SADC meeting are supported by this plan. Given the magnitude of the crisis across multiple countries (FAO, 2016), timely and coordinated support is required to assist vulnerable families to restore their agricultural production, regain their livelihoods and better withstand future climatic shocks. The FAO is committed to complement and support the efforts of governments in the region to respond effectively to the immediate stress effects of El Niño on assets and livelihoods of vulnerable farmers, as well as to pursue policy and investment options and build their resilience. The 2015 and 2016 agricultural season in southern Africa was the driest in thirty-five years. In a region where over 70.0% of the population is dependent on agriculture for their livelihoods, and following two, and in some cases three, consecutive years of drought, El Niño (FAO, 2018) has had a devastating impact on the lives and livelihoods of farmers and herders. Food reserves and seed stocks were depleted, and water and pasture, scarce. More than 643 000 livestock deaths were reported in five countries due to the lack of feed and water as well as the outbreak of disease.

The 2015 and 2016 harvest assessments indicate a regional shortfall of nearly 9.3 million tons of cereal production. The high regional deficit is driving up staple food prices and constraining the already limited purchasing power of vulnerable families. The situation was urgent with at least 40 million people projected to be food-insecure in the 2016 and 2017 lean season – 22 million of whom required immediate assistance. Drought (FAO, 2018: [s.p.]) emergencies have been declared by Botswana, Lesotho (FAO, 2018: [s.p.]), Namibia, Swaziland and Zimbabwe (FAO, 2018: [s.p.]). In addition, eight of South Africa's nine provinces which account for almost 90.0% of the country's maize production (and are critically important for

exports within the region), have been declared drought disaster areas. With the planting season is approaching, funding was urgently needed to help improve access to agricultural inputs.

The people who are dependent mainly on livestock for their food security and livelihoods will require feed support and protection against pests and disease during the ongoing dry season. Emergency activities in the agriculture sector will enable families to regain their livelihoods, will contribute to closing the food gap, and reduce reliance on emergency food aid. In the cases of all countries, the planned scale-up is subject to the availability of resources.

The balance of needs is expected to be addressed by both governments and non-governmental counterparts. To sum up, the El Niño phenomenon seems to have worsened the food security issue and the crisis has become more complex despite its origins not well understood currently. This presents a challenge taking action to ensure that a similar crisis does not occur the next time there is a shock to the food economy.

2.3.3 *Sustainable development goals*

Nowadays, there is an imperative to foster sustainable development. Following an inclusive process of intergovernmental negotiations and based on the proposal of open working groups on the SDGs, the latter set out some goals and targets which all of the countries have agreed on. There were seventeen agreed goals and 169 targets to demonstrate the scale and ambition of new universal agenda after the MDGs. The SDGs were formulated since its precursor, the MDGs, could not complete what they did not achieve. A vision for what this encapsulates is laid out in the new sustainable development agenda adopted by the UN's General Assembly on 25 September 2015 (UNDP, 2016) – that aims to end poverty, promote prosperity and the well-being of the people, while protecting the environment by 2030. As the UN's development arm, the UNDP has a key role to play in supporting countries to make this vision a reality, putting societies on a sustainable development pathway, managing risk, enhancing resilience, and advancing prosperity and well-being.

Building on its core strengths, a large network in more than 170 countries and territories, a principle coordination role within the UN Development System, and the proven ability in supporting efforts to reduce poverty, inequality and exclusion, and protect vital ecosystems – the UNDP outlined a vision in its Strategic Plan of 2014 to 2017 (UNDP, 2016) focused on making the next big breakthrough in development: to help countries achieve the simultaneous eradication of poverty and significant reduction of inequalities and exclusion. While

ambitious, this vision is within reach, and significant inroads can be made to eradicate poverty, to reduce inequalities and exclusion, as well as to safeguard the environment. In line with this vision, the UNDP has worked with the UN's Development Group (UNDG) in developing a strategy for effective and coherent implementation support of the new sustainable development agenda under the acronym 'MAPS' (Mainstreaming, Acceleration and Policy Support).

The mainstreaming component of MAPS aims to generate awareness among all the relevant actors and to help governments land the agenda at national and local levels, and ultimately to mainstream the agenda into their national plans, strategies and budgets. The acceleration component focuses on helping government's fast-track progress on the SDG targets by providing tools that will help to identify critical constraints to faster progress, and to focus on those development objectives that are more relevant to the country's context. The Policy Support component aims to provide coordinated and pooled policy support to countries working to meet their SDG targets. In this regard, UNDP offers an integrated package of policy support services that align with its programming priorities. These services, as outlined in the prospectus, cover a wide range of areas: poverty reduction, inclusive growth and productive employment, gender equality and the empowerment of women, HIV and health, access to water and sanitation, climate change adaptation, access to sustainable energy, sustainable management of terrestrial ecosystems, oceans governance, and promotion of peaceful and inclusive societies.

2.3.3.1 Severe acute malnutrition (SAM)

In most cases, malnutrition is used to describe inadequate nutrition or insufficiency and can be displayed in different ways, depending on location. Meanwhile, food insecurity prevails ubiquitously, as discussed by malnutritionists Spool and Torino (2008). Further, Spool and Torino (2008) mention that food insecurity may be described as inadequate access to plentiful, safe, nutritious food that meets the nutritional needs, as well as food predilection, of individuals and communities and plays a significant role in the advances of malnutrition in resource poor and resource inadequate settings. Regarding the food security situation, and although it seems that odds are against the world, progress has reportedly been made since the 1950s in combating poverty, hunger and malnutrition across the world – with food production increasing globally. The WHO (1997), has publicly claimed that there has been a significant reduction in the prevalence of pre-school malnutrition and infant and child mortality; however,

despite those remarkable improvements, poverty, hunger and malnutrition continue to be an immense challenge.

It has been revealed by Oldewage-Theron, Dicks and Napier (2006) that, 790 million people in developing countries and 34 million people in developed countries are experiencing malnourishment and do not have sufficient food. Furthermore, Oldewage-Theron et al. (2006) suggest that globally the state of the nutritional situation is improved – where the reality is that the nutritional status has worsened in numerous countries, and particularly in Africa. According to the Save the Children reports of 2005 and 2009 (UN, 2015) over 60.0% of children who died in South African hospitals were reported to be underweight, and more than half of those children were reportedly suffering from severe malnutrition. This reported high mortality rate is related to the high rate of children exposed to, or infected with HIV. Many of these severely malnourished children die at home before setting getting to the government facilities where help and care is provided. According to the South African National Health and Nutrition Examination Survey (SANHANES, 2012), South Africa is said to be in a transition, in which undernutrition (notably stunting and micronutrient deficiencies) coexist together with the rising incidence of overweight and obesity. In support of this, the 2005 National Food Consumption Survey (NFCS, 2005) states that about 18.0% of children are stunted compared to a 21.6% prevalence in the 1999 survey. The SANHANES survey (2012) maintains that there is a 26.8 %; increase in occurrences of stunting and that about 9.3% of children are underweight, which shows a reduction from 11.0% in children aged one to three years.

There is an increase in the prevalence of stunting as reported by SANHANES (2012) at 26.8%, with the Eastern Cape at 15.6% for girls and 21.6% for boys, from birth to fourteen years. Anaemia affects 27.9% of children and 29.4% of women between fifteen and forty-nine years of age. The 2005 survey (NDOH, 2017) estimated that 63.6% of children and 27.7% of women had a vitamin A deficiency. Zinc deficiency in children was 45.3%. At the national level. 51.6% of households experienced hunger, approximately 28.2% were at risk of hunger and 20.2% appeared to be food-insecure in 2005, as mentioned by the NFCS (NDOH, 2017). Whilst SANHANES (2012), reported a decrease in households experiencing hunger to 26.0%, with the risk of hunger that remained the same at 28.3%, and food insecurity had increased to 45.6%.

Childhood undernutrition is a major global problem and is the underlying cause of 35.0% of deaths among children under five years of age in the developing world. According to these

two reports (UNICEF, 2017), malnutrition further contributes to childhood morbidity, mortality, impaired intellectual development, adult suboptimal work capacity, and increased risk of disease in adulthood. In support of this, the 2008 Lancet series on maternal, child and undernutrition, and severe acute malnutrition (SAM), regards severe malnutrition as the most important contributory cause of childhood mortality (UNICEF, 2017). As a result, an estimated 19 million children globally had been reported to suffer from SAM and with half a million dying directly because of SAM each year (UNICEF, 2017).

World debates make it clear that undernutrition has a lasting effect on its survivors, reducing the income potential by leaving them less able to learn, or to perform physical labour, and trapping them in a generational cycle of poverty. Undernutrition is responsible for 11.0% of disability, as well as the number of years in their lives that young children will need to adjust, worldwide. The severe wasting during the first twenty-four months of life leads to a loss of up to eighteen points from an individual's expected intelligence quotient (IQ) score. The known negative impact of undernutrition on the physical and mental potential of the population diminishes national productivity and thereby costing most countries as much as 3.0% of their GDP. Understandably, severe malnutrition is both a medical and a social disorder. Seemingly, the medical problems of the child result in part, from the social problems of the home in which he or she lives.

It can be deduced that malnutrition is the result of chronic nutritional and frequently emotional deprivation by carers who, because of poor understanding, poverty, or family problems, are unable to provide the child with the nutrition and care required. If successfully managed, the severely malnourished child will require that both medical and social problems be recognised and corrected. Appropriate case management in health facilities, community referral systems and follow-up of care (following discharge), could save the lives of many children and dramatically lower the reported case fatality rates. One must bear in mind that undernutrition can happen at any point in the life cycle of any household's individuals. However, when it happens early in one's life, one can suffer irreversible damage. Nutritional challenges will also continue assiduously throughout one's life cycle. Inadequate nutrition usually begins in utero and extends into adolescence and adult life. The cycle of poor nutrition also spans from generation to generation.

Young children, and girls in particular, who do not receive adequate nutrition become stunted adults and are more likely to continue the cycle unless it is broken. Pregnancy during the

adolescent years in childbearing girls increases the risk of low birth weight infants and also the difficulty of breaking the cycle. Good nutrition needs support at all stages of the life cycle including infancy, childhood, adolescence and adulthood (this is especially true for girls and women). Intensive efforts are needed to prevent and minimise the adverse effects of poor nutrition. Undernutrition may be greatly improved if we improve household access to nutritious foods, cultural practices and individual physiological requirements of food and nutrients. For the province to improve food security and nutritional well-being seriously, we need to strongly advance on the coordination strategies and integrated approach within, and among multiple sectors (that is, government, civil society and the business sector). The underlying causes of undernutrition include inadequate access to food and nutrients, improper care of mothers and children, limited access to health services and unhealthy environments. The UNICEF framework (2005) divides the causes of undernutrition into three: immediate, underlying and basic. This framework can guide collection of information on the causes of malnutrition and planning of actions to address undernutrition in the community at the ward, district, provincial and national level.

2.3.3.2 Food insecurity in relation to obesity

South Africa is generally described as a diverse country with several context-specific social determinants of health, which influence the incidence and prevalence of obesity. According to the National Department of Health Minister, Dr Motsoaledi P.A. (2015), obesity is understood to be the non-communicable disease that represents a dire threat to the physical and mental health of the South African population. In addition, Dr Motsoaledi (2015) further mentions that poverty, food insecurity, an uneven distribution of wealth, a lack of education, rapid urbanisation and the built environment are among the factors contributing to the rising obesity epidemic. Among other factors, obesity is caused by consuming food containing more fat and sugar, and less fruit and vegetables. Perhaps the biggest challenge to be addressed here is about changing of attitude towards food security and physical activity at the same time; to avoid an obese population from being afflicted with additional diseases that will cost the Department of Health more expenditure.

It is against this background, according to the National Minister of Basic Education, Motshekga A.M. (2015), as reported in national parliament, which the prevalence of stunting and obesity are of concern as they are seen as a double burden of malnutrition affecting the learners at school. Further, Motshekga (2015) shared some results with parliament, of the study done by the University of Johannesburg (UJ, 2016) revealing that anthropometric

measurements showed positive improvements in the nutritional status of learners for wasting, stunting and underweight across all schools where school breakfast and lunch were served. However, the high number of overweight learners remains a challenge across all of the sampled schools and is going to hamper both the health and the education of the individual learners (due to poor lifestyles or bad management of food at home). This creates an urgent need to address the ongoing negative impact of the South African financial and economic crises, volatile energy and food prices and ongoing concerns about food security in the country as a whole. In line with addressing the impact of poverty on obesity, the National Department of Health (2015) feels that consideration has to be given to providing healthier food options that are affordable and accessible and that follow relevant nutritional recommendations.

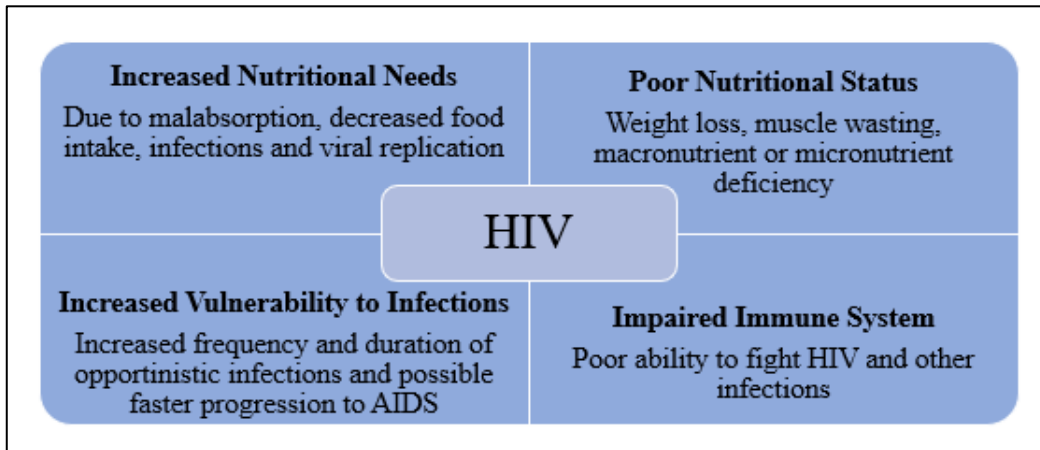
2.3.3.3 Relationship between HIV/TB and nutrition

The relationship between HIV and nutrition is multifaceted and multidirectional. HIV can cause or worsen undernutrition by causing reduced food intake, increased energy requirements and poor nutrient absorption. Further, undernutrition weakens the immune system, increases vulnerability to infection, and worsens the disease's impact on food security and vulnerability.

The vicious cycle can result on the following:

- Weight loss, the most common, and often most disturbing symptom of HIV reported in most people with AIDS (Regional Centre for Quality of Healthcare (RCQHC) and Food and Nutrition Technical Assistance (FANTA) Project, 2003b).
- Loss of muscle tissue and fat.
- Vitamin and mineral deficiencies.
- Increased nutritional needs due to infections, metabolic changes, viral replication and poor nutrient absorption.
- Weakness and reduced productivity.
- Reduced immune function.
- Increased susceptibility to opportunistic infections.

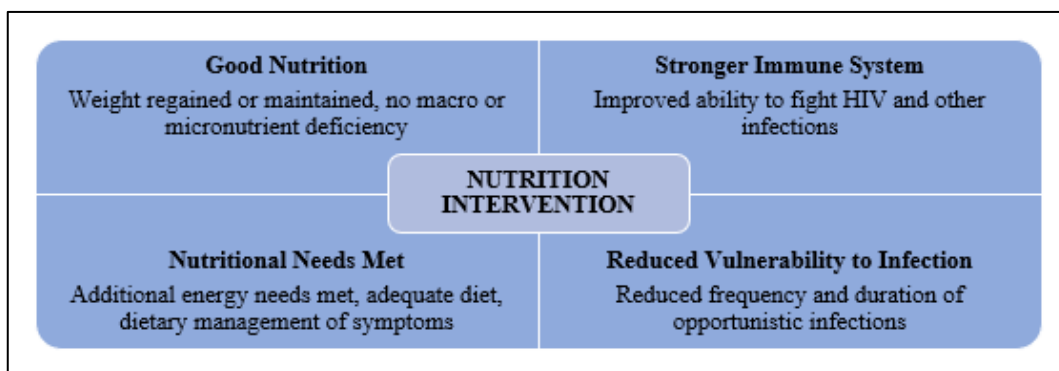
Figure 2:11 Malnutrition and HIV: a vicious cycle



Source: Adapted from RCQHC & FANTA, 2003a

Children living with HIV/AIDS are at risk of malnutrition. HIV/AIDS stunts child growth and can reduce appetite – food intake and nutrient absorption is vital at a time when the body needs good nutrition the most to fight the infection. The result is a weakened immune system that is ill equipped to fight the virus, and infections like TB. Many HIV positive children suffer from SAM – a life threatening condition. To increase the chances of survival, these children need therapeutic foods urgently to treat malnutrition combined with antiretroviral treatment to prevent the disease from progressing; thereby, further exacerbating the vulnerability of the medical condition. At this stage, it is wise to quote the 2013 Infant Feeding Policy (NDOH, 2013) that is being implemented and which clearly articulates that during the intrapartum period, health care personnel should encourage labour and birth practices to support early breastfeeding. The policy (Infant Feeding Policy, 2013) also reinforces labour support, offering light foods and fluids, light exercise such as walking, to further discourage the unnecessary use of analgesics and anaesthetic drugs (unless medically required) to ease pain due to the adverse of these in the breastfeeding initiation stage. Facilitate and support skin-to-skin contact and early initiation of breastfeeding within the hour, which can decrease the risk of haemorrhage, newborn hypoglycaemia and increase exclusive breastfeeding (unless there is a medical indication not to breastfeed). Infants are eager and more alert to feed in an hour. This early sucking by the infant starts the process of milk formation and ensures that the infant receives the first breast milk called colostrum. Formula or any other supplemental feed (for example, water, glucose water and other fluids) should not be given to breastfed infants unless medically indicated since it interferes with the success of breastfeeding. Ensure that mothers are offered the necessary support that is necessary to acquire the skills of correct positioning and attachment of their infants for optimal breastfeeding.

Figure 2:12 Nutrition and HIV: the cycle of benefits from nutrition intervention



Source: Adapted from RCQHC & FANTA, 2003a

During postnatal care, health care personnel should strive to promote and support exclusive breastfeeding for six months. Mothers should understand the risks associated with mixed feeding. All breastfeeding mothers (HIV negative and positive) should be counselled about postnatal transmission of HIV and encouraged to practice safe sex during the breastfeeding period. Postnatal transmission and reinfection increase risk through breastfeeding; mothers (or their infants) should be encouraged to take antiretroviral treatment as prescribed to prevent HIV transmission whilst breastfeeding.

2.3.3.4 *The South African government's food security strategy*

In South Africa the effects of food insecurity have been addressed since the beginning of the new political dispensation – when the strategic framework for action to achieve food security was first outlined in the Reconstruction and Development Programme (RDP, 1994), which identified food security as a basic human need. It recognised poverty and food insecurity as the legacy of the apartheid socio-economic and political order. The long-abandoned development programme of the young democratic government, the RDP (1994) identified food security as a priority policy objective. As a result, the new young democratic state reprioritised public spending to focus on improving the food security conditions of historically disadvantaged people.

The policy resulted in increased spending in social programmes of all spheres of government such as school feeding schemes, child support grants, free health services for children between birth and six years, pregnant and lactating women, pension funds for the elderly, working for water, community public works programmes, provincial community food garden initiatives

(e.g., Kgora and Xoshindlala), land reform and farmer settlements, production loans scheme for small farmers, infrastructure grants for smallholder farmers and the presidential tractor mechanisation scheme. During 2000, it became necessary to improve the unsatisfactory situation that had resulted in the implementation of many food security programmes by different government departments. As a result, cabinet decided to formulate a national food security strategy that would streamline, harmonise and integrate the diverse food security programmes into an IFSS (2002). Currently South Africa faces the following key food security challenges:

- to ensure that enough food is available to all, now and in the near future
- to match income to food prices in order to ensure access to sufficient food for every citizen
- to empower citizens to make optimal food choices for nutritious and safe food at all times
- to ensure that there are adequate safety nets and food emergency management systems to provide for people who are unable to meet their food needs from their own efforts (and to mitigate the extreme impact of natural or other disasters)
- to possess adequate and relevant information to ensure analysis, communication, monitoring, evaluation and reporting on the impact of food security programmes of the target population

According to the South African government (2002), the envisaged outcome of the IFSS is to attain universal physical, social and economic access to sufficient, safe and nutritious food by all South Africans at all times, possible to meet their dietary and food preferences for an active and healthy lifestyle. This statement is also a definition of food security by the UN's FAO (the United Nations Educational, Scientific and Cultural Organization (UNESCO), 2008). The South African approach to food security seems to be a development approach; hence, the IFSS' focus on multiple stakeholders. This approach entrenches public, private and civil society partnerships and strongly focuses on household food security without overlooking national food security.

The strategy operates on the following noticeable broad basis:

- Food security interventions will ensure that the target food-insecure population gains access to productive resources.
- Where a segment of the target food-insecure population is unable to gain access to productive resources, then food security interventions will ensure that segment gains access to income and job opportunities to enhance its power base to purchase food.
- Food security interventions will ensure that the target food-insecure population is empowered in order to have nutritious, healthy, and safe food.

- Where another segment of the target food-insecure population is still unable to access sufficient food because of vulnerability of any sort, disability of any kind, extreme conditions (destitute) – food security interventions will ensure that the state commits to provide relief measures that may be short-term, to medium-term, and on a sustained basis, depending on the nature of interventions given.
- Food security interventions will proceed from an analysis that is grounded in accurate information and which is to eradicate hunger, malnutrition and food insecurity; to be constantly monitored, evaluated and reported for a quick response, to avoid further vulnerability.

Under the Ministerial Social Sector Cluster Plan of Action, the Special Programme for Food Security is reportedly dealing with all interventions that pertain to food production trading strategic objectives of the IFSS, while the job and income creation opportunities and objectives will be dealt with by the communities in distress themselves (Drimie, 2002). The following development programmes are seen as the main inputs of the IFSS (2002):

- nutrition and food safety by the Integrated Nutrition and Food Safety Programme
- safety nets and food emergencies management by the Comprehensive Social Security System and Disaster Management
- capacity building by the Food Security Capacity Building Programme
- stakeholder dialogue by Food Security Stakeholder Dialogue Programme
- analysis, information and communication by the Food Security Information and Communication Programme
- Social Indicators initiative from STATS SA

The core of the Social Sector Cluster Departments is mandated to support the IFSS. The Social Sector Cluster at national level is made up of the Departments of Health, Social Development, Public Works, Water Affairs and Forestry, Transport, Education, Housing, Provincial and Local Government, Land Affairs, Environment and Tourism, Arts, Culture, Science and Technology. The list is not exhaustive, and more than one department may lead and co-chair an IFSS programme.

Lead departments will present the details of their programme and the IFSS lead department will in turn consolidate these into the Integrated Food Security Programme (IFSP). It is proposed that IFSS lead departments be as follows:

- Special Programme for Food Security: Department of Agriculture.
- Community Development Programme: Department of Public Works.

- Integrated Nutrition and Food Safety Programme: Department of Health.
- Comprehensive Social Security Programme: Department of Social Development.
- Information and Communication Programme: STATS SA.
- Food Security Capacity Building Programme: All departments.
- Food Security Stakeholder Dialogue Programme: All departments.

IFSS lead departments are chosen from Social Cluster departments to enable greater oversight within (rather than outside) the ministers' and director generals' (DGs) Social Sector Cluster. It will be the task of the lead departments to ensure links within Social Cluster sub-themes. Similarly, lead departments have to lead the Social Cluster to engage other clusters, the private sector and civil society. Lead and colead departments will formulate the details of their respective programmes. Within the current Social Sector Cluster Plan of Action, many programmes are at different levels of implementation, development and planning. Some have been costed and discussions regarding their funding are underway. The IFSS proposal will entail dealing with the Comprehensive Social Security System in a combined approach with Food Emergency Management that suitably resides under Disaster Management.

The issues that will be embraced by the programmes above in order to advance food security are particularly wide ranging. They include strategic and sensitive issues like land reform, production of food, procurement and marketing of food products, processing, storage and transportation of food, development and micro finance, infrastructure development, human resource (HR) development, education and training, research and technology development, food prices, international trade, fiscal and monetary policies, ailments related to hunger and malnutrition, social security grants and food emergencies and access to food legislation. Among other things, the IFSS proposes that the institutional arrangements and organisational structures be strengthened in order to give space and latitude to departments to contribute firmly to the IFSS.

The Minister of Agriculture and Land Affairs should convene and chair meetings of core ministers that lead and are core members of food security and nutrition programmes. They will provide political leadership to the IFSS and its programmes, set policy, direct and control operations, establish strategies, set institutional arrangements and organisational structures, set the norms and standards of service delivery, and report to the Ministers' Social Sector Cluster that is chaired by the Minister of Health. Similarly, the Department of Agriculture is the convenor and chair of the core of Social Cluster DGs, responsible for the IFSS. Specifically, it will provide the IFSS with secretariat services, and establish a food security unit to

coordinate food security activities within national and provincial government spheres. The structure also proposes components for consultative forums. These consultative forums will be a representation of stakeholders from the public, private and civil society sectors. The implementation of the strategy will require frequent dialogue with stakeholders and most important synthesis of feedback to inform food security policies and programmes. In line with the directive of the constitution and in conformity with its international obligations, South Africa has to consider the proposal of the UN's FAO, that member states should consider the enactment of legislation in the right to access to food. More research needs to go into this matter before a firm position can be taken.

The expected outcome of the IFSS is the following:

- greater ownership of productive assets and participation in the economy by the food-insecure
- increased competitiveness and profitability of farming operations and rural enterprises, owned and managed by, or on behalf of, the food-insecure
- increased levels of nutrition and food safety among the food-insecure
- greater participation of the food-insecure in the social security system and better prevention and mitigation of food emergencies
- greater availability of reliable, accurate and timely analysis, information and communication on the conditions of the food-insecure and the impact of food security improvement interventions
- enhanced levels of public, private, and civil society common understanding and participation in agreed food security improvement interventions
- improved levels of governance, integration, coordination, financial and administration management of food security improvement interventions in all spheres of government and between government and the private sector and civil society

2.3.3.5 *Current proposed solutions on food insecurity*

Insects are regarded as the next best sustainable food source in Africa as revealed by Musundire and quoted by the Port Elizabeth daily newspaper (*The Herald*, 14 November 2016). Musundire is a Zimbabwean food expert from the Chinhoyi University of Technology (CUT) and was speaking at the Food Security in Africa conference (*Daily Dispatch*, 2014) held in East London under the auspices of the universities of Fort Hare and Pretoria. Further, Musundire (*Daily Dispatch*, 2014) argues that the idea of eating the so-called creepy-crawlies

was not so far-fetched – as people from his country and northern parts of South Africa were already eating these for dietary purposes. According to Musundire (*Daily Dispatch*, 2014), food is food despite its source; he also made mention that in good years, the nation easily feeds on rice and mealie meal, and insects are merely one of the options available at worst times. Musundire (*Daily Dispatch*, 2014) concluded his presentation by further emphasising that, to use insects as a food source and to abolish food insecurity in Africa we must develop a value chain for insects; they become a good option during vulnerability in the same way as any other food commodity. Although the idea of feeding on insects is fairly new, we cannot expect this to be the only alternative, rather, as an addition to the basket of options in the quest to guarantee a food-secured Africa.

Another delegate (Dr Maqhubela) at the conference further deliberated that insects are a cheap protein source and are easier to produce when compared with the typical protein, like beef (*Daily Dispatch*, 2014). It was clear from the conference speakers that as far as back as 2012, researchers on food security from the continent have documented the various species consumed by different communities for survival under the current circumstances; where it is difficult to cope due to ever-growing population, amid the challenge of environmental changes and geopolitical issues (such as land grabs). The 2016 Africa conference (*Daily Dispatch*, 2014) concluded, stating that there are some insects who feed on different plants (which, for humans are not edible), and that insects have the ability to extract compounds that are added to their bodies (thus additional nutrients). If the assertion above is correct, then as humans, we could get additional hidden nutrients indirectly (which come from plants that the insects eat for survival); it is further alleged that they may have some medicinal properties that we can benefit from. In another food security development (*Daily Dispatch*, 11 February 2017), and insofar as food security vulnerability, the Water Efficient Maize for Africa (WEMA) scientists and researchers from around Africa gathered in East London to discuss and plan how to improve cropping due to the severe droughts that have gripped the continent over the years.

According to the experts at the gathering (11 February 2017), the main objective is to enhance food security and to improve rural livelihood among smallholder farmers in sub-Saharan Africa – through the development and deployment of drought-tolerant and insect-protected maize seeds. According to Dr Mashingaidze (one of the main speakers), as quoted by the *Daily Dispatch* (11 February 2017), Africa has long developed drought-tolerant varieties through WEMA which have been implemented successfully in South Africa. Further, Mashingaidze, (2017) emphasises that African governments should support the meeting, as they are trying to

deal with the drought problem through food insecurity on the continent; this appears to be a problem that will surface every eight to ten years as Africa is generally a drought-stricken continent. The state and the nature of the problem faced by most African countries is getting more severe over the years, particularly because the incessant climate change makes Africa more vulnerable and unable to cope with both food and water issues. In taking a closer look at both the meeting and in pondering the literature reviewed so far, it clearly shows that Africa is a ticking time bomb; the Eastern Cape experienced the worst drought in 2016 according to Dr Maqhubela M of the Eastern Cape Department of Rural Development and Agrarian Reform (11 February 2017). Maqhubela (11 February 2017) states that this province was so badly hit, that the maize production reduced by more than 50.0% – this resulted in limited crops, and the loss of much livestock.

2.4 Conclusion

The focus of this chapter was two-pronged. First, it dealt with the theories that are related to food insecurity and vulnerability with an emphasis on both the local, regional and international levels. Second, the chapter looked at concepts that are related to issues of food insecurity and vulnerability. The chapter examined these two variables by focusing on international, regional and local trends. It is clear from much of the experience and analysis of the past decades (and especially in southern Africa) that the situation must cease to be viewed as a short-term crisis and/or as a food security problem; rather it must be viewed as a chronic crisis of development – with recurring episodes of acute needs – which must be sincerely addressed by governments, civil society, development agencies and donors alike, from a long-term and multi-sectorial perspective. Globally there are approximately 800 million people who live in squalid conditions with food and educational deprivations. Sen (1999) strongly maintains that food production comprises important factors like land use and land tenure, soil management, crop breeding and selection, crop management and harvesting.

While food distribution involves a series of post-harvest activities (including the transportation, storage, marketing and activities related to household purchasing power), traditions of food use include feeding practices, food exchange and public food distribution. In supporting Sen's (1999) theory of food insecurity enablers, Ayalew (2006) reveals that activities related to food utilisation and consumption include those involved in the preparation, processing and cooking of food at both home and community level, as well as the household decision-making regarding food. According to Ayalew (2006), household food distribution practices, cultural and individual food choices, and access to health care practices, sanitation,

and knowledge also had a direct effect on food insecurity, whether positive or negative. Coates et al. (2007) strongly believe that food security and insecurity are terms used to describe whether people have access to sufficient quality and quantity of food at all appropriate times. Risk of a food security situation has impact on the population's access to food, water and overall levels of health and nutrition – particularly among the vulnerable people in the society. Further, Coates et al. (2007) presses on that poverty, health, food production, political stability, infrastructure, access to markets and natural hazards are some of the determinants of food security that plague countries today and even in the decades to come. Further, described by the UN's FAO (2002), due to the food situation in the world, there is a greater need to increase productivity if we are earnest about averting the world food catastrophe. The FAO (2002) estimates that global food production needs to increase by 60.0%, by 2050. Improving productivity and intensifying crop production among small-scale household farmers could be key to global food security and in ending hunger in the world. Globally, certain groups of people – as described by Samwel (2014), are more vulnerable to food insecurity than others.

Further, Samwel (2014) argues that vulnerability is the degree to which a population, individual or organisation is unable to anticipate, cope with, resist and recover from the impact of disaster. Poverty and its common consequences such as common malnutrition, homelessness, poor housing and destitution is a major contributor to vulnerability. Vulnerable groups are mainly described by the WHO (2010) to include among others, victims of conflicts (refugees and internally displaced people), migrant workers, marginal populations (the unemployed, homeless and orphans), the dependent population (e.g., elderly), children under five, disabled and ill people, women of child-bearing age, ethnic minorities and low literacy households.

Maxwell and Smith (1992) supports the above assertion while emphasising that older people are particularly sensitive to disruptions in food availability and access; they have also been categorised as vulnerable persons – a consequence of food insecurity among the majority of them. In 2015, the world leaders met and came up with seventeen SDGs where the main objectives were to broaden the scope of development away from the former eight MDGs and to embrace a more focused development trajectory of the world without compromising the gains of the MDGs. The second goal (MDGs, 2015), was trying too hard to end hunger, achieve food security and improved nutrition, and promote sustainable agriculture. According to Magwentshu (2016), the UN is in full agreement with the long-held notion that maintains that agriculture is the largest source of income and jobs for poor rural households; and nothing

else is needed but agriculture and rural development, especially in third world countries and the developing countries of the world. Further, Magwentshu (2016) agrees with the UN that agriculture is the single largest employer in the world, providing livelihoods for 40.0% of the global population. In essence, this sector (agriculture and rural development) requires new thinking and new approaches in the context of global economic conditions and in particular, the sluggish growth of the South African economy. According to the Department of Rural Development and Agrarian Reform's Annual Performance Plan (DRDAR, 2016) of 2017 and 2018, the sub-Saharan region in Africa is experiencing prolonged decline in commodity prices, as well as weak economic growth in Nigeria and South Africa. The decline by the two most powerful economies on the African continent is seen by Magwentshu (2016) and the DRDAR (2016) as potentially causing overall growth for the region to come in at 2.6% in 2016 – the region's lowest growth performance in two decades.

If the above remains the order of the day, it means that poverty and food insecurity is getting out of hand and plunging the continent into a deeper vulnerable situation of deprivation and hunger. According to the Global Economic Outlook (2016), the region has a lot of potential for economic expansion in the medium- to long-term, mainly due to its large demographic dividends and ample room for catch-up. However, several political and institutional constraints offer significant uncertainty. Although household access to food has reportedly improved according to STATS SA (Household Survey, June 2016) since 2002, it has remained static since 2011. Inadequate or severely inadequate access to food was observed in Mpumalanga at 31.7%, the Northern Cape at 31.3%, and the Eastern Cape reportedly at 28.4% (STATS SA, 2016).

Despite the high agricultural potential reported by the Quarterly Labour Force Survey on Quarter 1 (2016) in the province, the predominantly rural province faces severe socio-economic developmental challenges. Approximately 54.8% of its population lives in poverty and the rural areas continue to be economically marginalised. Further, the Quarterly Labour Force Survey (SERO, 2017) concludes by saying that agriculture, therefore, affords an opportunity for the Eastern Cape to provide employment for its largely unskilled population while also increasing food security and contributing to other sectors through the agricultural value chain. At the same time, improvements on the health front in terms of access to health services and medication have seen life expectancy in the province increase from forty-nine years of age for men and fifty-five years of age for women in 2007 to fifty-two years and six months for men and fifty-nine years and four months for women in 2016. This is still below

the target set by the UN MDGs at an average life expectancy of seventy years (SERO, 2017). The Amathole District Municipality so far, according to the Eastern Cape Socio-Economic Review Outlook of 2016, undertaken by the Eastern Cape Socio Economic Consultative (SERO, 2014), revealed that the Amathole District Municipality is not doing so well on the employment of youth and women. The next chapter describes the research instruments used to determine the dynamics of food insecurity and vulnerability in the ADM.

Notwithstanding the universal diminution in food insecurity, Africa's food security and nutrition position has long been explained by Sanches (2005) as worsening beyond anyone's imaginable control. From the above arguments, it is clear that Africa has been exposed to several waves of chronic food insecurity that result in a vast reduction in livelihoods and loss of life during the past decade (Folaranmi, 2012; UNDP, 2012). Further, Altman, Hart and Jacobs (2009) argue in support of the above that there is limited confidence in the food security status of South Africans, as research has not yet been able to determine conclusively the baseline estimate which is a major shortcoming as access to sufficient quantity of nutritious food is a basic human necessity, especially for human development from birth. The next chapter gives context of the research study area – where the fieldwork took place over two years – to reveal results that will be discussed in Chapter 6 of the study.

CHAPTER 3 : CONTEXT (BACKGROUND OF THE AMATHOLE DISTRICT MUNICIPALITY [ADM])

‘Human rights are violated not only by terrorism, repression or assassination, but also by unfair economic structures that create huge inequalities’ (Pope Francis I, 2016)

3.1 Introduction

This chapter is concerned with providing background information about the ADM. The points that are discussed in this chapter include the demographic profile of the ADM as one of the six district municipalities in the province, unemployment levels, income and poverty levels that have troubled the municipality, the municipality’s inability to collect revenue due to the high unemployment levels of the ADM’s citizens, economic activities in different districts in the Eastern Cape including the ADM, the rural nature of the Eastern Cape including the ADM, poor education levels in the ADM, food security policies in the ADM and the Eastern Cape, and a brief theoretical view on policy implementation within the ADM generally.

The main objective of this chapter is to introduce the context of the research area and to give background information within which to locate the ADM as the case study. A description of both the ADM and the Eastern Cape highlights the inefficiency of provincial administration and the resultant low standard of living experienced by much of the population. A history of colonialism and unpopular interventions by state and civil society in the ADM shows a legacy of poverty and vulnerability, despite a series of interventions and aid by government’s strategic partners (like civil society and development aid donors). The Amathole Mountain Escape includes the Raymond Mhlaba and Amahlathi municipalities and it towers over the opulent landscape of this route, valleys and forests adding to the rustic charm and mystique. ‘Amathole’ in isiXhosa is *the calves* (ADM Integrated Development Plan (IDP), 2015) and refers to the larger mountain range to the northeast of the district. It also indicates how close to nature the people of the district live, having for centuries brought their cattle to graze at the foothills of the Amathole. This route starts from King William’s Town to Bedford and into the Hogsback village. It meanders onward to the historical town of Alice where South Africa’s first black president Nelson Mandela and other notable African leaders received their education at Fort Hare University (UFH).

Figure 3:1 Map of the Amathole District Municipality

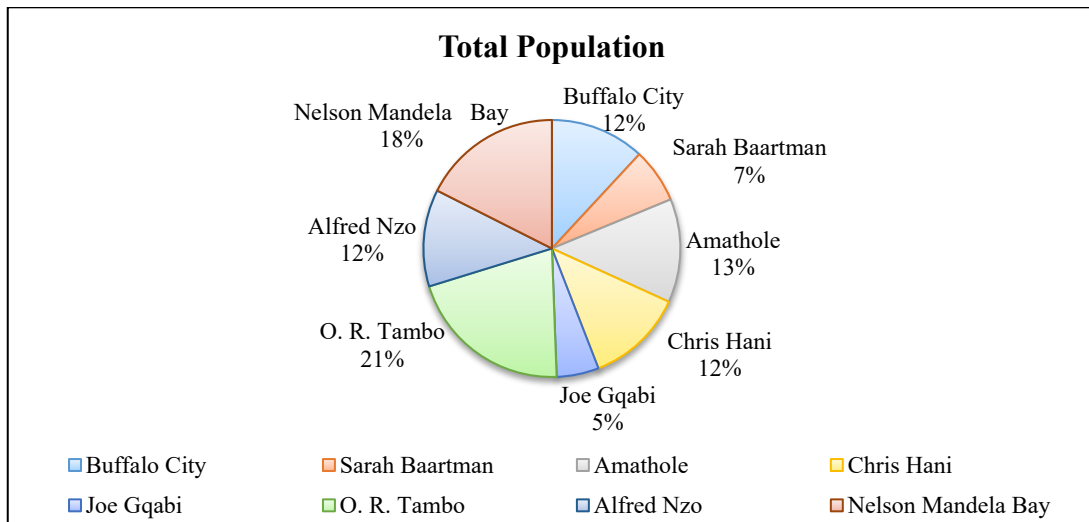


Source: ADM's GIS Unit, 2016

3.2 Demographic profile

The focus of this section is to describe the demographic status of the ADM. The ADM is one of the six district municipalities and two metropolitan municipalities of the Eastern Cape with an area of 21 595 km² according to the ADM's Geographical Information System (GIS) Unit (2016). These district municipalities include Sarah Baartman, Amathole, Chris Hani, Joe Gqabi, O.R. Tambo, Alfred Nzo and the two metropolitan municipalities of Buffalo City and Nelson Mandela Bay. Of these district municipalities, the ADM is the third largest district municipality, preceded by O.R. Tambo and Nelson Mandela Bay. The district municipalities that surround the ADM include Cacadu, Chris Hani and O.R. Tambo. In population size, the ADM is estimated at 854 389 people (13.6%) in relation to the total population size of 6.6 million people in the Eastern Cape (Census, 2011: p.46, ADM Vision 2030, 2015).

Figure 3:2 Distribution of population by district municipality in the Eastern Cape



Source: STATS SA Community Survey, 2016

This municipality has large disparities, as it encompasses large parts of the former Ciskei and Transkei homeland areas. The average population density is 43.1 people per square kilometres. The district is primarily rural with small towns scattered in all of the six municipalities, which make up the district. In addition, the ADM comprises six local municipalities. These municipalities include Amahlathi, Raymond Mhlaba (Nxuba and Nkonkobe), Ngqushwa, Great Kei, Mnquma, and Mbashe. Details of these local municipalities (town and surrounding areas) are presented below.

3.2.1 Amahlathi local municipality

The Amahlathi local municipality is a Category B municipality with an area of 4 820km² and is situated in the Amathole district. It is bordered by the Chris Hani district in the north, the Buffalo City metro in the south, Mnquma and Great Kei to the east and Raymond Mhlaba to the west. It is an administrative area, and one of six municipalities in the district. Amahlathi is isiXhosa for ‘a place where many trees are grouped together, a forest’ (ADM, 2015); forests are a key feature of the area. The Amahlathi Local Municipality’s main economic sectors are community services, finance, manufacturing, trade, agriculture, construction and transport. The towns that constitute this municipality include Kei Road, Cathcart, Keiskammahoek and Stutterheim. This local municipality is characterised by several semi-urban areas and rural areas.

3.2.2 *Raymond Mhlaba*

The Raymond Mhlaba local municipality is a Category B municipality with an area of 6 357km² and is situated in the Winterland of the Eastern Cape under the jurisdiction of the ADM. It is approximately 200km from Port Elizabeth in the Nelson Mandela Bay metro. It is regarded as the largest municipality of the six local municipalities in the district, making up a third of its geographical area. Raymond Mhlaba was established through the amalgamation of the two local municipalities of Nkonkobe and Nxuba in August 2016. A countryside municipality, it includes the imposing and majestic mountainous range of the Winterberg (IiNtabazeNkonkobe). The rural hinterland forms part of the municipal area. Most of the farming activities take place in the rural areas, which consist of partly owned farms, and this plays a major role in the economic growth of the area. The Raymond Mhlaba local municipality comprises the historic towns of Alice (home to the famous UFH), Bedford, Adelaide, Fort Beaufort, Hogsback, Middeldrift, Balfour and Seymour. The main economic sectors are general government services, wholesale and retail trade, community, social and personal services, finance and insurance, business services, construction and manufacturing. It also serves a large rural area in addition to the towns.

3.2.3 *Ngqushwa local municipality*

The Ngqushwa local municipality is a Category B municipality with an area of 2 241km². Ngqushwa is one of the six local municipalities within the jurisdiction of the ADM, situated in the Eastern Cape. The Keiskamma River on the east and the Great Fish River on the western side border this municipality. The southern boundary comprises part of the coastline of the Indian Ocean. Ngqushwa together with the coastal town of Hamburg is one of the smaller municipalities in the district, accounting for 10.0% of its geographical area and it is predominantly rural. Similarly, as to the municipalities mentioned above, Ngqushwa is characterised by numerous semi-urban and rural areas. The main cities or towns are Hamburg and Peddie and the foremost economic sectors are agriculture and tourism.

3.2.4 *Great Kei local municipality*

The Great Kei local municipality is a Category B municipality with an area of 1 736km² and is located within the Amathole district in the Eastern Cape amid the three former industrial towns of Butterworth, King William's Town and East London. It is bounded by Stutterheim in the north, the Wild Coast in the southeast, the Great Kei River in the east and Buffalo City

in the west. It is the smallest of the six municipalities in the district. Regional access is obtained through the district via the N2 National Route from East London to Butterworth. It is mainly a tourist destination, though the film industry has also shown keen interest in the area. Historically, it is famous for its agricultural sector and cultural heritage. This municipality consists of Komga as the main town, while its small coastal towns are Morgan Bay, Kei Mouth, Cintsa and Haga Haga, as well as various settlements. The main economic sectors are community services and agriculture.

3.2.5 *Mnquma local municipality*

The Mnquma local municipality is a Category B municipality with an area of 3 270km² and is located on the southeastern part of the Eastern Cape. Mnquma local municipality falls under the jurisdiction of the ADM and comprises an amalgamation of the former Butterworth, Ngqamakhwe and Centane Transitional Regional Councils. The municipality shares borders with the Chris Hani District Municipality and the Indian Ocean. It is one of six municipalities in the Amathole district. The Mnquma local municipality is composed of three towns, namely, Centani, Butterworth and Ngqamakwe. Mnquma local municipality earned its name from a local tree that is respected in the area and is mainly used during cultural customs, norms and values by the Ama-Xhosa (not only of the area, but also generally). This local municipality consists of several rural and semiurban areas. The main economic sectors are community (government) services, wholesale and retail trade, as well as manufacturing. The municipality used to be the main industrial area of the former Transkei homeland. Currently, the main industrial area is defunct, resembling a ghost town.

3.2.6 *Mbhashe local municipality*

The Mbhashe local municipality is a Category B municipality with an area of 3 169km² and is situated within the Amathole district on the southeast of the Eastern Cape. It is bound by the coastline, flowing from the Mncwasa River in the north to the Qhora River on the south, along the Indian Ocean. It borders the King Sabata Dalindyebo municipality (O.R. Tambo district) on the northeastern side, Mnquma on the south (Amathole district), Ntsika Yethu (Chris Hani district) in the south-west, and Ngcobo (Chris Hani district) in the west. It is one of six municipalities in the district. Mbhashe local municipality earned its name from the beautiful river called 'Mbhashe', which flows through Dutywa (previously, 'Idutywa'), Willowvale and Elliotdale. This local municipality consists of the following three towns: Willowvale, Dutywa and Elliotdale. The local municipality is mainly dominated by the rural areas. The main

economic sectors of this municipality are general government, wholesale and retail trade, community, social and personal services.

3.3 Demographic profile of the ADM

The demographic profile of the ADM has its own challenges; these include:

- Poverty, whereby 59.0% of the population of the district earn an income of less than R1 600 per month.
- Education, the population is characterised by 19.0% of people that have obtained matric or higher education qualifications.
- HIV/AIDS and TB, the district is making improvements, albeit at a slow pace.

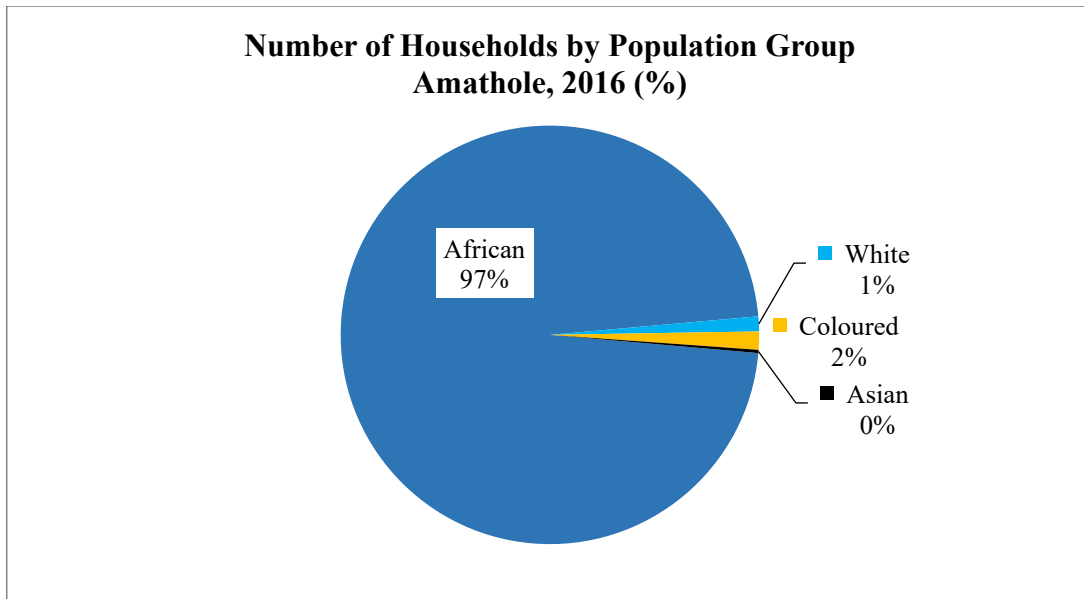
Not only are these challenges evident in the Amathole region, but also at provincial and national level (ADM Vision 2030, 2015). Overall, these challenges contribute increasingly to the problem of food insecurity in different households in the Amathole region. Thus, the details of these local municipalities reflect that the majority of citizens in the Eastern Cape live in rural areas. In most cases, the rural areas in South Africa seem to be dominated by underdevelopment. Hence, it is necessary for the provincial government to prioritise rural development as a means of promoting sustainable development in the province (EC Vision 2030, 2014: p.8).

Table 3:1 Population in Amathole District Municipality by local municipality

Local Municipality	Black	Coloured	Indian or Asian	White	Amathole
Mbhashe	260 352	371	290	418	261 431
Mnquma	243 972	487	323	517	245 299
Great Kei	27 441	506	41	2 778	30 766
Amahlathi	96 765	1 477	100	2 489	100 831
Ngqushwa	64 717	150	59	251	65 177
Raymond Mhlaba	138 019	10 097	292	2 477	150 885
Amathole	831 265	13 087	1 105	8 930	854 389

Source: STATS SA Community Survey: Population Group, 2016

Figure 3:3 Number of households by percentage of population group in the Amathole District Municipality



Source: IHS Markit Regional eXplorer version 1156, 2016

3.3.1 Unemployment levels, income and poverty

Despite the emergence of post-apartheid South Africa, the Eastern Cape remains trapped in structural poverty. The estimation is that 20.0% to 60.0% of the province's population lives in poverty. The situation is reflected through different aspects of the provincial demographic health and socio-economic profile. The highest level of poverty seems prevalent in Alfred Nzo at 57.7%, followed by O.R. Tambo at 53.9%, and Joe Gqabi at 49.8%. The area that seems to have the lowest poverty rate in the province is the Nelson Mandela Bay metropolitan municipality, at 28.3% (Eastern Cape Planning Commission, 2014).

On a positive note, statistics also uncover that there has been a decline in the level of poverty in the Eastern Cape's districts, of between 7.0% and 24.0% percentage points between the years 2000 and 2012 (ADM Vision 2030, 2015). This reduction in poverty rates is attributed to the provision of social grants by the South African government (Eastern Cape Planning Commission, 2014). One of the major causes of poverty is unemployment. Thus, like the other district municipalities in the Eastern Cape, the ADM is dominated by the challenge of the high unemployment rate as this contributes to the perpetuation of poverty.

According to the ADM Vision 2030 (2015), the indicators from the labour market reveal that the ADM has 42.9% unemployment, which is a reasonable high level of unemployment in a

district municipality. This unemployment rate seems to be dominant in the Ngqushwa local municipality at 52.8% as this is higher in comparison to the district average. The the next highest unemployment local municipality is Nkokobe at 48,1%. Furthermore, the challenges of unemployment, insufficient income for citizens and poverty seem to cloud different districts of the Eastern Cape. According to the Eastern Cape Planning Commission (2014: p.27), there is a spatial disparity in terms of income among the Eastern Cape district municipalities. The higher level of income exists in Nelson Mandela Bay and Buffalo City metropolitan municipalities, and Cacadu District Municipality. The areas that have the lowest income levels include the O.R. Tambo, Amathole and Chris Hani district municipalities. Therefore, the challenges of low income, unemployment and poverty are connected to one another and they contribute to the perpetuation of food insecurity in households.

Statistics (ADM Vision 2030, 2015) indicate that the district consists of approximately 2.1% of the population earns an income of less than R500 per month, while about 50.3% of the population earn in the range between R500 and R3 500 per month. In utilising the benchmark poverty line of R174 per month (equivalent to about US\$ 2 a day), this uncovers that people who subscribe to this income are considered to be ultra-poor (ADM Vision 2030, 2015). In some cases, this low-income level of the majority of the citizens in the country is the result of unfair distribution of the country's resources, rather than the inadequacy of such resources. Brand et al. (2013: p.275) argue that the insufficiency of resources and capital in society is attributed to the fact that they are controlled by few individuals (for instance, the officers who are in control of government departments, government agencies, municipalities, etc.). This situation results in the exclusion of the majority of the people in society from the production systems. Various examples where the majority people (or the masses) include workers, the unemployed and the underemployed. This is an indication that poverty and low income for the masses in society is derived from the way in which power and resources are distributed (Glasses, 2013: p.1). Through the eyes of the Eastern Cape Planning Commission (2014: p.27) the challenge of poverty that seems to cloud the province may be attributed to structural factors, which result in the confinement of poor citizens into a life of perpetual deprivation.

Therefore, possible solutions to this challenge include providing social assistance to vulnerable groups and effectively providing basic services as a means of improving safety nets and thus the quality of life, job creation and self-employment initiatives.

3.3.2 *The municipality's inability to collect revenue*

The dominance of high unemployment levels, low income and poverty for the majority of the population in the Amathole region has a negative effect on the ability of the municipality to collect revenue from its citizens. Because of these challenges as mentioned above, the municipality does not have a sufficient revenue resource that is necessary to provide adequate service delivery in the communities. In fact, this is a challenge that not only takes place in the ADM, but on a national level in the country. South Africa can be seen to have two economies: one that is affluent and First World in orientation, and one that is poor and Third World in nature. In the first economy, achieving municipal revenue enhancement (i.e., debt collection) is a matter of maximising administrative, financial, legal and technical efficiencies. In contrast, in the second economy, improved debt collection procedures are of little help in this context because unemployment rates are high, and poverty is endemic. A high percentage of outstanding debts in previously disadvantaged communities is evidence of this (Gildenhuys, 1997: p.108). It is an unfortunate situation because the majority of the population at local municipal level consists of underprivileged people and consequently, a minimum of revenue collection by the municipalities occurs. Ultimately, municipalities end up becoming dependent on the national government for grants, as they are not able to build up their own revenues. As a result, the challenges of poverty and food insecurity increase, since municipalities are unable to provide effective service delivery in communities.

3.3.3 *Economic activity*

This section focuses on the economic activities in various districts in the Eastern Cape, including the ADM. The province appears to be dominated by the intensity of cases of socio-economic underdevelopment; the indicators that are commonly used to measure this under development include education, income and unemployment. The reality in the province is some areas possess low levels of socio-economic development and others possess high levels. Examples of those that have low levels of socio-economic development include areas like Mthatha, Queenstown, Butterworth, Fort Beaufort, etc.

Those areas that possess high levels of socio-economic development are Grahamstown, Cradock, Graaff-Reinett, Steynsburg, etc. (Eastern Cape Planning Commission, 2014: p.27; EC Vision 2030, 2014: p.82). In terms of district municipalities, the Amathole region is one of the areas that seems to be dominated by frequent low levels of socio-economic development. The type of economic sector that dominates in a particular district municipality determines

whether it has high or low levels of socio-economic development. According to the ADM Vision 2030 (2015) the economy of the ADM tends to be dominated by community services – this sector of the economy has been growing since 1996. This reflects that government plays a vital role in creating the economic activity in the Amathole region. The ADM IDP (2012: p.42) concurs and mentions that the Amathole region's economy is over-reliant on the community services sector, through government as a means of providing jobs. This situation is perpetuated by the fact that there is not enough investment in economic infrastructure in the Amathole region, which would have resulted in its economic growth and development. It was made worse by the occurrence of de-industrialisation in the mid-1990s, in areas that include Dimbaza and Butterworth. Consequently, there was a reduction of the manufacturing base in these areas. Hence, it is necessary to diversify the economy of the Amathole region, and to prioritise initiatives that are designed to attract investments.

To a certain extent, the economic activities in the former Bantustan areas (Transkei and Ciskei) of the Amathole region seem to continue to be active. The former is composed of Mquma and Mbhashe local municipalities, while the latter consists of Nkonkobe and Ngqushwa local municipalities. This economic activity is a trend that has continued from these Bantustan areas until they became constituents of the Amathole region (ADM Vision 2030, 2015). The economic sectors that have made a significant contribution to the Amathole region are finance and trade. The financial sector is reflected by the existence of the banking industry – as it is often the provider of services to government employees. However, the dominance of trade is attributed to governmental services that are executed in the form of social grants and the salaries of the government employees (ADM Vision 2030, 2015). Concerning social grants, the South African government has used them as one of the tools for alleviating the low levels of socio-economic development. The Eastern Cape Planning Commission (2014: p.28) points out that social grants have become the most important component of the government's strategy to fight poverty. They are utilised as a means of providing a safety net to the citizens of the country; the intended beneficiaries include the disabled, the elderly and children.

A case example of government's social grant is the one that was provided by government during 2012; this involved providing a total of 2 655 831 social grants to beneficiaries in the Eastern Cape. Out of this total, there were 1 837 801 beneficiaries who received child support grants and 492 248 who received old age grants (Eastern Cape Planning Commission, 2014: p.28). As a contributor of economic activity of the Amathole region, the Amahlathi local municipality contributes the biggest share in the region at 26% of the GDP. Interestingly, this

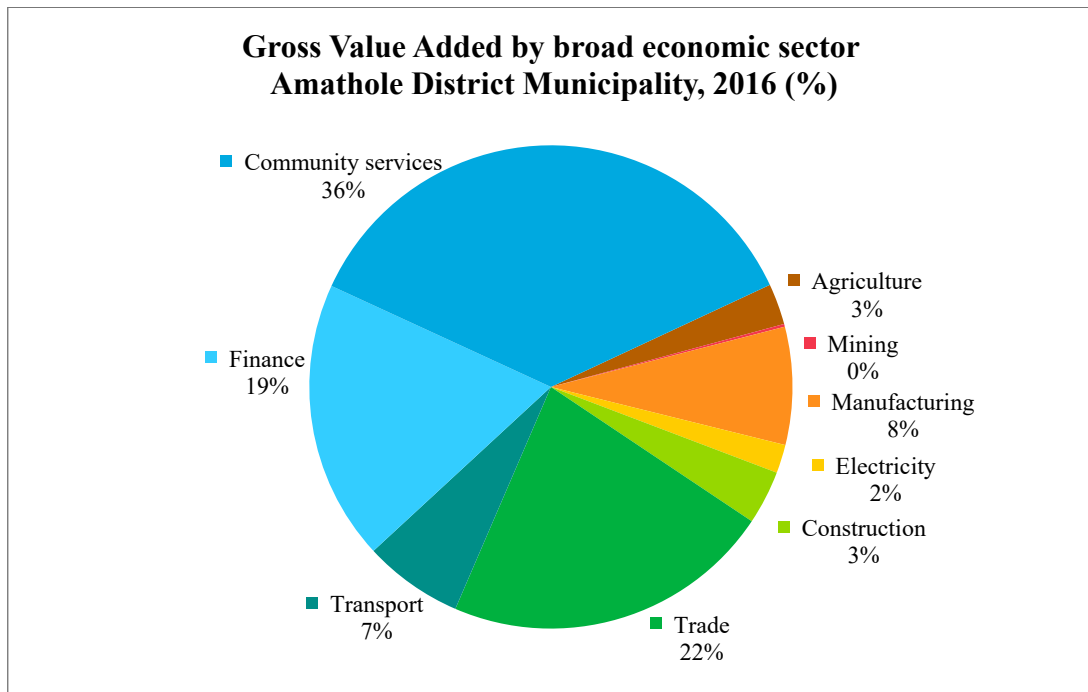
situation takes place despite the fact that the municipality does not have the largest share of the population. The second greatest municipality contributor to the Amathole region through economic activities is the Mnquma local municipality (21%). This contribution is attributed to the historical strengths of the former Transkei area, as it was rich in manufacturing industries before the era of the democratic government of South Africa (ADM Vision 2030, 2015). Furthermore, the Amathole region has opportunities that could make a vital contribution to developing the regional economic status. These include the natural forests and numerous game reserves, the ocean (economy), heritage and tourism potential, educational institutions, favourable climatic conditions and agricultural potential.

Table 3:2 Gross Value Added by broad economic sector (R billions, current prices)

	Amathole	Eastern Cape	National Total	Amathole as percentage of province	Amathole as percentage of national
Agriculture	0.7	5.9	94.4	11.7%	0.73%
Mining	0.0	0.5	306.2	10.3%	0.02%
Manufacturing	2.0	36.3	517.4	5.4%	0.38%
Electricity	0.5	6.2	144.1	7.8%	0.33%
Construction	0.9	13.2	154.3	6.9%	0.59%
Trade	5.5	61.5	589.7	9.0%	0.94%
Transport	1.7	27.5	389.2	6.1%	0.43%
Finance	4.7	60.5	781.7	7.8%	0.60%
Community services	9.1	89.7	894.1	10.1%	1.02%
Total industries	25.1	301.2	3,871.2	8.3%	0.65%

Source: IHS Markit Regional eXplorer version 1156, 2016

Figure 3:4 Gross Value Added by broad economic sector



Source: IHS Markit Regional eXplorer version 1156, 2016

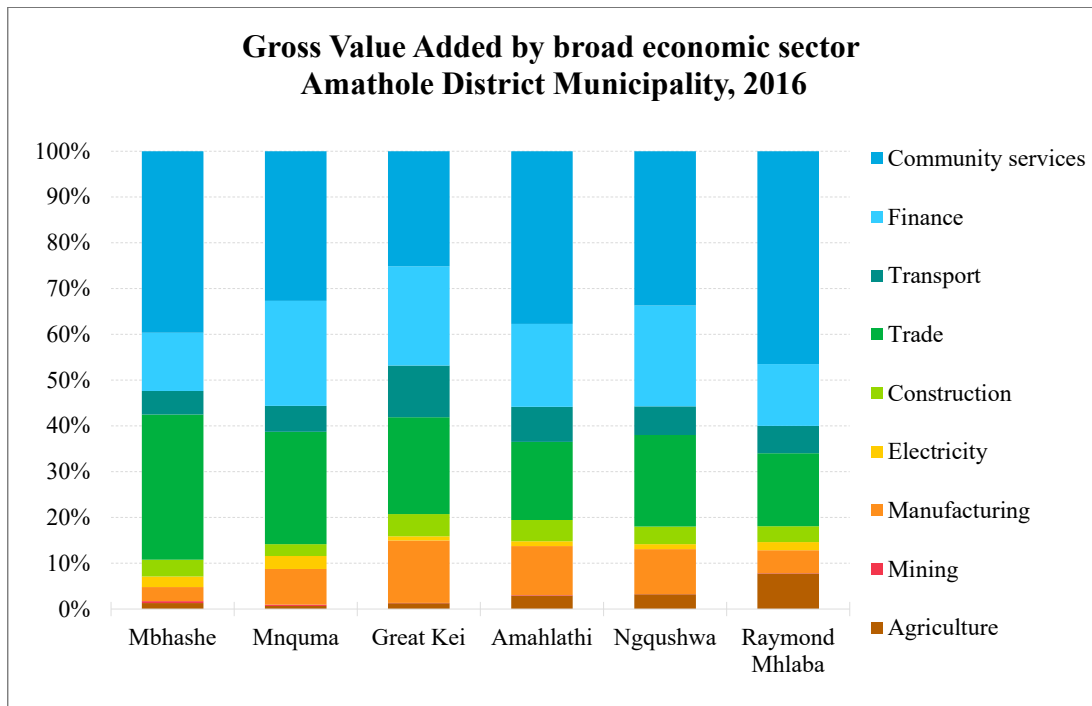
3.3.4 *Natural forests and game reserves*

The ADM is enriched with many game reserves and natural forests. If these resources were to be utilised effectively, they could make a positive contribution to the economy of the region. The outcomes could be the creation of financial incentives and job opportunities (ADM Vision 2030, 2015).

3.3.5 *The ocean economy*

Identified by government as one of the key drivers of economic growth in the country, the ocean economy is one of the most significant spheres that can increase the declining economy in South Africa (Kim & Maubargne, 2005). Therefore, the ADM has the responsibility of maximising resources in order to exploit the ocean economy; this implies placing the ocean economy at the centre of economic growth drivers. In the Amathole region, it is necessary for the authorities to pay particular attention to the Wild Coast and the coastal area near Ngqushwa, by raising investment on infrastructure as a means of gaining access to the coast and to mobilise the participation of the private sector in the ocean economy of the region (ADM Vision 2030, 2015).

Figure 3:5 Gross Value Added by broad economic sector



Source: IHS Markit Regional eXplorer version 1156, 2016

3.3.6 *Heritage and tourism potential*

One of the approaches of developing the economy for the region is making use of the district’s history and its rich heritage sites. These include historic sites like Fort Fordyce, Fort Malan, Fort Beaufort and Fort Hare. The implication is that it is necessary to sell these sites into the market in a manner that goes beyond only history and towards tourism packages that include hospitality. This district is also characterised by history of an educational institution where some renowned world political leaders graduated in the past, UFH (e.g., Mangosuthu Buthelezi, Oliver Tambo, Robert Mugabe, Nelson Mandela, etc.).

3.3.7 *Favourable climatic conditions and agricultural potential*

To a certain extent, the Amathole district is blessed to have favourable climate conditions, which include areas that have a higher prevalence of rainfall, like the Mbhashe and Mnquma local municipalities. However, the authorities in the region have not fully exploited these favourable climatic conditions and agricultural potential, by investing in irrigation schemes to ensure that communities in the region move away from subsistence towards commercial agriculture (ADM Vision 2030, 2015).

Figure 3:6 Access to water



Source: STATS SA, 2016

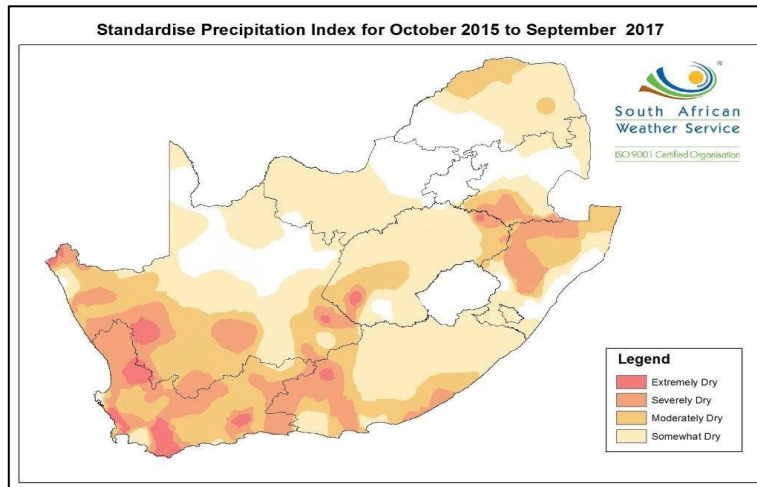
South Africa is one of the greatest emitters of greenhouse gases per capita. Emissions are accounted for at national level, but the effects of climate change may be apparent at local level, such as changes in local patterns of temperature and rainfall. Some portions of the ADM have been declared drought-stricken areas since July 2009 with the Raymond Mhlaba local municipality being the worst affected municipality in the district. The Eastern Cape includes two of South Africa's Water Management Areas (WMA), namely the Fish to Tsitsikamma WMA and the Mzimvubu to Keiskamma WMA, into which the ADM falls. There are three main rivers in the Mzimvubu to Keiskamma WMA, and the area is largely used for livestock farming and subsistence agriculture with commercial timber grown in the higher rainfall zones. The water of the Fish River has a naturally high salinity. Water quality is an important issue in the ADM, and issues such as the eutrophication of water resources, non-compliance of sewage works and pollution into surface and groundwater are important to deal with. Due to the change in weather patterns and regular appearances of the El Niño phenomenon, certain areas in the district are experiencing regular periods of below-normal rainfall conditions and even serious drought conditions. In this regard, special planning initiatives are required and alternative water resources need to be explored. In Raymond Mhlaba (Bedford and Adelaide), the ADM has started a groundwater exploration study via funding obtained from the Department of Water Affairs.

Lessons learnt in extended periods of drought, for example, over the period between 2008 and 2010, are that carting water to drought-stricken areas is an unsustainable way of providing water. It is expensive and there is very little to show for the expenditure at the end of the period. As it is likely that in the future there will be more frequent periods of drought caused by climate change, it is deemed wise for the ADM to invest in more sustainable and permanent drought intervention measures. In this regard, the ADM has set aside an amount of R78.55 million from their own funding (from its reserves). This, to source alternative water resources in endeavouring to improve water supply security during drought conditions that would also help mitigate the risk of drought in the future.

Drought intervention measures, as and when required, will be carried out in the following order:

- Ongoing publicity campaigns about the drought and conserving water.
- Undertake groundwater investigations in each affected area (this commenced in 2011 and 2012).
- If groundwater investigation is successful, equip boreholes.
- If groundwater investigation is not successful or only partially successful, supplement with desalination in coastal areas (a study was done, and preliminary design work was completed in Quarter 3 of 2011 and 2012 with an environmental impact assessment (EIA) and Phase 1 implementation that followed soon thereafter).
- In inland areas where groundwater is not an option, other surface water supplies should be investigated.
- Water reuse should be considered as an immediate quick-win solution in all drought affected areas with Waste Water Treatment Works [WWTWs]. Further, it is proposed that ultimately water reuse becomes part of the ADM's best practice at all WWTWs throughout the district as a means to reduce water usage and long-term water conservation approach. Studies have been completed for Butterworth and Adelaide and EIA studies and preliminary designs were completed in 2011 and 2012.

Figure 3:7 Map showing SPI from October 2015 to September 2017



Source: Weather SA [South African Weather Service], 2017

It is important for government authorities in the Amathole district to exploit these opportunities as a means of developing the economic status of the region. Embracing such an approach would result in the creation of job opportunities and self-employment, and ultimately the alleviation of poverty and consequently, the challenge of food insecurity in households would be eradicated.

3.3.8 *The rural nature of the ADM and the Eastern cape*

One of the problems that seem to dominate in the Eastern Cape is the underdeveloped infrastructure, mostly because of being poorly maintained. The reduced value of the infrastructure assets is the result of this (EC Vision 2030, 2014: p.80). This happens despite the fact that the national and provincial governments have plans in place for developing infrastructure in different parts of the country. For instance, according to the National Department of Public Works (NDPW) Strategic Plan (2015), R6 billion would have been spent on goods, services and infrastructure development by 2016. The value of such services is that they would assist in making improvements for the livelihood of the citizens of the country and therefore, resulting in economic stimulation in the country. However, in most cases the implementation of such plans does not take place as intended, as a consequence of the challenges that arise in rural areas. For example, in areas like the Amathole region, the rural villages are located in areas that have the most complicated topography, which results in high costs of delivering bulk infrastructure such as water and electricity. Consequently, such areas seem to be characterised by infrastructure backlogs (EC Vision 2030, 2014: p.80).

Thus, the rural nature of some areas in the province and in the Amathole region makes them vulnerable to having inadequate infrastructure. Consequently, such areas end up having an underdeveloped economic status, and ultimately the perpetuation of food insecurity in households.

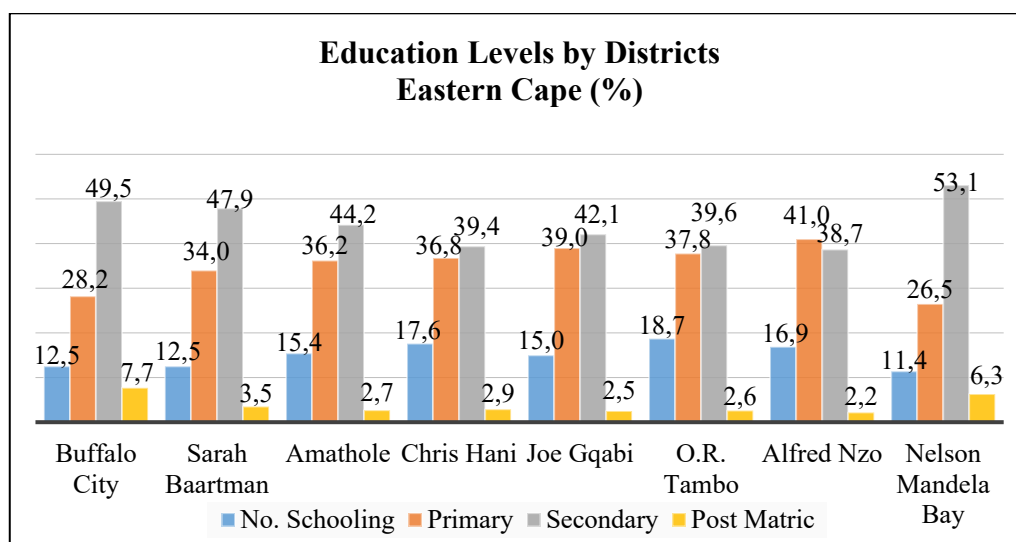
3.3.9 Education level

Table 3:3 Educational levels in the Eastern Cape

District/Metro	No Schooling	Primary	Secondary	Post matric
Buffalo City Metro	12.5	28.2	49.5	7.7
Sarah Baartman	12.5	34.0	47.9	3.5
Amathole	15.4	36.2	44.2	2.7
Chris Hani	17.6	38.6	39.4	2.9
Joe Gqabi	15.0	39.0	42.1	2.5
O.R. Tambo	18.7	37.8	39.6	2.6
Alfred Nzo	16.9	41.0	38.7	2.2
Nelson Mandela Bay Metro	11.4	26.5	53.1	6.3
Eastern Cape	15.3	34.7	44.4	3.9

Source: ECSECC, 2016

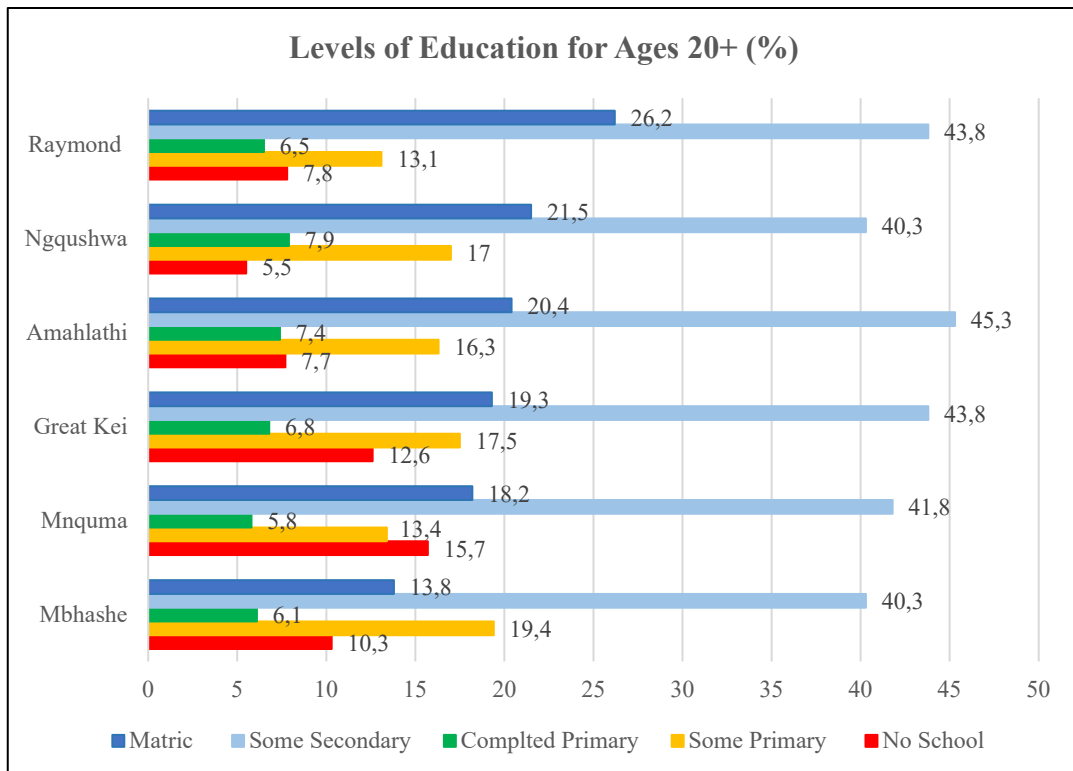
Figure 3:8 Graph depicting education levels in the Eastern Cape



Source: STATS SA, 2016

About 3.9% of the population residing in the Eastern Cape has a post matric qualification. Most of these are situated in the metros (Buffalo City at 7.7% and Nelson Mandela Bay at 6.3%). The two metropolitan municipalities are the economic hubs of the Eastern Cape where most of the social events are take place and where the two industrial development zones are found.

Figure 3:9 Graph depicting education levels in the Amathole District Municipality



Source: STATS SA Community Survey, 2016

One of the challenges that seem to cloud the Amathole region is the inadequate level of education. This mediocre education status contributes in perpetuating food insecurity in households. Without education opportunities there are no job opportunities. According to ADM Vision 2030 (2015), the Amathole region has the largest population that does not have any form of schooling and has the least people with higher education. The Amathole region has a large population with some having primary level of education, and of those, only few graduate to the next level of education compared to the provincial figures (STATS SA, 2016). For instance, during 2011 there were 63 970 people that had no schooling, 111 168 people with some primary education, and 37 306 who had completed their primary education. Therefore, these numbers indicate that the Amathole region is a poorly educated population.

Figure 3:10 Access to education



Source: STATS SA, 2016

Further, the poor education standard in the Amathole region exists despite the fact that the ADM operates in a provincial space that has four universities and several colleges. According to the ADM Vision 2030 (2015), these universities include Walter Sisulu University, University of Fort Hare, Rhodes University, and Nelson Mandela Metropolitan University. The colleges include Lovedale Further Education and Training, and Fort Cox College of Agriculture and Forestry. Despite the existence of these universities and colleges, the majority of the population in the Amathole district (and this includes the Eastern Cape in general) do not possess post-matric qualifications – and in the absence of these qualifications, chances of becoming competitive in the job market worsen. This situation also contributes to the deterioration of opportunities for self-employment. Eventually, food insecurity in households takes hold of the opportunity to escalate.

Figure 3:11 Poverty in the Amathole District Municipality



Source: STATS SA EL Office, 2016

3.3.10 *The housing situation in the ADM*

The ADM covers an area of 23 577km² and is made up of six local municipalities with a total population of 854 389. The population of the Amathole District Municipality has decreased between the period of 2010 and 2016. The ADM comprises a wide range of settlements distributed within the six local municipalities and could be classified as:

- **sub-district centres:** Fort Beaufort, Butterworth and Stutterheim
- **local centres:** Alice, Adelaide, Bedford, Willowvale, Centane, Cathcart, Elliotdale, Nqamakwe, Dutywa and Peddie
- **sub-local centres:** Kei Road, Middeldrift, Balfour, Keiskammahoek, Seymour, Hogsback, Komga, Kei Mouth and Hamburg
- **rural villages**

One of the objectives of the housing strategy is to deal with the challenge of providing sustainable and viable human settlements within the district in a focused manner. In doing so, this kind of settlement had to have a common understanding of a human settlement; places where people live, work and create. These are places where there is social interaction and economic activity. This implies that sustainable human settlements are not just houses that are built for people and therefore, in order to provide for sustainable settlements, understanding of the following is essential:

- nature and type of existing settlements
- nature and type of settlements that constitute the demand
- nature and type of settlements that constitute the supply
- nature and type of existing settlements

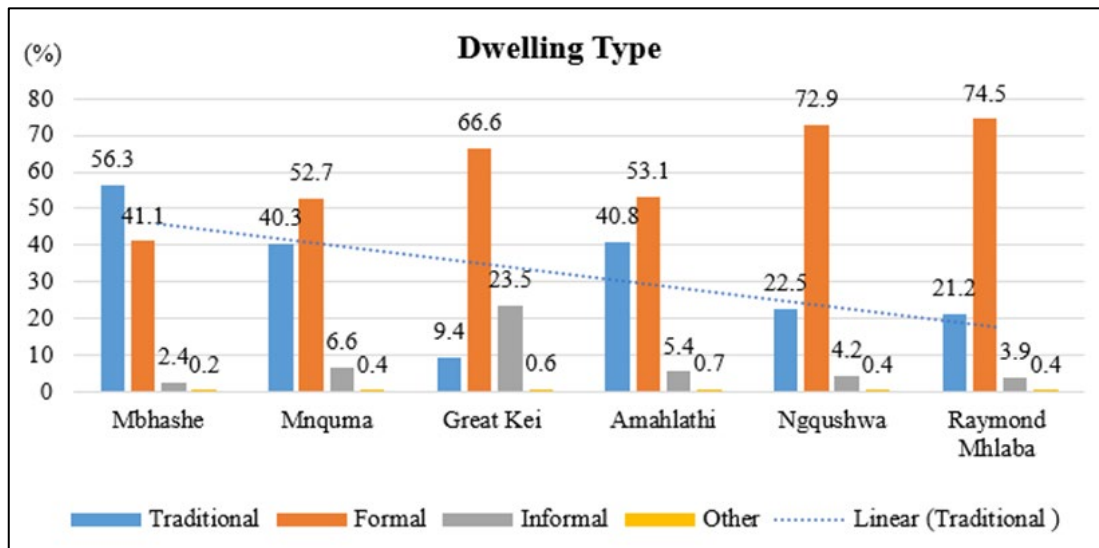
Figure 3:12 Different types of households



Source: STATS SA EL Office, 2016

Housing statistics are generally difficult to collect and to verify. As a result there is difficulty in determining housing needs and backlogs are always a contested issue. There are elements that affect and influence both the demand and supply of housing, ranging from demographics, migration and the basic economic conditions that prevail. However, according to statistics from the STATS SA Community Survey (2016), the situation with regard to housing in the district is as follows.

Figure 3:13 Dwelling types in the Amathole District Municipality



Source: STATS SA Community Survey, 2016

What can be deduced from the above data is that more than 50.0% of existing households in the ADM are not regarded as formal, and that fact impacts on the demand as well as on the backlog for settlement supplies.

3.3.10.1 Nature and type of settlements that constitute demand

The demand is determined through the acknowledgement of the socio-economic character of demand, as reflected by housing typologies. Identifying the area of greater demand for subsidies and establishing the exact need for beneficiaries also helps to establish the extent of the housing demand.

Other factors that need to be considered when determining the housing need or demand are:

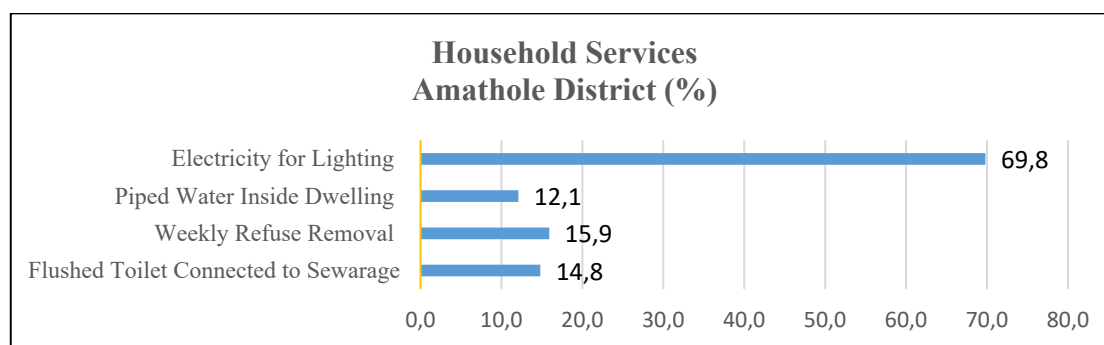
- migration
- household changes
- economic conditions
- mortality issues
- locational issues
- backlogs (ADM Vision 2030, 2015)

An in depth understanding of these elements can determine the potential demand in the future. Migration forms the basis for determining the existing demand on housing, in that understanding the types of migration and trends that exist, assists in identifying and planning for areas of greater demand. An analysis of the ADM's migration has been explored within the context of the province as a whole, and dominates the existing housing trends in the general district. A greater percentage of the population in the ADM is in the rural areas. Therefore, the migration trends highlighted in the preceding paragraph need to be taken into consideration as this implicitly indicates the vast demand in those areas. Household changes can result from population transitions and population growth rates. Among the likely reasons for a decline is a high death rate, low birth rate, out-migration, or most likely a combination of all of these factors. One of the key areas affecting housing predictions is the issue of HIV/AIDS-related deaths. There is great deal of uncertainty as to the overall effect that the diseases will have on housing demand, in terms of both household types, and tenure.

With regard to the former, the issue is the kind of units that will be needed, and regarding the latter, it is the uncertainty if more rental units will be appropriate for child-headed households – when considering that there are 5.7 million people who are HIV positive. A clear detail of

housing needs according to each municipality and their IDPs is detailed in each individual housing strategy and complimented by the updated data extracted from the community survey of 2016 (ADM Vision 2030, 2015). The housing backlog for an appropriate response on housing demand should be disaggregated in terms of housing typology and tenure.

Figure 3:14 Household services in the Amathole District Municipality



Source: STATS SA Community Survey, 2016

3.3.11 Food security policies in the ADM and in the Eastern Cape

Food insecurity is the problem that concerns policymakers in the Amathole region and in the Eastern Cape and this situation forces policymakers to devise strategies to eliminate the challenge. To do so, it is necessary to gain a better understanding of the nature of the challenges around the food insecurity issues. Hence, the next discussion will focus on various ways in which food insecurity manifests, before examining the policies that are appropriate in eliminating food insecurity.

3.3.11.1 The manifestation of food insecurity

Before gaining an understanding on food insecurity, it is necessary to understand food security. The concept of food security refers to all people being able to have regular, acceptable access to safe and nutritious food, in order to have a healthy and productive life. In accessing the food status of South Africa, one finds that the country is self-sufficient in terms of having food; however, approximately 1.5 million children suffer from chronic malnutrition, while 14 million people are vulnerable to the challenge of food insecurity.

The phenomenon of food insecurity is the opposite of food security. Food insecurity is inherently associated with poverty and vulnerable groups in communities and hence, poverty is utilised as one of the indicators in describing food insecurity (Agricultural Policy Unit,

1997). In addition, food insecurity is sometimes linked to the nutritional status of children. Among the tools for measuring food insecurity, one has to estimate if the energy intake is adequate. For instance, in South Africa there are approximately 1.5 million malnourished children under the age of six years. Then, 'among the ultra-poor (the poorest 20 percent of households) the rate is 38%, while it is only 6% among the rich' (Agricultural Policy Unit, 1997). Therefore, this data uncovers that food insecurity is a challenge that affects the children in a particular region or country.

One way to understand food insecurity is to observe the evidence of human development. The indicators of human development may be used as a tool for assessing South Africa's status of poverty and social deprivation in relation to other countries around the world; especially, in comparison to countries that have similar income levels to this country. As a country, South Africa seems to be poor when compared to other middle-income countries. Those countries that are comparable to South Africa (or have a lower per capita Gross National Product (GNP) levels) have a better performance with regard to indicators like infant mortality, life expectancy, and adult literacy (Agricultural Policy Unit, 1997). In addition, the challenge of food insecurity tends to affect the more vulnerable groups of people in communities. Within the South African context, the vulnerability of groups takes place in the form of some of these categories, namely:

- vulnerability by race
- poverty and gender
- poverty and age
- the distribution of food insecurity and poverty by provinces
- and rural or urban distribution

The following section looks at the brief details of these points.

3.3.11.2 Vulnerability by race

In South Africa, the challenge of vulnerability to food insecurity as a consequence of poverty is derived from racial groups. Specifically, it seems to be confined to households of Africans. This is because Africans are frequently poor, by 66.0%, in comparison to less than 2.0% of households of white people (Agricultural Policy Unit, 1997). Therefore, these statistics reveal that the challenge of food insecurity in South Africa appears to be dominating especially black African people. This calls for the need of effective government interventions that are intended to eradicate food insecurity and poverty of black African people in South Africa.

3.3.11.3 *Poverty and gender*

Gender dimensions influence the problem of food insecurity in the province and in South Africa. In most cases, women are more vulnerable to food insecurity than men. For example, about 48.0% of women in comparison to 43.0% of men live in conditions of poverty both in areas that are rural and urban. Simultaneously, there are approximately 67.0% of poor female-headed households that are located in rural areas (Agricultural Policy Unit, 1997). The numbers that are presented in this section uncover that there are a greater number of food insecurity cases pertaining to women than to men, in the context of both rural and urban areas. This calls for the need for effective measures that will improve the current initiatives for addressing gender imbalances with regard to alleviating food insecurity and poverty.

Figure 3:15 Poverty and access to electricity



Source: STATS SA, 2016 Community Survey

3.3.11.4 *Poverty and age*

One of the factors that affect food insecurity is the age group of people in households or in communities. In South Africa, in many cases people are unable to eradicate food insecurity and poverty because of their age. According to the Agricultural Policy Unit (1997), this group includes the age groups of people who are under eighteen or over sixty years of age. Statistics show that three in every five children live in poor households. According to the provinces, the Northern Cape has 83.0% of children who live in households that are poor, in comparison to 21.0% of children in Gauteng (Agricultural Policy Unit, 1997).

Consequently, this section discloses that age group is a problem that has a negative effect on eradicating vulnerability to food insecurity and poverty. This indicates that there is a need for interventions or policies that should be intended to alleviate food insecurity and poverty of people who are under eighteen or over sixty years of age.

3.3.12 *Distribution of food insecurity and poverty by provinces*

The manifestation of food insecurity and poverty also takes place according to different provinces in the country. The Agricultural Policy Unit (1997) reveals that food insecurity and poverty are distributed unevenly among the nine provinces. This distribution involves the Eastern Cape and the Northern Cape (the two provinces with the highest rates of poverty). Statistics regarding these two provinces reveal that ‘while containing only 35.0% of the population, poor households in these provinces generate 59.0% of the total poverty gap’ (STATS SA 2006 and 2011 Poverty Trends in SA, March 2014). On the contrary, ‘the poverty rates in Gauteng and Western Cape are both under 20.0%’ (Agricultural Policy Unit, 1997). Therefore, this discussion shows that the Eastern Cape is one of the provinces dominated by food insecurity and poverty. In most cases, this challenge is perpetuated by unfortunate situations like mismanagement by government officers and corruption by those officers who are in charge of coordinating programmes for food security and poverty alleviation.

3.3.12.1 *Rural or urban distribution*

The occurrence of poverty and food insecurity is affected by whether people live in urban or rural areas. Statistics show that in South Africa 72.0% of people live in rural areas and of those, 70.0% are poor. This status of being poor is ‘exacerbated by the disproportionate lack of access to services’ (SA Human Rights Commission, 27 March 1999). In addition, the country is characterised by an ‘urban/rural population distribution [that] is almost equal [to] 51%/49%’ (Agricultural Policy Unit, 1997). Consequently, the dominance of poverty in rural areas in comparison to urban areas makes people in rural areas more vulnerable to the challenge of food insecurity and poverty. Hence, it is necessary for the government to make a concerted effort to achieve programmes that are used in the process of eliminating food insecurity and eradicating poverty.

3.3.13 *Policies for eliminating food insecurity and poverty*

As indicated before, the ADM is dominated by the challenge of underdevelopment – the situation seems to be rampant in the eastern side of the region. The main cause of this challenge is that there is very little, if any investment in these areas. A start to making improvements to ease the situation includes the identification of catalytic projects; if executed, they can improve the economic situation for the inhabitants of the Amathole district. To mention a few, SMME development, cooperative development and incubation centres, are of the approaches that could be used in order to develop projects in the Amathole district.

3.3.13.1 *Small, Medium and Micro Enterprise development*

One of the means, and as one of the priority areas of eliminating food insecurity in households in the Amathole region, is to embrace enterprise development, through Small, Medium and Micro Enterprise (SMME) development. Among the indicators of progress on this matter is the development and adoption of the SMME Strategic Plan by the council during the 2009/2010 financial year (ADM IDP, 2012). This SMME Strategic Plan involved numerous programmes and activities that are intended to guide the implementation of the plan. By using SMMEs the belief is that, such an intervention would assist in developing local economic development in the Amathole region (ADM IDP, 2012: p.42). However, the idea of embracing SMMEs has its own challenges such as poor infrastructure, the underdevelopment of the SMMEs and poor product quality:

- **Poor infrastructure:** the majority of the SMMEs tend to operate in urban areas, and in most cases, they experience poor infrastructure – one of the necessities for development. This situation is more for those SMMEs that operate in rural areas.
- **The underdevelopment of the SMMEs:** the authorities who are responsible for SMMEs have discovered that the SMMEs have a tendency to remain underdeveloped for many years, despite the fact that they receive various forms of support from the ADM office, including other government departments. According to the ADM IDP (2012: p.42), ‘these enterprises are not growing – graduate to small business category’. One of the factors that were identified as a cause of SMMEs remaining underdeveloped is the absence of a databank that provides details of SMME units within the district.
- **Poor product quality:** The SMMEs also have the challenge not to produce poor quality products. For instance, those in housing construction have cases of where they have producing bricks and blocks that break easily. Among the interventions for improving the situation (poor quality products), by the ADM office so far, has been that of organising

sessions for product development. One of the facilitators of these sessions was the Small Business Enterprise Development Agency, which included SMMEs and cooperatives as beneficiaries of the interventions or sessions (ADM IDP 2012: 42).

3.3.13.2 Cooperative development

One of the means of improving the socio-economic development in the Amathole region has been adopting the concept of cooperative development. According to the ADM IDP (2012: p.42) the enterprise development through cooperative projects, has been identified by the ADM office as one of the priority areas that have the potential to make a positive contribution on economic development in the Amathole region. Consequently, the ADM office has provided various forms of support over the past years to these projects, in the form of financial and non-financial contributions. The former assists cooperatives with the means to gain start-up capital for cooperative projects and the latter becomes beneficial to the members of cooperative projects through initiatives like training sessions, workshops, marketing, improving product quality, and business and financial management, etc. Among the efforts to improve cooperative projects by the ADM office, is that of conducting a baseline study on these sorts of projects. The findings of the study disclose that cooperatives operate mostly in the agricultural, manufacturing and beadwork sectors. These initiatives for the development of cooperative projects operate under the guidance of the ‘national and provincial legal instruments for cooperatives [sic] development’ (ADM IDP 2012: p.42).

In addition, the development of cooperative projects by the ADM office also includes the establishment of local and district forums. The goals of the forums include: developing an information sharing space, networking among cooperatives and other stakeholders, and creating better opportunities for effective and efficient development of cooperative projects in the Amathole district. In terms of controlling the forums, the cooperative projects are responsible for facilitating their activities; the intention is for them to take responsibility and to take control of the development of individual cooperative projects (ADM IDP 2012: p.42).

3.3.13.3 Incubation centres

Among the efforts of providing development initiatives on SMMEs and cooperative projects by the ADM, office has been the development of incubation centres. The goal these incubation centres is to monitor progress towards the development of SMMEs. The two forms of incubation centres that have been developed in the Amathole region are the Eastern Cape

Information and Technology (ECIT) in East London and the Skills Development Centre in Butterworth (ADM IDP, 2015).

3.3.14 *Theoretical view on policy implementation*

It has been indicated, that policies and programmes play a vital role in the ADM and the Eastern Cape by eliminating the challenge of food insecurity. However, despite the existence of these policies (for example, policies for food security), it is a common that when policy implementation occurs, the policies differ from what was intended. Challenges that were intended to be solved by these policies continue to dominate people's lives. This is attributed to the fact that policy implementation does not always go as planned; the services that were meant to be delivered to the intended beneficiaries are not received at the expected quality and quantity. Ayee (1994: p.1) argues that policies that manage to be implemented often look very different from the original intentions of policy framers. This experience is common in South Africa where there are many policies developed by the government, but their implementation produces mediocre consequences. Hence, the people at local level carry on experiencing problems that were supposed to be solved by such policies – one such example is food insecurity. Cloete and De Coning (2012) build on this point by saying that policy implementation failures tend to manifest in many of the spheres of the South African government. The signs of these failures include the misappropriation or non-spending of the approved capital budgets, unsatisfactory service delivery and incidences of dissatisfied citizens' groups in communities (Cloete & De Coning, 2012: p.178). Therefore, South Africa often experiences more incidences of protests – that are often accompanied by violence – due to the frustration of poor public service delivery by local government. Thus, these protests are symptoms of the failure to conduct adequate policy implementation (Vernekohl, 2009: p.12).

3.3.15 *Current situation of Amathole*

Table 3:4 Acute malnutrition deaths in the Eastern Cape hospitals from 2013–2017 (reported cases)

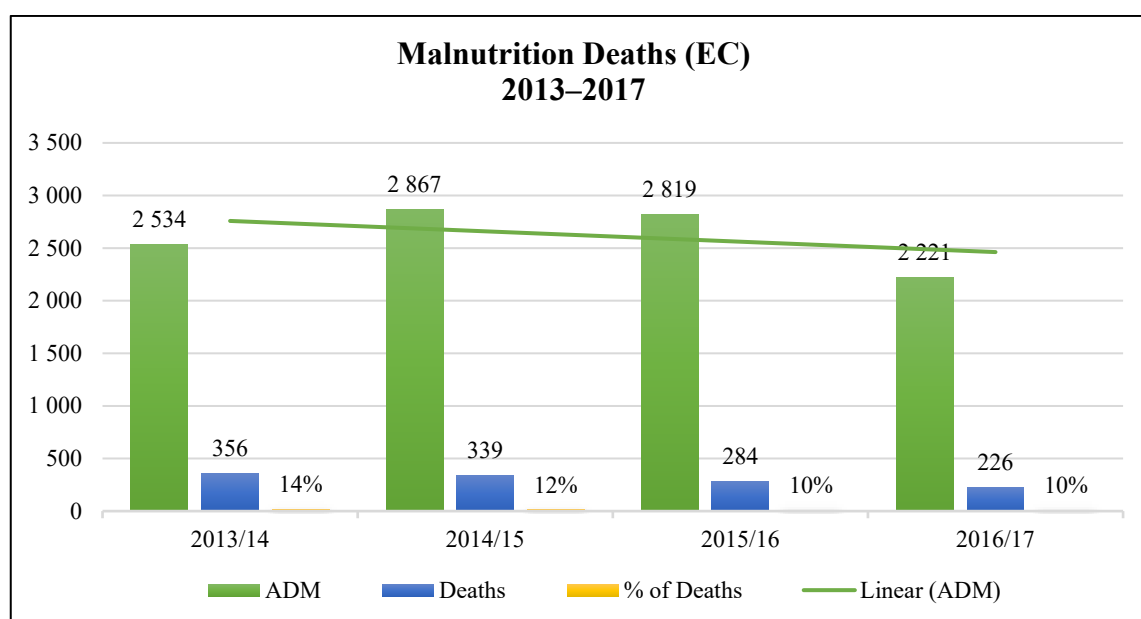
Year	2013/14		2014/15		2015/16		2016/17	
District	ADM	Deaths	ADM	Deaths	ADM	Deaths	ADM	Deaths
Buffalo City Metro	201	27	252	24	231	27	181	14
Nelson Mandela Bay Metro	173	17	198	25	189	16	139	12
Amathole	311	27	248	35	222	31	190	20
Chris Hani	455	44	422	42	378	31	399	23
O.R. Tambo	703	154	1 029	119	1 160	128	837	99
Alfred Nzo	296	55	381	69	310	37	250	35
Joe Gqabi	175	28	159	18	181	8	127	18
Sarah Baartman	211	4	178	7	148	6	98	5
Total	2 534	356	2 867	339	2 819	284	2 221	226

Source: District Health Information System, 2017 (EC: DOH)

Seven people died after eating toxic plants found growing in the wild, according to statistics (DHIS, 2017) released by the Eastern Cape Department of Health and also from the departments' DHIS at the Bhishe head office. An inquest was held regarding the food insecurity situation in the province, and some districts hastily established Monitoring and Response Units (MRUs) – which are multidisciplinary forums – to assist, and to contain, the poverty situation resulting from the drastic measures people are resorting to, for food. These forums meet monthly to discuss strategies to be implemented; there was no clearly understood available strategy to deal with the toxic plant cases presented by some desperate patients in their facilities. As generally believed and hoped for the forum that includes anti-poverty district forums of the South African Social Security Agency (SASSA) and Department of Social Development (DSD) will assist in the offering of food parcels, social grants (child grant, foster care) as an immediate shock absorber while the is looking at the long-term sustainable solution and partners. The DRDAR is conspicuous by its absence and in assisting households with food gardens – despite this province’s tagline of making agriculture a game-changer. However, the situation has summarily encouraged the Department of Health to realise the importance of community health workers who are now charged to carry out mid upper arm circumference measurements to identify the children early enough to prevent them from having to experience SAM. Among the decisive solutions, is the greater involvement of the nutritional managers who will be attending the war room meetings and will present the nutritional status and plans developed to guide further the wards towards the realisation of food security through food gardens.

The strengthening of social mobilisation will be undertaken through roadshows and are to be conducted during the first two days of each month. These roadshows will educate mothers and caregivers on infant feeding in an attempt to curb child and infant mortality. Districts are also charged with the task of organising workshops for traditional health practitioners to educate them on signs and symptoms of undernutrition and the sixteen key family practices. The inclusive approach of the province, which has been so disordered and reactionary, also saw the late inclusion of traditional leaders through the involvement of *Imbumba YamaKhosikazi AkoMkhulu* (IYA). This research study has also noted with concern that community nutrition development centres (CNDC) are not covering the most needy areas and nor are they clearly monitored by the Department of Social Development. This has resulted in sporadic episodes of deaths (due to SAM and desperate people eating poisonous plants) in communities that are vulnerability and under food insecurity pressure, and who are not coping with the hunger and despair of not knowing where their next meal will come from.

Figure 3:16 Malnutrition deaths in the Eastern Cape from 2013–2017 by percentages



Source: DHIS, 2017 (ECDOH)

The graph above clearly shows that out of the 10 441 hospital admissions in the Eastern Cape over the period from 2013–2017, 1 205 people died of malnutrition – clearly an alarming situation. This equates to, on average, 11.5% people per year – and one wonders about the number of people who have died from malnutrition outside of hospital facilities. Also worth noting is that the number of acute malnutrition deaths in 2017 did not decrease; rather, they probably increased due to the fact that the year (2017) was not yet complete at the time of

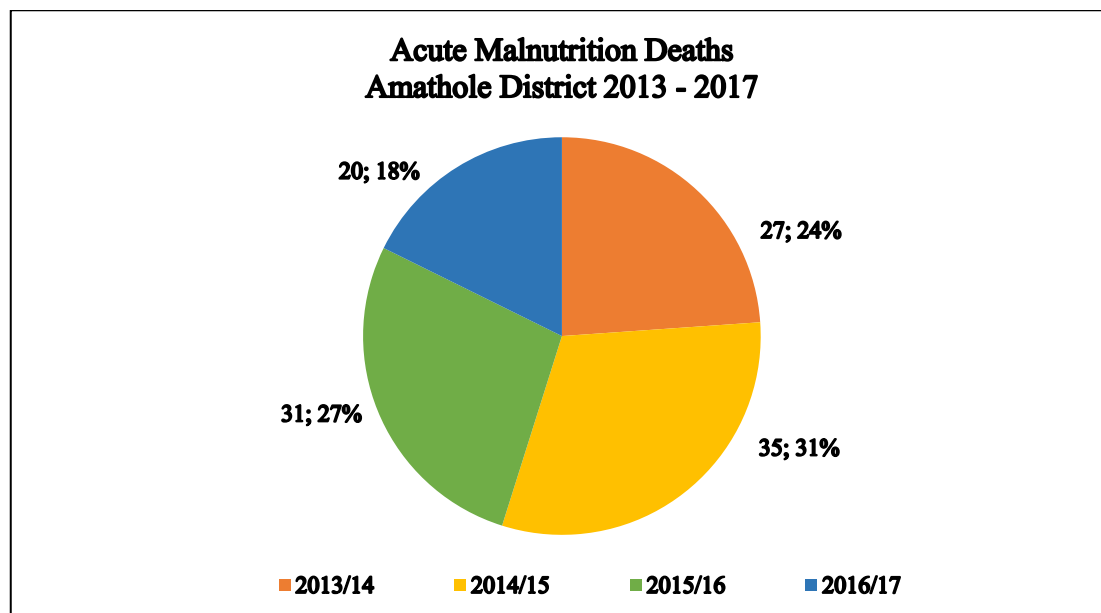
reporting (i.e., the timeframe of this report). One should also take into consideration the migration patterns in the province, which may also be a factor in the malnutrition hospital reported admissions and reported death statistics. If the current state of malnutrition is not prioritised and swiftly addressed by all the players involved (i.e., national and provincial governments assisted by both civil society and business), the situation will worsen further. Thus, it must be noted that the Amathole district will be in a food insecurity crisis, if something substantial and positive is not done. However, the Amathole district scenario on malnutrition deaths also shows a shocking situation; of the four years under discussion, twenty-eight people on average, have died from malnutrition each year.

Table 3:5 Malnutrition deaths in the Amathole District Municipality from 2013–2017

Year	2013/14		2014/15		2015/16		2016/17	
District	Adm.	Deaths	Adm.	Deaths	Adm.	Deaths	Adm.	Deaths
Amathole	311	27	248	35	222	31	190	20

Source: DHIS, 2017, (ECDOH)

Figure 3:17 Acute malnutrition deaths over four years in the Amathole District Municipality



Source: DHIS, 201, ECDOH).

These communities are vulnerable and under food insecurity pressure, and are not coping with hunger and despair which engulfs them. The shameful situation of acute malnutrition continues unabatedly, surely stunting the young, and those who are supposedly growing will be greatly affected and doomed for life. Looking closely at the alarming situation of acute malnutrition it can also be concluded that the performance of the Eastern Cape students at school is not only compromised, but enormously condemned; this despite the availability of vast lands for food farming in the province. The catastrophic situation manifesting in the hospital facilities, is happening against the backdrop of the Eastern Cape's implementation of primary health care re-engineering and the National Health Insurance (NHI) that has failed in most modern countries. This is due to the intensive financial nature required of heavily investment into poor infrastructure. In the Eastern Cape the NHI is being piloted on two districts, namely, the O.R. Tambo district and Alfred Nzo district. These districts were previously of the former homeland of Transkei. Here a number of facilities were dilapidated and dysfunctional, due to poor government maintenance. This situation not only talks to the Department of Health but also to the Department of Rural Development and Agrarian Reform as well as to local municipalities for a well-coordinated and integrated approach. This was previously addressed by the abandoned Reconstruction and Development Policy which was trying to balance the past's inequalities – although it is generally believed that it fell short of addressing the highly contested twins (the land question and economic empowerment) – on behalf of historically disadvantaged individuals.

For the situation to stabilise, it is suggested that a multi-pronged approach of cluster systems be adopted by the national government (the current administration) and endorsed by the Eastern Cape provincial government. This approach could yield better results where stakeholders would plan and implement together resulting in better outcomes and meaningful impact.

How farm dwellers (as a vulnerable group) survive in South Africa

From the onset, the researcher states that although the Amathole district is not wholly a farming community, one cannot merely dismiss the challenges faced by this group, which also includes the district of Amathole. Although the farming community in Amathole has not been the subject of the study in its entirety, it is however, part of the vulnerable group, affected by poverty and food insecurity. This is especially true now that the district is under stress through drought and erratic climate patterns. The situation is dire – such that employment in the farming community is seen as dwindling and unsustainable due to the aforementioned causes,

and thus it is worth focusing on some of the dynamics, which manifest in the district. According to *The Conversation* (2017), South Africa's unemployment rate puts the country in the bottom ten of the world. Seemingly, South Africa's hunger levels continue to grow. It has what Berkeley geography professor, Gillian Hart (*The Conversation*, 2017) calls a 'population surplus to the needs of capital' – a population that must find ways to survive despite living a 'wageless existence'. Worth noting is that all of this is happening against the backdrop of three unfolding social processes, which further push the country to the bottom section of the list of countries that are hungry (as earlier alluded to). The first of the three processes involve deteriorating conditions for survival, which results in a new emerging social category called the 'precariat' (*The Conversation*, 2017) where growing numbers of people struggle to secure the conditions for their survival through traditional means, like permanent work. Instead, more people survive through multiple jobs that are part-time, insecure and precarious.

Guy Standing (*The Conversation*, 2017), who is a professor of economic security at Bath University – and who coined the term – estimates that a quarter of the world's adult population is now in the precariat. The second process, land reform, is currently geared at servicing the economic needs of black and white rural elites, with the land reform budget allocations spent on the wealthy rather than on the poor South Africans who are unable to access land. The third process, the structural legacy of the dispossession of Africans from land has not been addressed, and failing to resolve this means that a painful political question is left hanging – and becomes an easy element to manipulate. According to Hornby (2017), the biggest question on land ownership hinges on, asks how these historical and present conditions constitute the conditions for emancipatory politics. Further, Hornby (2017), questions how rural people who need land to live on, or to farm will organise a claim for restoration. According to Hornby (2017) there is only one possible answer emerging from the research undertaken by the Association for Rural Advancement (AFRA), a land rights NGO working with farm dwellers in South Africa's Kwazulu-Natal province. AFRA recently undertook a socio-demographic and income survey of 850 households, which were situated on farms in the Umgungundlovu District Municipality; this was to understand more about farm dwellers' conditions, and how these have changed over time. While the radical opposition party, the Economic Freedom Fighters (EFF) and some factions of the governing African National Congress (ANC) are calling for the restoration of land to Africans without compensation to existing landowners, the AFRA's conclusion is that the politics associated with land is not only about an organised emancipatory movement. Rather, farm dwellers are more preoccupied with daily survival strategies to push poverty away from their respective doorsteps.

If work opportunities – as concluded by the study carried out by AFRA (2017) – are anything to go by, many farm dwellers will be left with no choice but to leave the farms. However, such opportunities are increasingly limited, and many farm dwellers are now asserting their demand to remain on the land that they have long ties to; these are different strategies of fragmentation of farm dwellers' interests in the land. We can say that it seems that the potential exists for a social movement of people 'surpluses' to capital requirements. Whether such a movement develops, depends on how effectively populist political groups can create alliances within, and between, the agricultural precariat – those living in city slums and those whose land access is threatened by agreements between traditional authorities and corporate interests (like mining). On the international front, the International Peasant Movement, *La Via Campesina* provides an example of a social movement involving reoccupation of unproductively used farmland. One can argue that in South Africa the precariat is more complicated than elsewhere because the country is not agriculturally rich and more than half of the population is now urbanised, living in shacks on the edges of cities.

According to AFRA (2017), farm dwellers can be simply defined as rural people who live on large commercial farms owned by someone other than themselves. AFRA (2017) also mentions that in some respects farm dwellers are a relic of the country's agrarian history, which involved the establishment of capitalist agriculture in the early 1900s on the back of unpaid labour of African tenants. In return, tenants were granted the right to use some of the farmland for their own farming. Currently, data shows that farm dwellers are not simply wage workers as they identify intimately with the land that they live on; more than half of the interviewees have family graves on farms. Their livelihoods are land-based and more than half cultivate crops, while just less than half own livestock.

Looking closely at the situation, and in a fragmenting class of agricultural labour, one cannot help but conclude by saying that three distinct responses are necessary to tackle the increasingly strained conditions for its social reproduction. These are:

- moving away from conditions on farms that make survival intolerable or impossible
- seeking out better options in the cities and towns
- holding on to the roots of a familiar life and place on the farm, despite deteriorating conditions

It is questionable that those who decide to move away from farms usually do so because of the landowner decisions. These include, among other things, explicit measures to evict some or

all of the family members as stated by Hornby (2017) and agreed upon by AFRA (2017), which also states that this has affected 7.0% of the total sample of over 7 000 individuals, as well as implicit or ‘constructive’ evictions. These actions involve the impounding of livestock, cutting off access to basic services such as water and electricity, locking gates and preventing children from attending school. The second response of seeking better options involves individual farm dwellers who decide to leave the farm. Further, the AFRA study (2017) mentions that about a quarter of farm dwellers who have the landowner’s permission to live on the farm, choose to live elsewhere as a means of survival. Rates of unemployment affecting households on these farms exceed 80.0%, so those who leave, tend to have done so in search of work. According to *The Conversation* magazine (2017), farm dwellers must contend with difficult living and working conditions. This makes the third response that entails staying on the farm perhaps the most surprising. One factor is that a farm wage (i.e., income) makes up 55.0% of a household’s income. Therefore, when people can get work on the farms where they have dwelling rights, it makes sense for them to stay, this despite the hardships. There are other explanations that Hornby (2017) mentions as to why farm dwellers stay on the farms. AFRA (2017), supported by Hornby (2017), call this the politics of holding on to home.

According to both (AFRA, 2017 and Hornby, 2017), it is alleged that nearly 75.0% of all farm dweller households interviewed had lived on the farm in question for almost 23 years or longer, and had a parent, grandparent or great grandparent who had been born on the farm. When asked ‘Who is the owner of the house you live in?’ 61.0% said they owned the house (and/or even though they had already stated the name of the farm’s owner). One of the reasons given on the ownership of a house exposed that they had no other home and had never lived anywhere else. When asked ‘Who would take over the home after the household head died?’ more than half said that someone in their family would take it over. This clearly then suggests that a different, parallel concept of ownership coexists with legal ownership of the land. Farm dwellers know the farmer is the titleholder of the farm but are also asserting that they are the owners of their homes. In finding a long-lasting solution to the farm dwellers’ problem, political alliance among farm dwellers – who are opting for different survival strategies – does not appear to exist yet, although the economic conditions are present. It could possibly develop if either the EFF or a breakaway group of the ANC organise it. As it appears now, the EFF’s focus seems to be on shack settlements and the urban poor, while the ANC is too caught up in its own internal wrangles to be able to organise a movement of this kind and to finally put the matter to rest (as a fundamental solution to the problem).

Figure 3:18 Household food gardens



Source: Ngumbela's (Author) own pictures

3.4 Conclusion

The focus of this chapter was to provide background information about the ADM. The value of the chapter is that it provides a picture of the Amathole district – the area where the study was conducted. The points that were discussed here include the demographic profile of the Amathole district, issues of unemployment, income and poverty status, the incapacity to collect revenue by the ADM, the status of economic activities in the Amathole district (and in the Eastern Cape in general), the Eastern Cape, rural in nature contributes to its poor infrastructure and underdeveloped, the poor education levels in the ADM, food security policies in the ADM and in the Eastern Cape and the theoretical view on policy implementation. This chapter described the research area in order to provide some perspective, introducing the research area that will assist during the data collection process and analysis. The next chapter will present the data that relates to the studied phenomena and the study's findings as revealed by the analysis of the data.

CHAPTER 4 : RESEARCH METHODOLOGY

‘The right to adequate food is the right of all individuals.’ Sorensen et al. (2004: p.12).

4.1 Introduction

Chapter 1 introduced this study, its background, context, research problem, question and objectives as well as the significance of food security. It concluded by clarifying and defining concepts within the context of this study. Chapter 2 provided the literature review on food insecurity and vulnerability. Chapter 3 delivered the context of the district under discussion within which the study is located. The main objective of this chapter is to explain how the study was conducted. The discussion will be provided under the following sub-headings: research design, the study’s population, sampling technique and sample, instrumentation, data collection method and data analysis method.

Although many anthropologists and social scientists have undertaken a number of studies on food security issues in third world countries, and in particular, on the African continent, much of their research has focused mainly on rural areas. However, it is worth noting that there is limited literature available on urban food security and insecurity, to guide this research on how to conduct food insecurity research in urban areas. Suffice to say, food insecurity needs a multidimensional approach since there is no unique gold standard or indicator that measures it in its entirety, as revealed by the World Food Programme (2009). Although, there have been instances where rural methods were embraced to address urban food insecurity and set up, like the rapid rural assessment and participatory rural appraisals that were developed by Chambers (1994) and were adapted from the rural to urban setting without any technical problems (Ervin, 1997; Moser & McIlwaine, 1999; 2000).

As explained in the previous chapters, food insecurity research is an infinite schema spanning political, economic, social, technological, environmental and legal spheres. All of the above issues or spheres of influence are closely related to sustainable food production and especially to access to food of adequate quality and quantity at all times needed for consumption by the consumers. Therefore, in trying to structure all complexities into one method of investigation would be inappropriate, and might result in arriving at an undesired outcome of the study – resulting in a flawed diagnosis and erroneous policy imperatives.

Research studies are to give both advice and to point out policy gaps in order to better plan and coordinate such plans. Finally, the political economy theory approach presented in Chapter 2 shows that global, regional and local influences as well as intra-household power relations and dynamics mostly drive issues of food insecurity. It is clear that choosing an appropriate research method is not a matter of one size fits all – it was decided to use a number of methods that can be adapted simultaneously to both rural and urban settings. The use of the same methods for both settings shows awareness that the means and the tools for accessing food in both situations are quite different, and thus the use of multiple methods of investigation would work best. Informed by the political economy approach and the asset vulnerability framework, the researcher was aware that it was not enough to know the food security status of urban dwellers, but also to understand their thoughts and beliefs about their own situation. This included understanding the actions that they need to take in addressing their own predicament, since they are responsible for their own situation and are a part of the solution in addressing it. Subsequently, the researcher had to employ creative ways in combining different methods, tools and techniques to better understand the dynamics of food insecurity and vulnerability in the Amathole district. According to Denzin and Lincoln (1994), a researcher is able to employ their creativity; they regard a researcher as one who should be a bricoleur (i.e., a jack-of-all-trades). A jack-of-all-trades is one who is able to use whatever tools and techniques available at one's disposal in order to gain an in-depth understanding of the phenomena being studied.

4.2 The surveyed area and study unit

The research area was the Amathole District Municipality in the Eastern Cape as demarcated by the Demarcation Board of South Africa whose head offices are in East London. The Amathole district has six local municipalities (as discussed in Chapter 3 to give the reader a clear picture of the surveyed area).

4.3 Preliminary visits to the surveyed area

Before the actual data collection process for the main study was undertaken, a preliminary study was carried out in January 2017. The purpose of the pre-emptive visit to the area was the following:

- to see if there were any existing food security projects
- to find out the number of households which would be able to assist the researcher by taking part in the data collection phase of the study

- to establish a relationship with community members and local authorities to establish trust, and to facilitate future visits
- to introduce the study to be conducted in the community

Prior to these self-made arrangements with the community leaders, the researcher had made some arrangements via officials of the Department of Social Development (EC) and the Department of Health (EC) who work on the anti-poverty sites through the local municipalities LED officers. Both the social development officials and the LED officers accompanied the researcher around the area and introduced him to the various stakeholders involved. On departing the area, the researcher requested, first verbally and then in a written communication, that he would like to come and collect data for academic purposes as well as to assist government-planning processes insofar as food security issues are concerned.

4.4 Research design

In terms of research design, this study will make use of both qualitative and quantitative research approaches. Embracing both methods is called a mixed-method approach. The use of two or more research methods becomes relevant when one method is not complete by itself. The mixed-method approach is increasingly becoming a vital part of social science research; it cancels out the weaknesses of using either a qualitative or a quantitative technique separately from the other (Morse and Niehaus, 2009). The following subsections look at the qualitative and quantitative research techniques separately.

4.4.1 *Mixed-methods research: what is it?*

When the researcher of this thesis was confronted with the modes of investigation, he found that this method was the most appealing due to its multiplicity of viewing the complex nature of the phenomena being studied. The food insecurity is a complex subject and needs a multipronged form of investigation and understanding.

The term mixed-methods refers to an emergent methodology of research that advances the systematic integration, or mixing, of quantitative and qualitative data within a single investigation or sustained program of inquiry. The basic premise of this methodology is that such integration permits a more complete and synergistic utilisation of data than separate quantitative and qualitative data collection and analysis do. The evaluation of Patient-Centred Medical Homes (PCMHs) provides an ideal opportunity for mixed-method studies to contribute to learning about best practices on how to implement a PCMH, as well as PCMH

effectiveness in achieving the triple aim outcomes of cost, quality, and patient experience of care. Mixed-methods research originated in the social sciences and has recently expanded into health and medical sciences including fields such as nursing, family medicine, social work, mental health, pharmacy, allied health, and others. In the past decade, its procedures have been developed and refined to suit a variety of research questions (Creswell and Plano Clark, 2011). These procedures include advancing rigor, offering alternative mixed-methods designs, specifying a shorthand notation system for describing the designs to increase communication across fields, visualizing procedures through diagrams, noting research questions that can particularly benefit from integration, and developing the rationale for conducting various forms of mixed-methods studies.

The mixed-methods research is a research methodology for conducting research that involves collecting, analysing and integrating quantitative (e.g., experiments, surveys) and qualitative (e.g., focus groups, interviews) research. This approach to research is used when integration provides a better understanding of the research problem than either qualitative or quantitative alone. By mixing the two methods, both quantitative and qualitative research and data, the researcher gains in depth and breadth understanding and corroboration, while offsetting the weaknesses inherent in using each approach on its own. One of the most advantageous characteristics of conducting mixed-methods research is the possibility of triangulation, i.e., the use of several means (methods, data sources, and researchers) to examine the same phenomenon. Triangulation allows one to identify aspects of a phenomenon more accurately by approaching it from different vantage points and using different methods and techniques. Successful triangulation requires careful analysis of the type of information provided by each method, including its strengths and weaknesses.

4.4.1.1 When to use the mixed-methods approach?

Since the researcher has opted to use this method of investigation, it is important to note when the mixed-methods research is particularly suitable for use in the research:

- the researcher wants to validate or corroborate the results obtained from other methods
- the researcher needs to use one method to inform another method. (e.g., when little is known about a topic and it is necessary to first learn which variables to study through qualitative research, and then study those variables with a large sample using quantitative research)

- the researcher wants to continuously explore a research question from different angles, and clarify unexpected findings and/or potential contradictions
- the researcher wants to elaborate, clarify, or build on findings from other methods (e.g., if a causal relationship has been established through experimental research but one wants to understand and explain the causal processes involved through qualitative research)
- the researcher wants to develop a theory about a phenomenon of interest and then test it – usually, qualitative research is more suitable to build theory, while quantitative research provides a better way of testing theories
- the researcher wants to generalize findings from qualitative research

4.4.1.2 *Advantages*

Since this research study is attempting to address a complex challenge of food insecurity and vulnerability in the Amathole district, the advantages of the mixed-method approach were most appealing in trying to get closer to the complexity of the challenges in the district. The use of mixed-method research provides a number of advantages, namely:

- It provides strengths that offset the weaknesses of both quantitative and qualitative research (e.g., quantitative research is weak in understanding the context or setting in which people behave, something that qualitative research makes up for). On the other hand, qualitative research is seen as deficient because of the potential for biased interpretation by the researcher, and the difficulty in generalizing findings to a large group. Quantitative research does not have these weaknesses. Thus, by using both types of research, the strengths of each approach can make up for the weaknesses of the other.
- It provides a more complete and comprehensive understanding of the research problem than either quantitative or qualitative approaches would on their own.
- It provides an approach for developing better and more context-specific instruments. For instance, by using qualitative research it is possible to gather information on a certain topic or construct, in order to develop an instrument with greater construct validity (i.e., which measures the construct that it intends to measure).
- It helps to explain findings or how causal processes work.

In addition, the mixed-method type of research easily helps the researcher to explain, interpret, or contextualize quantitative findings while examining unexpected results from a quantitative study in more detail. One of the strengths of this method is the ease of implementation because the steps fall into clear, separate stages, with the design being simple

to describe and the results straightforward to report on. This is necessary, as the objective of this thesis is to inform and contribute to the body of knowledge in the food insecurity sector. The core characteristics of a well-designed mixed-method study in PCMH research include the following:

- collecting and analysing both quantitative (closed-ended) and qualitative (open-ended) data
- rigorous procedures in collecting and analysing data appropriate to each method's tradition (such as ensuring the appropriate sample size for quantitative and qualitative analysis)
- integrating the data during data collection, analysis, or discussion
- procedures that implement qualitative and quantitative components either concurrently or sequentially, with the same or with different samples
- framing the procedures within philosophical/theoretical models of research, such as within a social constructionist model that seeks to understand multiple perspectives on a single issue (for example, what households, communities, clinicians, and government officials would characterise as a food-insecure and vulnerable individual in a household)

This brief focuses on the potential uses of this methodology for food insecurity research as well as on specific mixed-method designs in primary care research (Creswell, Fetters, and Ivankova, 2004), which offers feasible, information-rich data that can enhance traditional quantitative research approaches.

The integration of quantitative and qualitative data in the form of a mixed-methods study has great potential to strengthen the rigor and to enrich the analysis and findings of any complex situation or challenge like food insecurity research. By carefully selecting the mixed-method design that best suits the evaluation's questions and meets its resource constraints, researchers can facilitate deeper, more meaningful learning regarding the effectiveness and implementation of best solution models.

4.4.2 *Qualitative research*

Qualitative research is a type of research design that intends to assist researchers to understand people – and the social and cultural contexts within which they live. Mack, Woodsong, MacQueen and Guest (2005: p.1) write that qualitative research is effective in cases where the researcher needs to gain information that is culturally specific about the study's population values, opinions, behaviours and social contexts. This design also allows the researcher the opportunity to describe research participants in detail (Babbie et al., 2008: p.271). Thus, a qualitative research design will be used in this study as it enables the collection of more

detailed data on this topic. Qualitative data consists of open-ended information that the researcher usually gathers through interviews, focus groups and observations. The analysis of the qualitative data (words, text or behaviours) typically follows the path of aggregation into categories of information and presenting the diversity of ideas, which has been gathered during data collection. The outcome of using a qualitative research technique will be the creation of field notes that give a detailed description of the situation. In addition, this study will take place in the space where the research participants work; that is, in the offices of the Department of Agriculture and the Department of Social Development.

4.4.3 *Quantitative research*

Quantitative research is a type of research that involves using large representative samples and structured data collection procedures. It employs methods that are adopted from the natural sciences and is designed to ensure objectivity, generalisability and reliability (Auriacombe, 2006: p.592; Struwig & Stead, 2010: p.4). Quantitative research is appropriate in this study because it will provide the researcher with the opportunity to obtain information that is reliable and relevant from the research participants, by making use of closed and open-ended questions. Quantitative data includes close-ended information such as that found to measure attitudes (e.g., rating scales), behaviours (e.g., observation checklists) and performance instruments. The scrutiny of this type of data consists of statistically analysing scores collected on instruments (e.g., questionnaires) or checklists to answer research questions, or, to test hypotheses. Therefore, this study will make use of triangulation in which more of quantitative and less of the qualitative data will be collected, that is quantitative and qualitative design. The results from the qualitative data will be used to support those results from quantitative data.

4.4.4 *The study population*

The concept of population refers to a large group of objects, people or entities. This group is the one from which the researcher intends to draw conclusions. An example of a group may be university students in a particular geographical location (Babbie & Mouton, 2001: pp.84, 100). The population of interest in this study constitutes household members from underprivileged backgrounds (the vulnerable group) in the Amathole district, and government officials who are involved in policymaking and implementation. According to STATS SA (2016), the population of this study is as shown in Table 4.1.

Table 4:1 Study population

Municipality	Settlement	Number of Households
Amahlathi	Daliwe township	2 199
Great Kei	Soto village	2 412
Mbashe	Nyhwara location	543
Mnquma	Bhungeni settlement	573
Ngqushwa	Hamburg location	1 347
Raymond Mhlaba	Sheshegu location	2 004
Amathole district	Six settlements	9 078

Source: STATS SA, 2016)

4.4.5 Sampling technique and sample

In order to generate a manageable sample that will be representative of this study, a multi-stage sampling technique was adopted for the participants (from whom quantitative data would be collected). In the first stage, proportionate stratified random sampling was used to select 150 households across the six settlements in the Amathole district. Stratified sampling involves dividing (stratifying) the population into groups (sub-populations). Subsequently, elements of the population are selected from these sub-populations in order to form a sample (Kothari, 2004: p.28). The groups that were recognised are the already existing six settlements of the district. Then, purposive sampling was used to select 400 participants from the 150 households sampled. The criteria for selection used were: volunteer to participate in the study, the head of the households and eldest two members of the household (if they were three or more members). Babbie and Mouton (2001: pp.164, 166–167) submit that purposive or judgemental sampling is about selecting participants on the basis of the researcher's knowledge of elements of participants and the nature of the aims of the study. Table 4.2 presents the detailed analysis of the sample of the study.

Table 4:2 Selected sample for the study

Municipality	Settlement	Number of Households	Selected Households	Sampled Participants
Amahlathi	Daliwe township	2 199	33	90
Great Kei	Soto village	2 412	37	92
Mbashe	Nyhwarra location	543	11	40
Mnquma	Bhungeni settlement	573	11	42
Ngqushwa	Hamburg location	1 347	27	66
Raymond Mhlaba	Sheshegu location	2 004	31	70
Total Sample		9 078	150	400

Source: STATS SA, 2016 Community Survey

For the qualitative data, a sample of 10 government officials would be purposively selected for the study. The officials would be from all of the cluster departments that participate in the food security programme of the province, which is coordinated by the Eastern Cape Department of Social Development. The departments are:

- Department of Agriculture
- Department of Education
- Department of Health
- Department of Social Development
- Department of Public Works
- Office of the Premier as the coordinating department

The selected officials would be interviewed by the researcher at their offices, during office hours and with their consent and permission, to assist and contribute to the research for results that would attempt to improve the lives of the people of Amathole and as well as the contribution to policymakers and planners, by providing better results. Table 4.3 presents the participants selected for the qualitative data.

Table 4:3 Participants for the interviewing schedule

Department	Position	Number Interviewed
Rural Development Agrarian Reform	Directors	1
Social Development	Director or Deputy Director	1
Education	Director	1
Health	Deputy Director	1
Expanded Public Works Programme (EPWP)	Director	1
Office of the Premier	Director	4
Amathole District Municipality (ADM)	Director	1
Total		10

Source: Researcher's construction

4.5 Instrumentation

Two self-designed research instruments would be used to collect data for this study. The first instrument is a questionnaire titled 'Questionnaire on Household Food Security and Vulnerability' (QH_FSV) and the second instrument is an interview schedule titled 'Food Security Policy Makers and Implementers Interview Schedule' (FSP-MIIS).

4.5.1 Questionnaire on household food security and vulnerability (QH_FSV)

This is a four-part questionnaire designed to elicit data about food accessibility, quality, security and sources from the vulnerable people living in the Amathole district.

- Part A of the instrument is used to measure the demographic information of the vulnerable people household. There are six items in this part.
- Part B is a checklist measuring household food security status. There are 10 items in this section.
- Part C measures the agricultural activities of the household and there are six items in this part.
- Part D is a checklist on the assets and needs analysis and there are four items on it.

4.5.2 *Food security policy makers and implementers interview schedule (FSP-MIIS)*

This instrument is used to elicit data from the ten government officials who are food security policy implementers is composed of three parts:

- Part A is used mainly to measure food availability in the Amathole district
- Part B is used to basically measure the food security availability and coping mechanisms
- Part C looks at policy interventions in the Amathole district through the eyes of the policy implementers.

4.5.3 *Recruitment of research assistants*

Research assistants were recruited after the researcher was introduced to the councillor via the municipalities' public participation officials and the Department of Social Development Official of the Livelihoods Unit. The researcher recruited a team of five female field-workers as research assistants to assist the researcher, who was the project leader. The recruited research assistants willingly joined the project as volunteers since they knew the researcher as a project leader in a previous project they had worked on. The recruitment of the research assistants was done from the Non-Profit Organisations (NPOs), which work in the six local municipalities where the study was carried out.

These NPOs were contracted by the Eastern Cape Department of Health (ECDOH) for the delivery of primary health care through their poverty alleviation strategy and implemented through the Expanded Public Works Programme (EPWP). The research assistants were thoroughly briefed on the research tool by the researcher to ensure proper understanding of the research project to guarantee accuracy and to avoid errors of judgement. During the training session that was held centrally for the five assistants, a dummy run (test procedure) of the questionnaire was completed with emphasis on the main objectives of the study. During the two months of fieldwork and visiting various households, several follow-up face-to-face meetings with research assistants were held in each local municipality. During these meetings, the research assistants gave progress reports and highlighted obstacles encountered during the household visits. During these meetings, the researcher was able to accompany the assistants and to remind them of the aims and objectives of the study. In addition, he reminded them of the benefits of the study as a whole for the communities of the ADM, and the Eastern Cape government in determining whether its policy initiatives through its projects, especially on

food security, were having the desired results. The intended results were to push the barriers of poverty and vulnerability.

All five of the research assistants were employed by their organisations as project managers and were willing to participate in the study to ascertain the extent of food insecurity in their respective project areas. The research assistants also carried out their own profiling that dealt with the disease profiles of their areas, as a requirement of their grant contract with the ECDOH. Because the research was to be conducted for academic purpose and not for profit, the researcher did not pay the research assistants. In fact, they would benefit from the study as it was going to be helpful for them to better understand the apparently intractable problem of food insecurity and vulnerability of the community in their areas. The exercise of using the project managers from the locally based organisations benefitted both the researcher and the five organisations for different reasons. The fieldwork by the five assistants elevated their community profiling, scope and community outlay. All of the research assistants were residents of their respective local municipalities and were familiar with the local geography, cultural intricacies, languages and community dynamics. These qualities made it easier for them to conduct interview sessions. The fact that the assistants were female also benefitted the research project as they stood a better chance of winning sympathy and cooperation of respondents, especially in the urban households (researcher's assumption).

Nowadays, it is not an uncommon occurrence to find researchers being ignored since people are often in a hurry and unwilling to participate in an academic study of this nature.

4.5.4 *Recruitment of participants*

Participants from the research were all willing to participate in the study. It was noted that they were not yet research repellent. The research participants at first thought that they were going to gain something for partaking on the study since the researcher was seen in the area with officials from the Department of Social Development (Sustainable Livelihoods Unit) and it is where, in most cases, food parcels come from. This was despite the explanation given by the researcher of the study for academic purposes from the onset, and during the previsit stage. Once they understood the main purpose of the researcher's presence in the area they dismissed their sentiments of gaining food parcels from the researcher and fully cooperated with the research.

The people of all of the local municipalities that were researched were accessible and conversed easily since they were in their own setting, and the researcher and his assistants spoke in the local language. The process was that the researcher would make an appointment during the morning of the day before the intended visit, to ensure the respondent's availability for the next day. All of the appointments were made so as not to interfere with every day errands and delaying people in their daily routes.

4.6 Method of data collection

The data for the study was collected using questionnaires, published and unpublished sources and the reports of the Eastern Cape Departments of Agriculture, Social Development and Health as well as the research already done on the subject of poverty alleviation in the area by other researchers. The survey research method is the most widely used method in data gathering in many fields of investigation. According to Neuman (1997), using a survey requires respondents to answer standardised questions about their beliefs, opinions, characteristics and past or present behaviour. Further, Bulmer and Warwick (1993) agree that this method reveals the primary aim of the survey method (which is to collect standardised information from a relatively large number of individuals) in order to generalise the sample to the population from which it was drawn. A survey is carried out by means of a questionnaire.

Chikoko and Mhloyi (1995: p.96) define a questionnaire as 'a document containing questions designed to solicit information appropriate for analysis'. Oppenheim (1992: p.100) concurs with Chikoko and Mhloyi by stating that it is 'any data collection instrument-encompassing checklist, attitude scale, and projective techniques rating scale'. It can be used to gather information that can be converted into quantitative and qualitative data. The use of questionnaires as a main instrument during data collection is aimed at finding key issues in food insecurity and vulnerability. The questionnaire that would be used in the study is a structured questionnaire with mainly closed questions to promote confidentiality of the respondents. Questions that would be asked vary from demography, access to food, access to land, as well as vulnerability causes and dynamics associated with food production thereof.

The questionnaire would cover four broad areas:

- household demographic information
- household food security status
- agriculture and

- assets and needs analysis

Each research assistant would distribute fifty questionnaires per settlement.

4.6.1 *The key questions asked in the questionnaire were:*

- What are the factors that inhibit the achievement of food security in households in the Amathole district?
- What strategies can be used as a means of reducing food insecurity in vulnerable groups in the Amathole district?
- What key indicators could be used in monitoring policies for food security regarding vulnerable groups in the Amathole district?

A total of 400 participants completed the questionnaires assisted by the research assistants over a period of three weeks. The participants were asked to complete the survey and they were assured that their feedback would remain confidential.

4.7 **Structured in-depth interviews**

The interviews were used to counter any possible weaknesses of the questionnaire in that they provided each respondent with a chance to talk, rather than only write. An interview is a conversation between two or more people (the interviewer and the interviewee) where questions are asked by the interviewer to obtain information from the interviewee (Czarniawska, 2014). In this instance, the interviewer had a face-to-face meeting with a respondent, or a group of respondents. The advantage is that a great deal of information needed in a scientific research can be gathered from respondents, by asking direct questions and the respondents can yield much information. The interview helps the researcher to follow up, lead the discussion, and thus obtain more data and clarity. The use of this tool helps the interviewer develop rapport, secure relationships with the subjects, and obtain specific information, which subjects might have been reluctant to put into writing. In addition to the 400 questionnaires that were handled by the research assistants, the researcher interviewed ten government officials who are both policy makers and implementers on the ground. This was achieved despite the difficulty in securing meeting times that suited both the researcher and the purposely-sampled government officials. These officials from the Departments of Agriculture, Health, and Social Development food security units were asked to provide clarity on food security policies and vulnerability dynamics with specific reference to both the Eastern Cape Province and the Amathole district respectively.

4.8 Key informant interview: government officials

The researcher set up in-depth interviews with ten key informants who were specifically selected. The interviews covered such issues as future food security of households, land degradation and crop production scenarios, the relationship between climate change and crop production, issues related to land tenure security, land management practices, extension services, non-farm activities, main household incomes and information related to physical capital and social relations and networks. The key informants selected were heads of households, district experts on food security, agriculture, health, education, and local and international NGOs working in the study area. The checklists prepared were semi-structured and flexible.

Taylor and Bogdan (1998) point out that an in-depth interview is non-direct, semi-structured and a non-standardised and open-ended interview, but the checklists were not too broad to manage. The checklists were used as probing and information beyond the already-prepared semi-structured questions, which were collected during the in-depth interview periods. In-depth interviews were held near to interviewees' homesteads, at their farmlands and in some cases at elevated grounds to observe the general conditions of the study area. The average time taken to interview key informants ranged from one to two hours. Key informants were not forced to respond if they were uninterested in completing the interview. For example, two key informants from the provincial Department of Agriculture were not able to complete the interview period and the researcher accepted their unwillingness to be interviewed. During the interviews, the four interview principles were employed:

- letting people talk
- paying attention to interaction
- being sensitive to cases raised
- being non-judgmental

4.9 Language and translation of questionnaires

The commonly used languages in the research for daily communication were isiXhosa and English. Where isiXhosa was the mother tongue, speakers did not understand English and not all English speakers understood isiXhosa. Thus, the researcher had to assist with interpreting the questions in the questionnaire from English to isiXhosa when completing it during the household visits. The questionnaires were set in English, and the questions were translated into isiXhosa for the respondents, with their answers recorded in English. After the researcher

and or the assistant fully explained the question in isiXhosa, the answer was given, and the questionnaire was filled in (in English). The researcher and/or the assistant ensured that the content of the questionnaire remained the same, as well as looking out for grammatical errors that may have crept in while the questionnaire was filled in. The questionnaire was not set in isiXhosa, as interpreters would be needed during data collection which might have increased the possibility of communication failure taking place between fieldworkers and respondents. This would also have increased the budget for the researcher – since the research assistants were merely helping out without any form of compensation.

4.10 Pre-test

As previously mentioned, a pre-test of the questionnaire was conducted prior to the actual data collection. Ten households with similar demographic characteristics to the respondents of the present study (i.e., the same home language, adults of about 18 years and older who have diverse educational levels and are from various ethnicity groups), were chosen to take part in the questionnaire pre-testing exercise. The pre-testing exercise of the research questionnaire ensured that the difficulties which may have been experienced during data collection were immediately addressed and this aided the process a great deal since the researcher would be assisted in some households (Strydom, 2011: p.241). According to Malhotra (2009: p.350), pre-testing is a measure to determine whether all concepts of the questionnaire are clear and have a logical flow, without potential misunderstandings of the terminology used (especially by two different people at the same time). If during the pre-testing of the questionnaire the household members were noticeably hesitant when giving an answer, the researcher was able to ask for their opinion regarding the question. That made it possible for the researcher to understand better whether the question was of a sensitive nature, whether they did not understand the question correctly or if they did not understand it at all. If the pre-test respondents did not understand the question asked, they were requested to give an alternative phrase or words that are community-acceptable and commonly used in the area without prejudicing the research. The pre-testing was especially valuable for this study as some questions were quickly adjusted for the South African context, which comprises different cultural groups with different norms and values.

Further, Strydom (2011) as well as Babbie and Mouton (2011) advise that the pre-test makes it possible to identify the approximate time needed to complete a questionnaire. After the pre-test was completed and the necessary changes were made on the questionnaire, it was adapted according to the findings obtained. The terminology of the questionnaire was adapted for low

literate households as it was realised that respondents did not understand the questionnaire completely.

4.11 Method of data analysis

4.11.1 Numerical data analysis

With regard to data from the questionnaire, coding will be used in this study as a tool for analysing data. The term coding is used to signify the process of taking segments of a text and labelling them according to meaningful categories (codes) (Babbie et al., 2008: p.499). Regarding information that is captured from the interview schedule, an Excel spreadsheet is used as a means of processing data. Subsequently, the data will be used in establishing the discussions for the study in relation to the theoretical framework. Both descriptive and inferential statistics would be used to analyse the data. Descriptive statistics of frequency percentage mean and standard deviation are used where applicable to analyse the demographic data and to answer some of the research questions. Inferential statistics of multiple regression will be used to answer research questions on contribution of factors. Qualitative data would be used to complement the findings of the quantitative data.

4.11.2 Document analysis

Document analysis was important to the study and involved the examination of unpublished primary materials from multilateral and bilateral donors, the government and civil society organisations. The most important of these were consultancy reports, documents outlining plans for policy reforms within institutions, internal memoranda on institutional restructuring and statistical records relating to memberships. It also entailed studying secondary data in the form of publications by the government and civil society organisations on various aspects of economic, political and social development in the Eastern Cape.

Documents analysed included the departmental Annual Performance Plans (APP), the provincial government's Programme of Action (POA), annual reports, policies, programme regulations, programme minutes, supervision reports, district performance reports and departmental records. The documents were acquired through formal government information request procedures from senior managers of the implementing departments (like Rural Development and Agrarian Reform, Social Development and Health), reading of reports from districts to head office programme managers, performance reports to cluster committees, and

research reports of a related matter to the topic being investigated. The benefits of using secondary data in this research correspond largely with the general advantages of its application as set out by Blaxter et al. (2006: p.171):

- the collection of large amounts of primary data is difficult, time-consuming and costly
- if relevant data already exists it is logical to make use of it
- it can act as a complement to primary data assembled
- it can confirm, modify or contradict primary findings
- it allows focus on analysis and interpretation
- research should build on what has already been done where this is relevant
- more data is collected than is ever used, so it is best to gather as much as possible of what already exists

Key documents relating to national policy-making processes were analysed in order to provide relevant information to the research questions. Government documents on national policy-making processes were relatively easy to obtain, largely due to the donor stress of setting quantitative targets for all aspects of poverty reduction, and for monitoring and evaluation. Therefore, the Government Communication and Information Systems (GCIS) funded the production of government documents (in hard copy and electronic form) on aspects of economic, political and social life (published in English), and these are available at no cost from their regional offices. The statistics, facts and arguments made in key government and civil society documents and used in the research, were effective in constructing an overview of levels of economic and social development in the country, and STATS SA surveys and 2016 Census were particularly helpful in understanding aspects of national policy-making processes.

4.12 Ethical considerations

The researcher deliberated key ethical considerations such as freedom of respondents to participate or not to participate in the study, as guided by the South African Human Sciences Research Council's Code (2006). The ethical considerations are very important as a research principle, which is why the researcher relied on the research code. As a first step, appropriate permissions were sought, starting with an official letter of introduction and data solicitation from the University of KwaZulu-Natal's College of Law and Management Studies in the School of Management, IT and Governance.

According to Bassey (1995), a researcher needs to respect the origin of the data and to ensure the dignity and privacy of the respondent. In addition, Cohen, Manion and Morrison (2000) assert that a researcher needs carefully to consider confidentiality, anonymity, non-identifiability and non-traceability when conducting interviews. The objectives of the research were clearly explained to the participants during the introductions and they were asked to provide their informed consent. The respondents were not coerced into participating in the research study. In upholding confidentiality, no participant was forced to give their names when identifying themselves to either the researcher and/or the research assistants during the interviewing sessions. The interviews were carried out at the convenience of the participants and in their own homes. Questions were made simple for ease of reference and understanding for respondents to be able to easily give a true reflection when answering; this was designed to make it simpler for the researcher during the analysis stage. Focus groups were held in the homesteads of ward councillors with their permission, and they invited participants which lent credence to the request for participation. At the end of each focus group discussion and interview sessions, respondents were thanked for their time and for sharing valuable information on the study subject for academic purposes.

4.13 Trustworthiness

Babbie and Mouton (2001: p.279) clearly state that another approach to clarifying the idea of objectivity as it is manifested in qualitative research, is found in the influential work of Lincoln and Guba (1985). They indicate that the key criterion or principle of good qualitative research is found in the notion of ‘trustworthiness’. Further, Polit and Beck (2004: p.332) suggest that the criteria for establishing the trustworthiness of qualitative data are credibility, transferability, dependability and conformability.

4.13.1 Credibility

Research credibility simply refers to the compatibility between the constructed realities that exist in the minds of the respondents and those attributed to them. The credibility of any research study can be ensured by engaging in activities that have a likelihood of producing credible data such as prolonged engagement, persistent observation, member checks, triangulation and peer debriefing:

- Prolonged engagement means staying in the field until the data is saturated. To ensure credibility the researcher made an appointment with the participants a day after data collection to verify the data and to check their reaction to the findings.

- Persistent observation is another activity that ensures the credibility of a study. This refers to the researcher focussing on some aspects of the situation that are relevant to the phenomena under study (Polit & Beck, 2006: p.337). The researcher, by virtue of being a programme manager at a provincial office has the responsibility of visiting communities and observing some of the activities conducted in these communities. This helped the researcher with the verification of some of the data collected during interviews.
- Member checks means going to the source of the information and checking both the data and the interpretation thereof (Babbie & Mouton, 2001: p.276). The aim is to assess the intentionality of respondents, to correct obvious errors and to provide additional volunteer information. It also creates an opportunity to summarise what the first step of the data analysis should be and to assess the overall adequacy of the data, in addition to individual data points. The researcher checked the data, which was collected, continuously with the participants to confirm it. A literature review was conducted to link the findings with previous research.
- Triangulation is a key word used to name the combination of different methods, study groups, local and temporal settings, and theoretical perspectives in dealing with phenomena. According to Brink et al. (2006: p.116) data source triangulation refers to the use of multiple resource references in order to draw true conclusions. This provides the basis for truth and highlighting or sifting out the truth.

The researcher used in-depth phenomenological interviews to gather information. Journals, articles, and internet searches guided the researcher in controlling this study, and these sources gave the researcher confidence in the study findings.

Peer debriefing is done with a colleague of similar status, who is outside the context of the study, has a general understanding of the nature of the study, and with whom one can review perceptions, insights and analyses (Mouton, 2001: p.277). The researcher was assisted by the supervisor to focus on the study and he also discussed the study with the programme managers at sub-district level.

4.13.2 *Transferability*

Transferability assesses whether the researcher has provided sufficient descriptive data in the research report to enable consumers to evaluate the applicability of the data to other contexts (Polit & Hungler, 1995: pp.395–363). Transferability in qualitative research is not always

possible, but in this study, the researcher applied the following strategies to enable a certain level of transferability:

- Thick description: the researcher collected detailed descriptions of the data in context and reported on them.
- Purposive sampling: the researcher utilised a selective sample of programme managers and policy implementers at head office level to gather data on their experiences with regard to food insecurity programme and poverty alleviation strategies, and support and in-service training of communities on food security programmes. The researcher comprehensively described the methods used in this study to the readers of this report.

4.13.3 *Dependability*

Dependability means that an inquiry must provide its audience with evidence that if it were to be repeated (with the same or similar respondents in the same context), findings would be similar. According to Lincoln and Guba (1985), since there can be no validity without reliability (and thus no credibility), a demonstration of the former is equivalent to demonstration of the latter (Babbie & Mouton, 2001: p.278).

4.13.4 *Confirmability*

Confirmability is the degree to which the findings are the product of the focus of the enquiry, and not the bias of the researcher (Babbie & Mouton, 2001: p.278). In this study, the researcher determined confirmability by compiling and handing the documents to an independent auditor to make conclusions about the study.

4.14 The researcher's integrity

The researcher is a person who is critical of the quality of the scientific knowledge and of the soundness of ethical decisions in an interview inquiry. Moral research behaviour involves more than ethical knowledge and cognitive choices; it encompasses the moral integrity of the research, and the researcher's sensitivity and commitment to moral issues and action. Through interviewing, the importance of the researcher is magnified because the interview is the main instrument in obtaining knowledge. Being familiar with value issues, ethical guidelines, and ethical theories may help in choices that compare ethical versus scientific concerns in a study. However, in the end, the integrity of the researcher – their knowledge, experience, honesty and fairness – is the decisive factor. The role of the interviewer can involve tension between

professional distance and personal friendship. The interviewer may identify with their participants so closely that they do not maintain a professional distance, but instead, report and interpret everything from the participant's perspective – in anthropological terms, 'going native'. When under pressure to deliver results (whether to a commercial employer or to their thesis), the researcher's show of empathy may become a means to circumvent the participant's informed consent and to persuade the participants to disclose experiences and emotions that they later might have preferred to keep to themselves or even 'not know' (Kvale, 2007: pp.29–30). No value judgments about the participants' actions and points of views were made under any circumstances – even if they conflicted directly or indirectly with those of the researcher. The researcher was trained not to impose his personal value system on interviewees and this was conveyed to the participants.

4.15 Research challenges

As a project leader, the researcher expected the project to only take three to four weeks at most, but the fieldwork took far longer due to a number of challenges. Among the unexpected challenges was that all the five research assistants had full-time paying jobs. They were project managers within their respective organisations and had to attend meetings with their community development workers (who report on new patients and where there were problems needing the urgent attention of the organisation, since this was their priority and being funded by the Eastern Cape government through the ECDOH EPWP programme). Also worth mentioning is that the assistants had families of their own to look after since they did not have minders.

Although the research project was carried out within the six local municipalities, transport was a challenge since the assistants lacked their own transport to move around the vast areas of the Amathole district. At times, it was difficult to find respondents at home during the day and it was challenging to make prior arrangements with them as some had gone job hunting or were attending interviews. However, it is important to report that none of these contending factors hindered the quality of the research study. Delays on the completion of the study can also be attributed to the project leader's own circumstances rather than only that of the lengthy fieldwork.

The researcher had some limitations in collecting primary data at first, since it was the period during the build up to the ANC's national elective conference and provincial conferences. The area was a contested terrain and the environment was hostile in most wards as ANC members

were jostling for positions and a stake at the delegates list for the national conference of the ANC – which is also the ruling party. However, after some convincing by the researcher, some primary data was collected through semi-structured interviews. The researcher is a resident of, and has also been working in the area, for more than twenty years. The issue of access to participants, informed consent, and culture and understanding of life in the area played a critical role in the interviews and in the quality of the data collected. The study area is vast and the researcher restricted himself to what was relevant to the study at that time. In addition, the noted progress in filling in the questionnaires was slow, because of the following:

- Some households were reluctant and did not participate for fear of publication of their names; thereby, stigmatising their poverty status or poverty level.
- Visiting the households during the day was difficult as they were always in a rush to either prepare food or rush to community engagements like funeral preparations, prayer meetings and/or branch meetings.
- Although Saturday and Sunday afternoons were convenient since the researcher could meet many of them easily at their resting spots, some were either drinking or socialising with their family and friends did not like the intrusion.
- Because most interviews were conducted in open space, interruption from fellow family members or neighbours and other community members was common.
- Twice, the police, having been attracted by the recording process, confronted the researcher; therefore, the researcher had to stop in the middle of the process to explain or even allow the police to listen in, on the actual interviewing process. Fortunately, the researcher had his student card with him, which helped during the identification process.
- Some married men expressed their reluctance to be interviewed near their wives saying that their wives might be interested to know their responses – and this resulted in further reluctance in participation.
- The researcher was also confronted by the Residents Association of Bhungeni informal settlement, suspecting and querying his mission even though they later helped organise a few households to survey within the area.
- Also worth mentioning was the use of cell phones during the questionnaire sessions where respondents were called or sent text messages via WhatsApp – and they would spend over ten minutes speaking or writing messages. This led to a session that was scheduled for thirty minutes taking almost an hour depending on the number of calls or messages the interviewees were taking or answering. In that case, the researcher had to be patient and wait until the respondent was done.

4.16 Potential value of findings

The research study yields the potential value in that it:

- provides insights to dynamics of food insecurity and vulnerability
- helps in pointing out the scope for future research on the subject, as well as areas for policy considerations and government department intervention strategies – the next chapter will present the Amathole as a case study area

4.17 Data analysis

This is a process of interpreting and deciphering of what respondents would have said about the topic under investigation. Data analysis is further explained as the process of bringing order, structure and meaning to the mass of collected data. Mouton (1996: p.108) firmly agrees and describes data analysis as involving ‘breaking up’ the data into manageable themes, patterns, trends and relationships. As mentioned previously, both quantitative and qualitative data analysis methods were used in this study.

Content analysis was used in analysing the data to obtain an in-depth meaning of the information gathered in the study area. According to Denzin and Lincoln (2000: p.15), content analysis allows for a thick description in the analysis of data. This can be further facilitated through thematic organisation and the themes then ground the arguments presented in the discussion. Hence, De Vos, Strydom, Fouche and Delport (2005) clearly point out that the purpose of analysis is to reduce data to an intelligible and interpretable form, so that the relation of research problems can be studied, tested and conclusions can be drawn. The data collected was coded and categorised in order to see patterns and interrelatedness during analysis of the results. This allowed for a comprehensive analysis, interpretation and discussion of collected data.

It is then against this framework that the data analysis is presented in Chapter 5. According to Kruger (2005), data display is a systematic visual representation of information, which enables the user to draw conclusions about the qualitative material gathered through different methods of collection. Data displays are methods or tools of qualitative analysis, which aim to provide a descriptive explanatory framework of investigation. Data display formats are always driven by explorative research questions or the development of concepts, which are often in the form of codes. In line with Leedy and Ormrod (2001), data was presented in terms of the research problem. O’Sullivan and Rassel (1989) affirm that the collected data must be organised and

presented in a way that will be most useful to the intended audience. Similarly, Kumar (2005) contends that the main purpose of using data display techniques is to make the findings clear and easy to understand when making judgements for future corrective measures of the problem situation. In this study, the researcher will present data in tabular form and graphical representation for ease of reference and understanding when analysing. The researcher mostly favours graphical representation of data because it makes it easy to see the pertinent features of a set of data, and graphs can be constructed for every type of data, be it a qualitative or a quantitative method of investigation. The study mainly used graphs as the mode of presentation because they present data in a way that is easy to understand, interpret and interesting to look at during analysis at public presentations of results – especially to large audiences. Questionnaire items were carefully and systematically themed according to similar categories and then coded to reduce the amount of data into manageable and easy to understand texts. This also makes them easy to compare, especially the repeated information by respondents and quickly to identify patterns that need further investigation.

4.18 Conclusion

This chapter has described the research design and research instruments that were used to pursue this study. Ethical considerations were also highlighted. The previous chapter presented the data that was collected in the field by means of the survey questionnaire, interviews and group discussions described in this chapter. The researcher is of the opinion that the methodology used to collect data provides a true reflection of the required information in order to get the bottom of the food insecurity and vulnerability dynamics in the Amathole district. The next chapter of the study addresses the data analysis.

CHAPTER 5 : DATA PRESENTATION AND ANALYSIS

‘The difference between what we do and what we are capable of doing would suffice to solve most of the world’s problems.’ (Gandhi)

5.1 Introduction

This chapter will present information that relates to the studied phenomena and the findings thereof as revealed by the analysis of the processed data into an acceptable form. According to Mouton (1996: p.108) data analysis is the process of bringing order, structure and meaning to the mass of collected data; thereby, making sense of what respondents would have said during the fieldwork. Bless and Smith (2002: p.137) are of the view that data analysis processes allow the researcher to generalise the findings from the sample used in the research and to extrapolate to a larger population (in which the researcher is interested). To that end, the purpose of this chapter is to present, in an orderly and systematic way, analysis and interpretation of the data collected from the respondents sampled in the Amathole district. This chapter will present the results of this study in two interrelated sections. The first section presents the demographic information of the participants, while the second section presents answers to the research questions. The final section of this chapter presents the summary of findings of the study as revealed by the data presented and analysed.

5.2 Analysis of demographic data

The table below shows that there are more female-headed households (64.24%) that are food-insecure in the Amathole district, with male-headed households at 32.73% while 3.03% with no gender indicated. In terms of gender, what is revealed from this study and what these statistics indicate is that mostly women are affected by poverty in the Amathole district.

Table 5:1 Gender, marital status, age and religion of the participants

Variable	Frequency	Percentage
Gender		
Male	108	32.73%
Female	212	64.24%
No indication	10	3.03%
Total	330	100.00%
Marital status		0.00%
Married	63	19.09%
Single	146	44.24%
Divorced	13	3.94%
Widowed	62	18.79%
No indication	46	13.94%
Total	330	100.00%
Age		0.00%
<16 years	4	1.21%
16–29 years	21	6.36%
30–50 years	115	34.85%
51–60 years	92	27.88%
>60 years	73	22.12%
No indication	25	7.58%
Total	330	100.00%
Religion		0.00%
Christian	164	49.70%
Traditional	42	12.73%
Islam	2	0.61%
Others	4	1.21%
No indication	118	35.76%
Total	330	100.00%

Source: Researcher’s construction

Table 5.1 above reveals that both male and female individuals participated in the study. The table also shows that the largest portion (44.24%) of participants was single, 19.09% were married, 18.79% were widowed, and 3.94% were divorced while 13.94% failed to indicate their marital status. The age distribution of the participants was as follows: 1.20% were below sixteen years of age, 6.40% were between sixteen and twenty-nine, 34.80% were between thirty and fifty, 27.90% were between fifty-one and sixty, 22.10% were above sixty, while 7.60% failed to indicate their age. In the case of religion, 49.70% were Christian, 12.70% were

traditional worshippers, 0.60% were Muslims and 1.20% practice another religion not mentioned in this study. Many – 35.80% – failed to indicate their religion.

Table 5:2 House-head education level, other household members' education level and principal occupation

Variable	Frequency	Percentage
House-head education level		
No formal education	19	5.76%
Informal education	18	5.45%
Gr. R–7	138	41.82%
Gr. 8–12	123	37.27%
Tertiary education	13	3.94%
No indication	19	5.76%
Total	330	100.00%
Other household members' education level		
No formal education	3	0.91%
Informal education	4	1.21%
Gr. R–7	106	32.12%
Gr. 8–12	132	40.00%
Tertiary education	27	8.18%
No indication	58	17.58%
Total	330	100.00%
Principal Occupation		
Unemployed	72	21.81%
Traditional healer	3	0.91%
Pensioner	33	10.00%
Caregiver	10	3.03%
General worker	12	3.64%
Non-governmental organisation (NGO)	1	0.30%
Community worker	4	1.21%
House help	6	1.82%
Livestock keeper	1	0.30%
Field worker	2	0.61%
Health worker	6	1.82%
Taxi driver	2	0.61%
Taylor	1	0.30%
Labourer	3	0.91%
Company manager	3	0.91%
Teacher	1	0.30%
No indication	170	51.52%
Total	330	100.00%

Source: Researcher's construction

The Table 5.2 presented data above, reveals that out of the 330 participants in this study, 3.94% had tertiary education experience, 37.27% had high school experience, 41.82% had basic education experience, 5.45% had informal, while 5.76% had no formal education. In these households, other members' education level was presented as 8.18% having tertiary education, 40.00% with high schooling, 32.12% having basic education, 1.21% with informal education and 0.91% with no formal education. The principal occupation of the observed households is revealed in Table 5.2 as follows: those that did not indicate any occupation are 51.52%, pensioners are 10.00% while the unemployed are 21.21%. Of those that have jobs: 0.91% are traditional healers, 3.03% are caregivers, 3.64% are general workers, 1.21% are community workers, 1.82% are house helpers, 1.82% are health workers and 0.91% are labourers. Others that are at less than 1.00% are livestock keepers, fieldworkers, taxi drivers, tailors and teachers. The data (including that which is marked as having no indication of occupation) shows that 83.33% of the participants in the study have no occupation.

5.3 Answers to the research questions

Sources of income and food to the vulnerable group of people in the Amathole district as revealed through the collected data of the research area.

- To answer this question, descriptive statistics were used to analyse the data collected, with items on sources of income, water and food.
- Tables 5.3, 5.4 and 5.5 present this information.

Table 5.3 below gives some sources of income as were reported by the households during the data collection for the study in the Amathole district; a further discussion follows the table, which fully interprets the researcher's views on the reported data.

Table 5:3 Sources of income for the vulnerable people

S/N	Source	Amount	Frequency	Percentage
1	Crops	<100	2	0.6%
		100–199	3	0.9%
		200–299	1	0.3%
		300–499	2	0.6%
		500 +	0	0.0%
		No response	322	97.6%
2	Vegetable	<100	7	2.1%
		100–199	1	0.3%
		200–299	1	0.3%
		300–499	3	0.9%
		500 +	0	0.0%
		No response	319	96.7%
3	Livestock	<100	0	0.0%
		100–199	0	0.0%
		200–299	0	0.0%
		300–499	0	0.0%
		500 +	4	1.2%
		No response	326	98.8%
4	Poultry	<100	5	1.5%
		100–199	0	0.0%
		200–299	0	0.0%
		300–499	0	0.0%
		500 +	1	0.3%
		No response	324	98.2%
5	Salary	<100	1	0.3%
		100–199	0	0.0%
		200–299	0	0.0%
		300–499	1	0.3%
		500 +	39	11.8%
		No response	289	87.6%
6	Pension	<100	4	1.2%
		100–199	0	0.0%
		200–299	0	0.0%
		300–499	45	13.6%
		500 +	149	45.2%
		No response	132	40.0%
7	Trade	<100	0	0.0%
		100–199	0	0.0%
		200–299	0	0.0%
		300–499	1	0.3%
		500 +	3	0.9%
		No response	326	98.6%

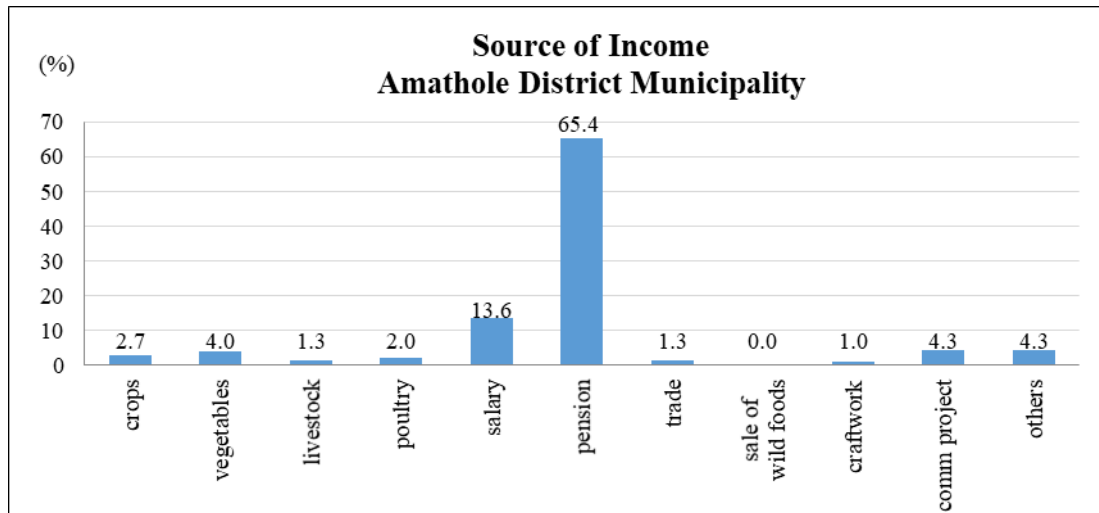
S/N	Source	Amount	Frequency	Percentage
8	Sale of wild foods	<100	0	0.0%
		100–199	0	0.0%
		200–299	0	0.0%
		300–499	0	0.0%
		500 +	0	0.0%
		No response	330	100.0%
9	Craft work	<100	2	0.6%
		100–199	0	0.0%
		200–299	0	0.0%
		300–499	0	0.0%
		500 +	1	0.3%
		No response	327	99.1%
10	Community project	<100	0	0.0%
		100–199	0	0.0%
		200–299	0	0.0%
		300–499	0	0.0%
		500 +	13	3.9%
		No response	317	96.1%
11	Others	<100	3	0.9%
		100–199	1	0.3%
		200–299	0	0.0%
		300–499	1	0.3%
		500 +	8	2.4%
		No response	316	95.8%

Table 5.3 reveals the major source of income for the vulnerable people of Amathole is pension money (58.8%), followed by those that receive a salary as their source of income (12.5%). Others source income from community projects (3.9%), sources not mentioned (3.9%), vegetables (3.6%), crops (2.4%), poultry (1.8%), livestock (1, 2%), trade (1.2%) and craftwork (0.9%). Figure 5.1 shows the sources of income and proportion of vulnerable people who source them.

Figure 5.1 shows that the main source of income for the vulnerable people of the Amathole district is pension payouts at 58.8%, followed by salaries at 12.5% and community projects at 3.9%. The statistics clearly show that people of Amathole rely heavily on government and community projects (mainly funded by civil society) for their survival – and they seem to be doing little to about working the land for their own survival. By vulnerable people relying on the government for charity, the present government is creating (if not already maintaining) a

social walfarist state as opposed to a developmental state, with citizens taking an active part in their own development destiny.

Figure 5:1 Source of income of the vulnerable people of the Amathole District Municipality



Vulnerable communities are faced with challenges of access to water and other related resources. The table below highlights the situation in the Amathole district; this shows that piped water from the local municipalities is the main source of clean water, followed by dams – animals share this as a source of drinking water. Harvesting of water (tanks) in Amathole is only at 5.2% which means that most vulnerable people do not use rainwater for watering plants to improve food security, for food preparation or for cleaning clothes, but rather rely on piped water that is not sustainable given the rurality of the area.

Table 5:4 Sources of water to the vulnerable people of the Amathole District Municipality

Source	Frequency	Percentage
Tap	200	60.6%
Stream or river	15	4.5%
Tank	17	5.2%
Dam	20	6.1%
Borehole	4	1.2%
Spring	8	2.4%
Others	1	0.3%
No indication	65	19.7%
Total	330	100.0%

Table 5.4 shows that a large number (60.6%) of vulnerable people of Amathole have access to tap water, with other sources of water as: dam (6.1%), tank (5.2%), stream or river (4.5%), spring (2.4%) and borehole water (1.2%), and 19.7% not indicating their water source. This information is presented in Figure 5.2.

Figure 5:2 Source of water

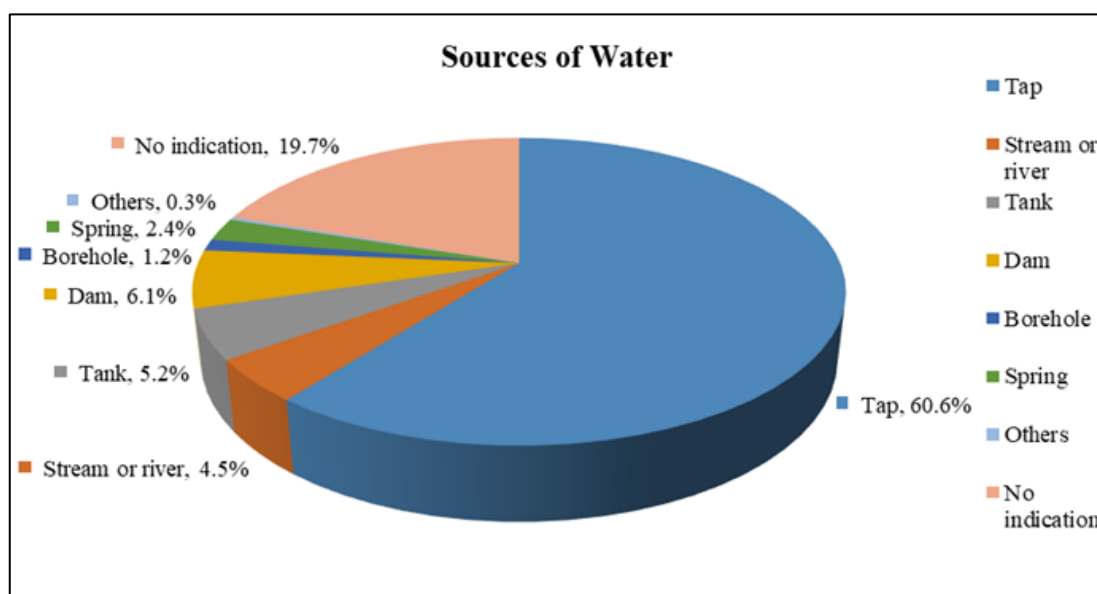


Table 5.5 below shows that the major source of food for the vulnerable people of Amathole is through purchase (57.9%), this is followed by food supplied from friends or relatives (40.3%), gifting (17.6%), hunting (13.6%), food aid (13.3%) and 'food at work' (10.3%). Other sources of food are own crop production (5.5%), own livestock production (1.5%), food at school (4.2%), fishing (1.2%), wild food collection (4.2%), food for work (1.8%), stealing (0.9%), stock (0.6%) and other (11.2%). Figure 5.3 presents this in a bar chart.

Table 5:5 Sources of food to vulnerable people of the Amathole District Municipality

Source	Frequency	Percentage
Own crop production	18	5.5%
Own livestock production	05	1.5%
Food at work	34	10.3%
Food at school	14	4.2%
Purchase	191	57.9%
Barter	01	0.3%
Gift	58	17.6%
Fishing	04	1.2%
Wild food collection	14	4.2%
Food for work	06	1.8%
Loan	01	0.3%
Hunting	45	13.6%
Food aid	44	13.3%
Stealing	03	0.9%
Stock	02	0.6%
Friends or relatives	133	40.3%
Others	37	11.2%
Total	330	100.0%

Based on analysis in Tables 5.3, 5.4 and 5.5, it can be inferred that the major source of income for the vulnerable people of Amathole is pension money (58.8%), followed by those that have stated a salary as their source of income (12.5%). The major source of water is tap (60.6%) while the major source of food is through purchase (57.9%), this is followed by friends or relatives (40.3%), gifting (17.6%), hunting (13.6%), food aid (13.3%) and 'food at work' (10.3%).

Figure 5:3 Source of food

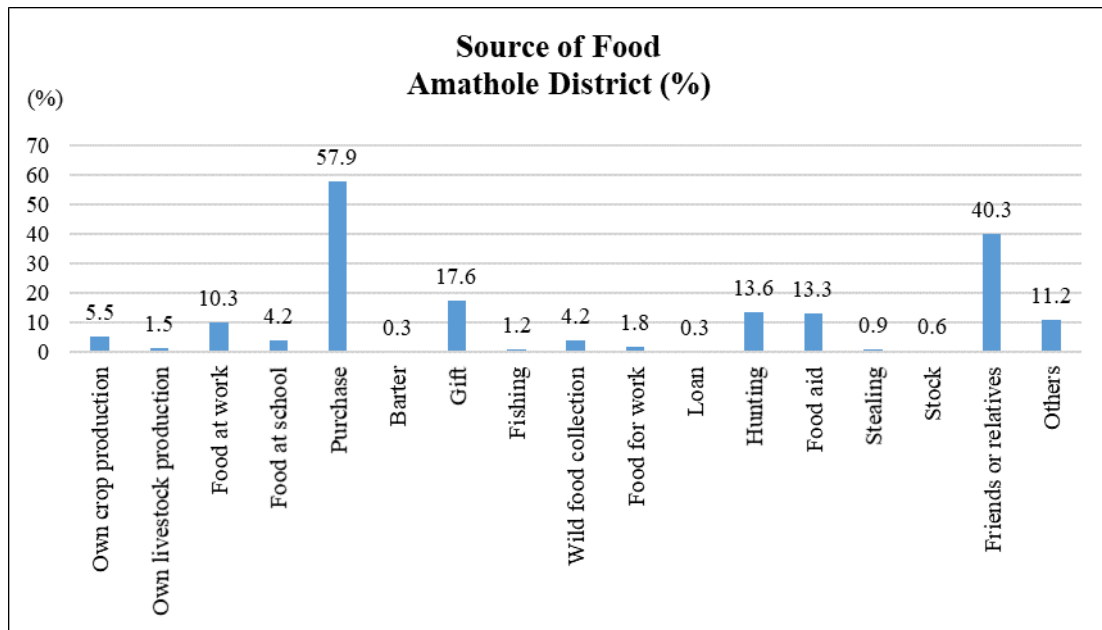
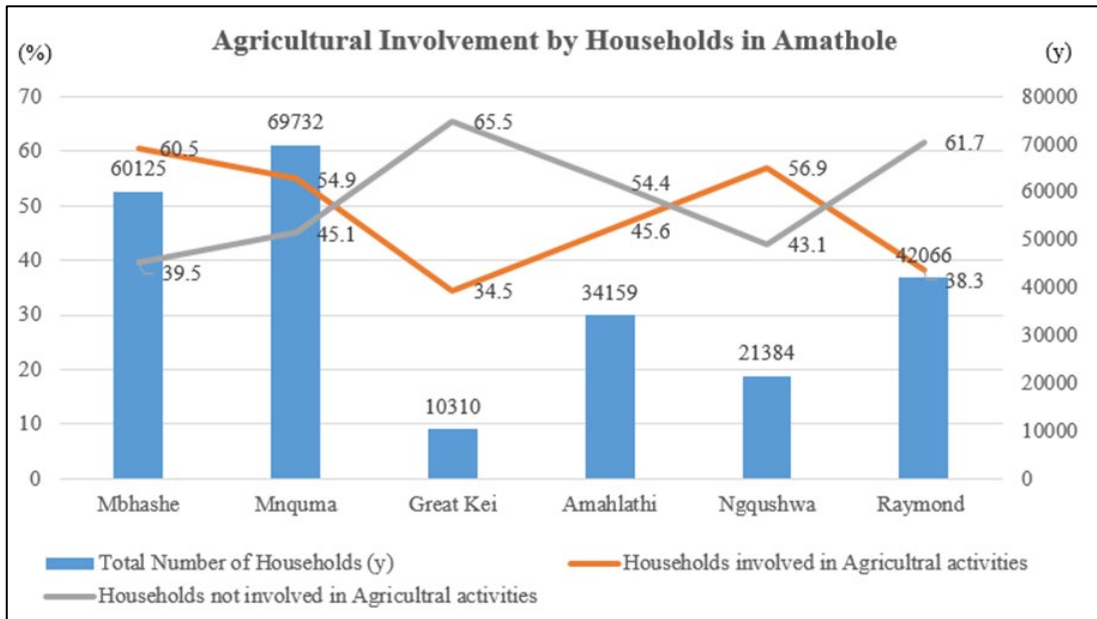


Figure 5.4 indicates that vulnerable communities are not necessarily involved in agricultural involvement or that they take agriculture as an avenue to be harnessed when addressing food insecurity for themselves. Rather, it seems that instead of working the land and carrying out subsistence farming, most people of the Amathole district appear to rely on the current government for handouts and support, which is not sustainable. This strengthens the argument that the realisation of a sustainable developmental state in the country is a dream that will not be realised in the present lifetime. It is then advisable that the Department of Agriculture, through government, should strengthen their extension services to be accessible to all of the country, if we are to win the war on poverty and food insecurity. Worth noting is that food security should not only be a government project, but should be the entire nation's concern and all government departments should have to contribute to the Provincial Integrated Antipoverty Strategy. Worth mentioning is that although the province had an antipoverty strategy in place, it has, however, not been cascaded into the district municipalities in a coordinated fashion with clear strategic goals, which are integrated and binding. Municipalities seem to be only attending to their own issues.

Figure 5:4 Showing agricultural involvement



5.3.1 Type of food vulnerable groups in the Amathole District Municipality commonly have access to.

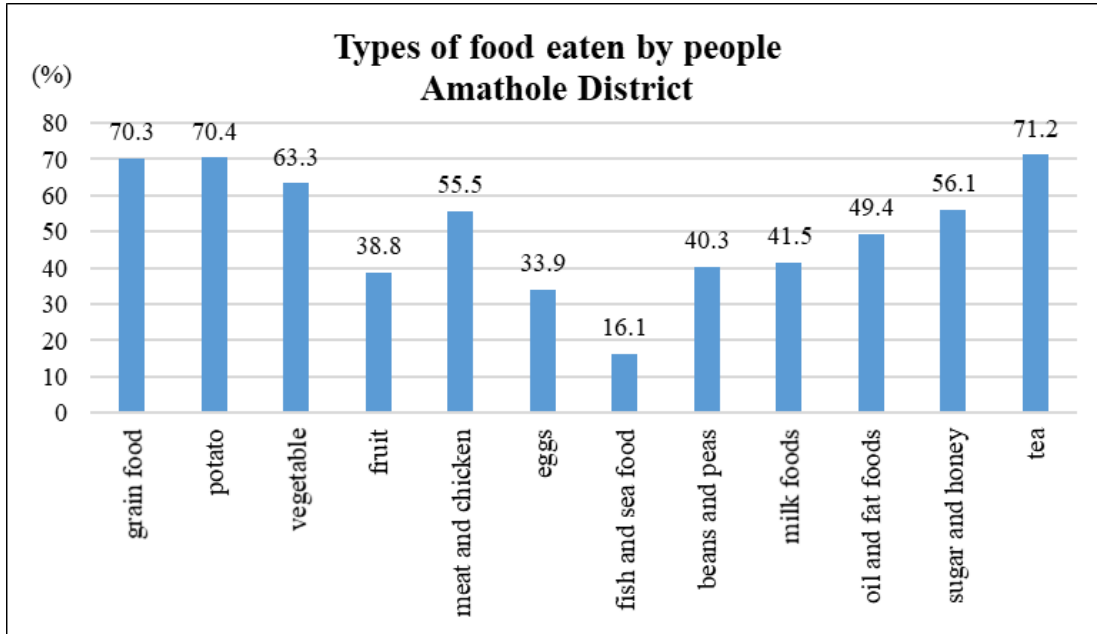
On taking an overall view on the types of food sourced by people of the surveyed district, it is clear that starch is the main source used to address food insecurity; it can be concluded that obesity will be a problem in the long term if starch is mainly used. It would be up to the district (i.e., government) to conscientize the community about safe and healthy eating habits. This strengthens the argument popularised by Bajagai (2016), that food availability does not always mean food security but depends on what type of food, and at what intervals is it available.

Table 5:6 Types of food eaten by vulnerable people of the Amathole District Municipality

Food type	Frequency	Percentage
Food from maize, wheat or other grain (e.g., pap, bread)	232	70.3%
Any potato or food from roots or tubers	234	70.4%
Any vegetable	209	63.3%
Any fruits	128	38.8%
Any meat, poultry or offal	183	55.5%
Any eggs	112	33.9%
Any fresh or dried fish and sea food	53	16.1%
Any food made from beans, peas or nuts	133	40.3%
Any cheese, yogurt, milk or other milk products	137	41.5%
Any food made from oil, fat or butter	163	49.4%
Any sugar or honey	185	56.1%
Any other food like coffee, tea and condiments	235	71.2%

Table 5.6 shows that the majority of the vulnerable people of Amathole eat solid foods. A large proportion (70.4%) eat potato or other roots (or tubers), those who eat such food made from maize, wheat, rice or other grains (70.3%) and those who consume tea, coffee etc. is (71.2%). Higher than the average of this group, eat vegetables (63.3%), meat, poultry or offal (55.5%) and sugar or honey (56.1%). Less than average of this group eat food made from oil, fat or butter (49.4%), cheese, yogurt, milk or other milk products (41.5%), food made from beans, peas or nuts (40.3%), eggs (33.9%) and fruit (38.8%). Very few people from this group eat fish or other seafood (16.1%). Figure 5.5 presents this in a bar chart format.

Figure 5:5 Types of food eaten by vulnerable people of the Amathole District Municipality



5.3.2 *To what extent is food accessible to the vulnerable group of people in Amathole?*

To answer the question of access to food, two tables (Tables 5.7 and 5.8) are presented. Table 5.7 presents data on the number of meals per day, accessing enough food and the rate of access to food. Table 5.8 presents the accessibility of food in the past four weeks. Table 5.7 shows that only 32.1% of the vulnerable group of people in Amathole can afford three meals per day. Of the respondents, 44.5% can only afford two meals while 8.2% can only afford one meal per day. However, 15.2% of the people did not indicate frequency of their daily meals. This is shown on a pie chart as presented by Figure 5.6.

Table 5:7 Average number of meals per day, access to enough food and rate of access to food

Item	Option	Frequency	Percentage
Average number of meals per day?	1	27	8.2%
	2	147	44.5%
	3	106	32.1%
	No indication	50	15.2%
Do you access to enough food?	Yes	68	20.6%
	No	243	73.6%
	No indication	19	5.8%
Rate your level of access to food	No change	82	24.8%
	Better	39	11.8%
	Fair	53	16.1%
	Worse off	111	33.6%
	No indication	45	13.6%

Figure 5:6 Number of meals per day

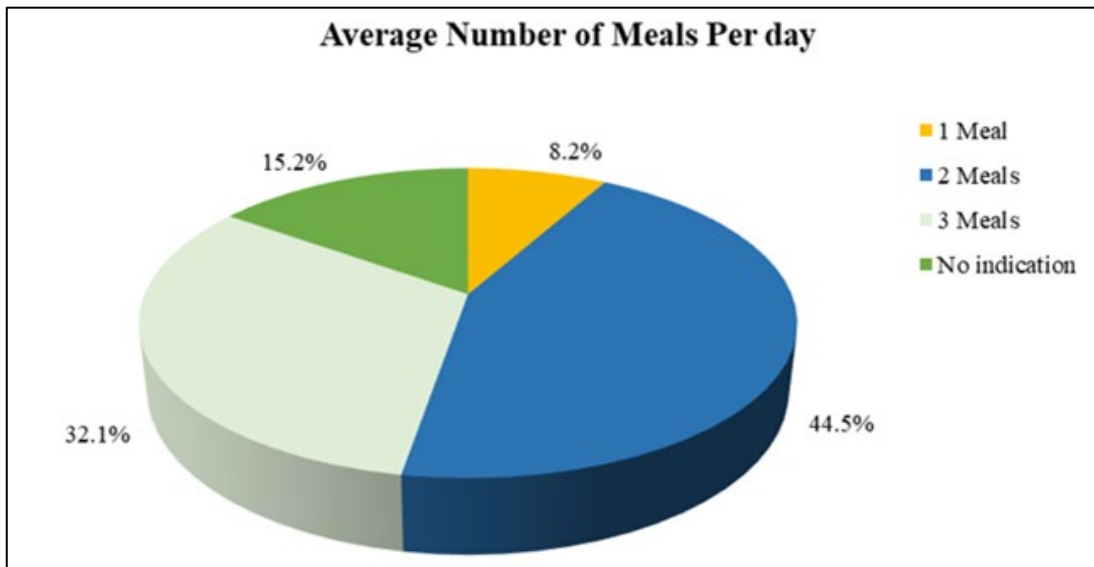
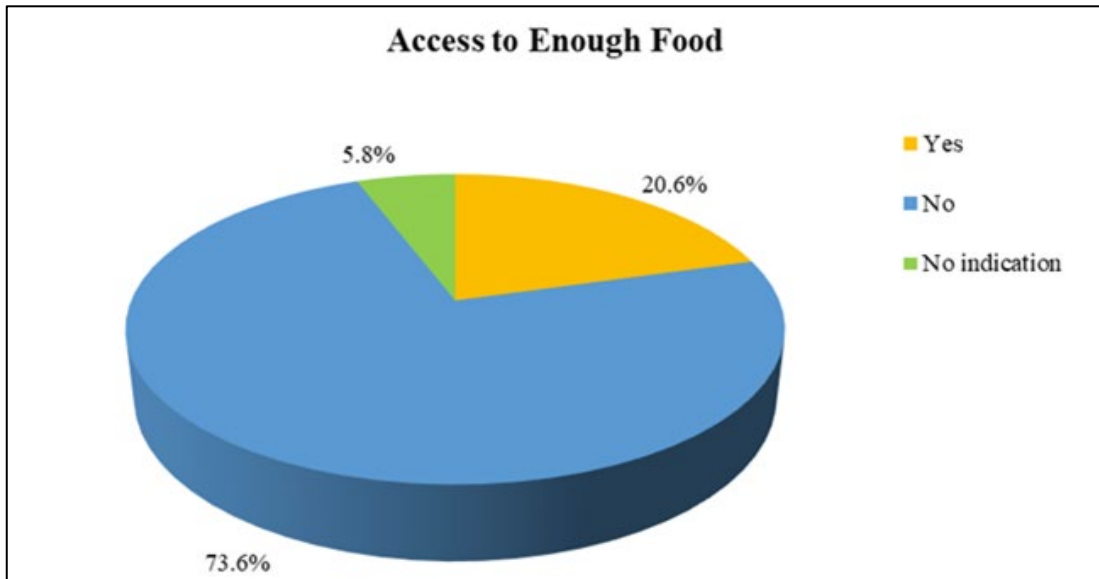


Table 5.7 shows that almost all of the participants indicated that they do not have enough food (73.6%) while those who can afford enough food is just (20.6%). Those that did not answer this question is (5.8%). Figure 5.7 presents this in a pie chart.

Figure 5:7 Accessing enough food



It is also indicated in Table 5.7 that the largest proportion (33.6%) of vulnerable people in Amathole rated their access to food to be worse off, those who rated it to be fair (16.1%), better (11.8%) and no change (24.8%) while those who did not answer the question (13.6%). Figure 5.8 presents this in a pie chart.

Figure 5:8 Vulnerable people rate of access to food

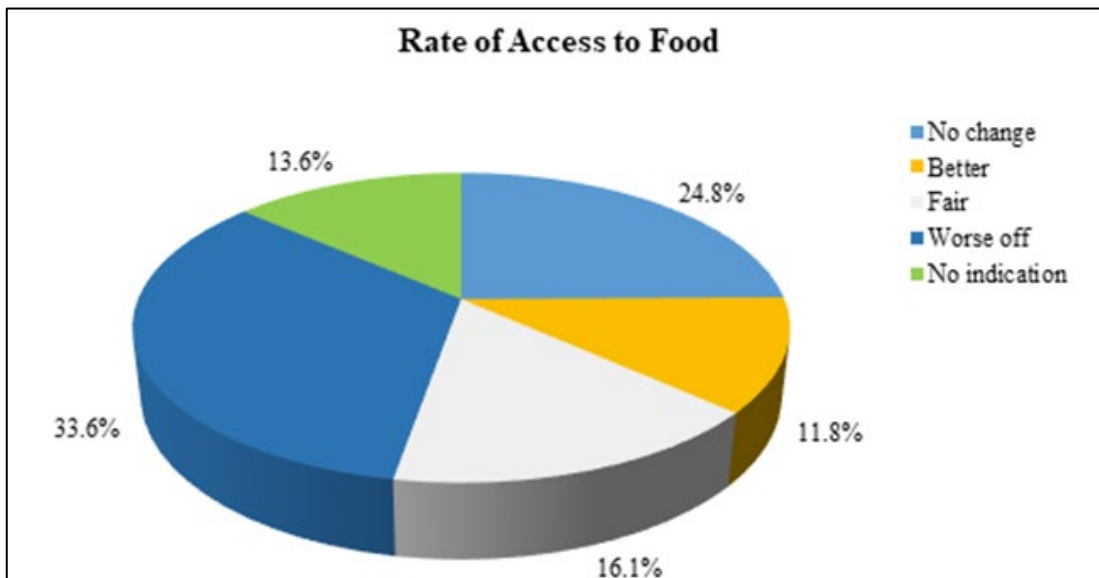


Table 5:8 Vulnerable people's access to food in the past four weeks

Items	N	R	S	O	Mean	Std.D
Did you worry that your family would not have enough food?	42 (12.7%)	91 (27.6%)	140 (42.4%)	57 (17.3%)	1.642	.912
Not able to eat the food you prefer because of no resources.	93 (28.2%)	87 (26.4%)	107 (32.4%)	43 (13.0%)	1.303	1.019
Eat a limited variety of food because of lack of resources.	103 (31.2%)	66 (20.0%)	124 (37.6%)	37 (11.2%)	1.288	1.028
Eat what you do not want because of lack of resource.	114 (34.5%)	62 (18.8%)	113 (34.2%)	41 (12.4%)	1.246	1.062
Eat smaller meals because of not enough food.	114 (34.5%)	56 (17.0%)	117 (35.5%)	43 (13.0%)	1.270	1.073
Eat fewer meals per day because not enough food.	78 (23.6%)	55 (16.7%)	161 (48.8%)	36 (10.9%)	1.470	.971
No food to eat because of lack of resources.	114 (34.5%)	75 (22.7%)	107 (32.4%)	34 (10.3%)	1.185	1.025
Sleep at night hungry because of no food.	121 (36.7%)	66 (20.0%)	118 (35.8%)	25 (7.6%)	1.142	1.005
Go whole day and night without eating because of no food.	125 (37.9%)	81 (24.5%)	109 (33.0%)	15 (4.5%)	1.042	.944
Weighted average	1.288 (42.9%)					

Table 5.8 shows that the vulnerable people of Amathole sometimes worry that their family do not have enough food to eat (mean = 1.64) and sometimes eat fewer meals per day because of lack of resources (mean = 1.47). But, they are often not able to eat their preferred food because of lack of resources (mean = 1.30), they constantly eat a limited variety of food because of the lack of resources (mean = 1.29), they frequently eat what they do not want because of lack of resources (mean = 1.25), they often eat smaller meals because of a lack of enough food (mean = 1.27), they sometime have no food to eat because of the lack of resources (mean = 1.18), they often go to sleep at night hungry because of lack of food (mean = 1.14) and sometimes go a whole day and night without eating because of the lack of food (mean = 1.04). The weighted average of the table is 1.288, which indicates that the vulnerable people of Amathole rarely have access to enough food. Their level of access can be rated as 42.9% that is below average.

5.3.3 What are the factors that inhibit the achievement of food security in households in the Amathole District Municipality as observed by the people?

Table 5:9 Factors inhibiting the achievement of food security as observed by the people of the Amathole District Municipality

Causes	Frequency	Percentage	Rank
Income not increase at the rate of inflation	89	27.0%	5th
Poor harvest due to drought	92	27.9%	4th
Poor harvest due to high temperature	54	16.4%	12th
Poor harvest due to low temperature	20	6.1%	16th
Poor harvest due to pest and disease	64	19.4%	10th
Poor harvest due to hail storm	16	4.8%	17th
Poor harvest due to late rainfall	82	24.8%	6th
Loss of livestock due to pests and disease	12	3.6%	18th
Loss of livestock due to snow	11	3.3%	19th
Loss of livestock due to drought	40	12.1%	15th
Loss of livestock due to high temperature	11	3.3%	19th
Lack of water sources or reservoirs	61	18.5%	11th
Lack of agricultural inputs	48	14.5%	13th
Poor salary	123	37.3%	3rd
Retirement	48	14.5%	13th
Retrenchment	72	21.8%	7th
Grants not increase at the rate of inflation	169	51.2%	1st
Increase in household size	66	20.0%	8th
Death of the main food provider	124	37.6%	2nd
Others	65	19.7%	9th

Table 5.9 reveals that the vulnerable people of Amathole have observed that the highest rated factor hindering the achievement of food security grants that do not increase at the rate of inflation (51.2%). The second factor is death of the main food provider (37.6%), third is poor salary (37.3%), fourth is poor harvest due to drought (27.9%) and the fifth is income not increased at the rate of inflation (27.0%). Other factors identified are poor harvest due to late rain (24.8%), retrenchment (21.8%), increase in household size (20.0%), poor harvest due to pests and diseases (19.4%), lack of water sources or reservoirs (18.5%), poor harvest due to high temperature (16.4%), lack of agricultural inputs (14.5%), retirement (14.5%), loss of livestock due to drought (12.1%), poor harvest due to low temperature (6.1%), poor harvest

due to hail storms (4.8%), loss of livestock due to pests and disease (3.6%), loss of livestock due to snow (3.3%) and loss of livestock due to high temperature (3.3%). Figure 5.9 presents this in a bar chart.

Figure 5:9 Causes of food insecurity

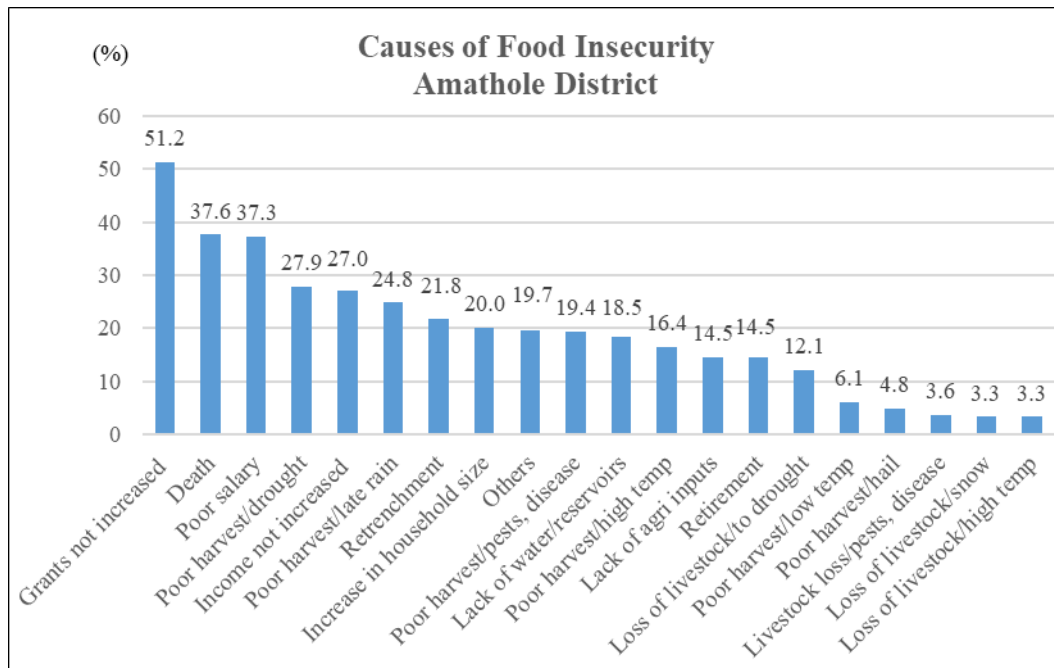


Figure 5.9 confirms that vulnerable people of Amathole concentrate on grants and salaries when they talk of food insecurity as shown by the responses as presented. Because they rely on piped water and not on dams and streams for irrigation purposes, observing poor harvest and weather patterns is not important to the people. Their involvement with the land and food gardens is not paramount to them, as their food security is achieved through grants and salaries.

5.3.4 Composite contributions of the identified factors on the food security of the vulnerable people of Amathole?

To answer this question, six independent variables were identified and computed from the responses of the participants namely:

- time of food shortage
- causes of food shortage
- measures taken against food shortage
- agricultural activities
- available resources

- agricultural skills

The dependent variable (the level of food security) was also computed. Multiple regression analysis was then performed, and the results are presented in Tables 5.10 and 5.11.

Table 5:10 Summary of multiple regression analysis showing composite contribution

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1957.82	6	326.30	8.016	.000b
	Residual	13148.13	323	40.71		
	Total	15105.95	329			
R	0.360					
R2	0.130					
Adjusted R2	0.113					
a. Dependent Variable: level of food security						
b. Predictors: (Constant), acquired skills, measures against food shortage, time of food short, causes of food shortage, agricultural activities, available resources						

Table 5.10 shows that there is a composite relationship between the independent variables (acquired agriculture skills, measures taken against food shortage, time of food shortage, causes of food shortage, agricultural activities and available resources) and the dependent variable (level of food security) ($R = 0.36$). This led to the independent variables accounting for 11.3% of the total variance in the dependent variable (Adjusted $R^2 = 0.113$). This composite contribution is shown to be significant ($F(6, 323) = 8.02; p < 0.05$). Therefore, there is a significant composite contribution of all of the identified factors on the level of food security for the vulnerable people of Amathole. The independent variables accounted for 11.3% of the total variance in the food security.

5.3.5 The relative contributions of the identified factors on the food security of the vulnerable people of the Amathole District Municipality?

Table 5:11 Summary of multiple regression analysis showing relative contributions

Coefficients						
Model		Unstandardised Coefficients		Standardised Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	6.160	1.076		5.726	.000
	Time off short	1.379	.524	.141	2.630	.009
	Causes of food shortage	.208	.090	.124	2.299	.022
	Measures against food shortage	1.349	.283	.249	4.764	.000
	Agricultural activities	.183	.205	.051	.891	.374
	Available resources	-.413	.204	-.118	2.023	.044
	Acquired skills	.202	.267	.044	.757	.449
a. Dependent Variable: level of food security						

Table 5.11 reveals that the measures taken against food shortage has the largest significant contribution to level of food security ($\beta = 0.25$; $t = 4.76$; $p < 0.05$), followed by time (frequency of occurrence) of the food shortage ($\beta = 0.14$; $t = 2.63$; $p < 0.05$), then by causes of food shortage ($\beta = 0.12$; $t = 2.30$; $p < 0.05$) and lastly by available resources for agriculture ($\beta = 0.11$; $t = 2.02$; $p < 0.05$). Others, i.e., agricultural activities ($\beta = 0.05$; $t = 0.89$; $p > 0.05$) and acquired agricultural skills ($\beta = 0.04$; $t = 0.76$; $p > 0.05$) have no significant contribution. Therefore, the identified variables that have significant relative contributions to level of food security of the vulnerable people in Amathole are the measures taken against food shortage, time of food shortage, causes of food shortage and available resources for agriculture.

5.3.6 Identified factors that will predict food security for the vulnerable people in the Amathole district?

According to Table 5.11, four out of the six independent variables identified have significant influence on food security of the vulnerable people of Amathole; thus, these four independent variables predict food security in the area:

- measures taken against food shortage
- time of food shortage
- causes of food shortage
- available resources

5.3.7 *The Prediction Equation*

The prediction equation is given as:

$$Y = C + X1b1 + X2b2 + X3b3 + X4b4$$

where

Y = Food security

C = Constant

X1 = Measures against food shortage (M)

X2 = Time of food shortage (T)

X3 = Causes of food shortage (CA)

X4 = Available resources for agriculture (A)

FS = Food security

Therefore, the prediction equation is

$$FS = 6.16 + 1.35M + 1.38T + 0.21CA - 0.41A$$

5.4 **Qualitative data analysis**

A thematic approach was adopted to analyse the qualitative data collected from the government officials who implement government policies in the district. Three themes were raised which would guide the analysis:

- status of food security in the Amathole district of the Eastern Cape
- causes of food insecurity in the district
- efforts to make Amathole district food-secure

5.4.1 *The status of food security in the Amathole district of the Eastern Cape*

Several questions were asked to establish the status of food security in the Amathole district. The first set of questions sought to identify if there is a food security policy in the district, if the district is food-secure and the level of poverty in the district. There were mixed reactions to these questions. Some participants believed that there is no food security policy and that the

district is not food-secure with the poverty level either constant or increasing. Several reasons were given to support these claims. As an example, Participant A claimed that there is no food security policy and that Amathole is not food-secure because:

The latest statistics (Community Survey, 2016) reflect that the poverty headcount in the district is 18.7%. Ngqushwa, Mbashe and Mquma are above the district average at 22.0%, 22.0% and 20.0% respectively. Participant A went further to say that, overall they remained constant, although Ngqushwa has experienced an increase since the 2011 Census.

Some participants claimed that there is a food security policy in the district. However, out of this set of participants, some believed that Amathole is not food-secure. For instance, participant C (who works at the Department of Agriculture and Public Works) claimed that there is a food security policy and that Amathole is food-secured. He supports his claim by saying that the Department of Rural Development and Agrarian Reforms is the custodian of the policy, and that Amathole is food-secured because of the rural nature of the district and availability of land. However, he also agreed that the poverty level in the district is increasing. Participant D works in the Office of the Premier, and agreed that there is a food security policy, but his opinion differed by saying that he is not sure that the Amathole district is food-secured. He supported his claim by saying that the rural areas and deep rural municipalities are food-insecured (e.g., Willovale).

With the above admissions from the participants, it is clear that although there seems to be a food security policy in the Amathole district, the district is not food-secure and the poverty level is increasing. Despite that the district is in a rural area with abundant land for agriculture and that it should be food-secure, this has not proven to be the case.

5.4.2 *Causes of food insecurity in the district*

All the responses from the participated interviewees showed that the causes of food insecurity in Amathole district are:

- poor agricultural activities
- lack of government support for agricultural activities
- over-dependence on government grants
- poor coordination of government programmes
- non-provision of agricultural resources

- unemployment
- lack of access to funds
- land degradation

Participant A admitted that there is a poor effort from government to ensure that families use their lands productively for both food and nutrition, and for possible subsistence farming.

5.4.2.1 Reliance on the grant system to sustain families

Participant B completed a comprehensive list of causes of food insecurity, particularly in the Amathole district with reference to past efforts, thus:

- Poor coordination of food security programmes between government departments and sector partners, and commitments that had been made without clearly defined interventions that would lead to the desired outcomes.
- EC Province's commitment to set up Agri-parks, but there was no clearly defined plan and resourcing of these parks. (e.g., silo planning in Mbizana, where the structure was built at great expense – millions of rands – and staffed. However, the site did not have access to electricity and water – rendering the structure useless, with the nearest village at least one kilometre away).
- Unemployment.
- Dependency that had been created without sustainable project plans.
- Over-reliability on government.
- Lack of appetite on SMME and entrepreneurship development in support of food security through local cooperatives.

By the admission of Participant C, some other causes of food insecurity in the district which are not mentioned above, include unavailability of extension officers, lack of access to funds and land degradation.

The qualitative data corroborates the findings of the quantitative data and shows that measures taken into account against food shortage, time of food shortage, causes of food shortage and available resources are the factors that have significant contribution to the level of food insecurity in the Amathole district. Based on this, it can be inferred that the major causes of food insecurity in the Amathole district are poor agricultural activities, lack of government support for agricultural activities, over-dependence on government grants, poor coordination

of government programmes, non-provision of agricultural resources, unemployment, lack of access to fund and land degradation.

5.4.2.2 *Efforts to improve food security in the Amathole district*

Several questions were asked to get a clear picture of what needs to be done to make the Amathole district food-secured. In this section, sub-themes are generated, based on the questions and responses of the interviewees and analysed accordingly. Several suggestions were made by the participants as to other ways in which food security in the district could be improved. Participant A admitted that the people in the district could take a cooperative approach to agricultural production, especially in areas affected by drought. Other community resources have to be implemented including dams, where applicable, for fish farming and ensuring nutrition and food security. Amathole is a region with high numbers of livestock and as such, the African concept of a sharing ecology has to be inculcated once more.

Participant B had opinions that are different to those above, and according to him, the following items must be seriously considered:

- implementation of the National Food Security Framework (as this is key)
- important to note and recognise the Community Asset-Based Model and use of local resources through the work the NGOs
- create more partnerships at local level
- support local development initiatives and cooperatives

Further suggestions raised by other participants are:

- collaboration with NGOs and other agricultural partners
- maximising the use of social capital
- implementation of food garden
- introduction of school gardens (to stimulate behavioural change among the people of the district)

Therefore, the following are the other ways in which food security can be improved in the Amathole district:

- by adopting a cooperative approach to agriculture
- government has to supply all of the necessary resources for agriculture (i.e., dams, silos, etc.)

- recognition and use of indigenous knowledge to agriculture
- proper implementation of the National Food Security Framework
- recognition of Community Asset-Based Model
- collaboration with NGOs and other agricultural partners
- maximum use of social capital
- implementation of food gardens among the households
- school agriculture to stimulate behavioural change among the people in the district

5.4.2.3 *Organisations' views on the best way to tackle food insecurity*

The officials interviewed were asked to suggest the best way to resolve the problem of food insecurity in the Amathole district. The first response to be examined suggests a better understanding of the problem through research before appropriate intervention. In the words of Participant A: 'A more nuanced statement of the problem of food security has to be developed with informed baselines. Crucially, there has to be better coordination [sic] within the social sector so as to readily identify families or households at risk and target interventions where needed'. Another response suggests an empowerment programme for youth and women. Participant 06 admits that: 'There is a need for governments' concerted effort to capacitate local farmers; Invest on Youth and Women development focusing on agriculture'. Recent research from Fort Hare (University of Fort Hare, 2015), indicates that, the majority of people involved in agriculture are older people, mainly above 55 years of age. This shows a definite lack of effort from the government in prioritising agriculture and farming.

There is a need to open agricultural colleges and to invest more in youth and female agricultural-based education. The Eastern Cape is known as the home of agriculture; we should invest more in what we know, and what we have, than starting new endeavours in the name of innovation. Industries should compete with agriculture for domestic products and take advantage of what we have, especially in rural areas. We must create strong partnerships with the business sector to support agricultural development – social compact and social investment. We must design an affordable and reliable funding model for cooperatives and SMMEs that are involved in agricultural development. Universities must support government programmes through research and development initiatives, as well as capacity building. All the other views are in agreement with these major admissions.

Only two uncommon views were voiced: that there should be a readily available market for farm produce in other areas to encourage the farmers and that government should create a conducive legislative environment.

It can be inferred that various organisations are of the view that, to solve the problem of food insecurity in the district, the following must be undertaken:

- a research study to generate baseline data about food security in the district
- interventions that are informed by the findings of the research
- empowerment programmes for the youth and women to boost agricultural activities in the district
- create a readily available market for farm produce to encourage the farmers
- agricultural education for the youth and women
- partnering with the business sector to finance agriculture
- better legislature for the problem of food insecurity

5.4.2.4 The major challenges facing government efforts

Officials who work in the departments that are involved in food security in the district were asked to list those challenges facing the achievement of food security. The two major challenges which featured in their responses, were administrative procedures and the interest of the people. In the words of Participant C, who works at the Department of Roads and Public Works and who admitted that the challenge facing their activities is: '[The] [a]pproach of [t]echnocrats were they impose instead of promoting participatory approach. Building capacity of the communities to take ownership of development agenda.' The participant from the OTP admitted that the challenges they have is that: 'There is lack of home-based production of food because community people are more interested in employment than farming'.

There is a conflicting position as to if the government is doing enough to alleviate the problem of food insecurity in the district. Those that disagreed with this position support their argument by saying their actions are mainly in theory and on paper with little intention to improve on implementation of priorities and approved programmes. No effort is made to improve monitoring and evaluation of initiatives and outcomes. This has been a priority during the period of Provincial Growth and Development Plan (PGDP) and evaluation was done, but never taken further. The outcome of that evaluation, instead, progressed and developed into a new set of priorities, without building from the PGDP.

The PDP and diagnostic report provided a basis for agricultural development, and confirmed that, the potential for agriculture and forestry remains under-tapped with arable, relatively well-watered land that is not optimally utilised (PDP, 2010: p.9).

It is worth noticing that all of the participants who agreed that government is doing enough on this issue also agreed that the implementation is poor. In the words of Participant C: ‘Yes, at the policy level but the challenge is with the implementation’. To support these responses, the participants were asked which other things they thought the government should do, to have food security in the Amathole district. Several suggestions were given, such as Participant B who listed the following:

- to change the way of working and to recognise communities as partners
- the need to document traditional methods and to share them with communities
- the need to highlight success stories which people can learn from; we can learn from the negative and positive stories from the media – in that way we will be a developmental and learning organisation that seeks to improve all the time, rather than remaining in departmental comfort zones due to the availability of existing resources
- the need to invest more on agricultural initiatives and to ensure efficiencies and effectiveness in government entities such as the Eastern Cape Rural Development Agency (ECRDA), ASPIRE, National Development Agency (NDA) etc., to ensure benefitting rural areas in different agricultural commodities – the ADM is known for products such as guavas, pineapples, animal farming (e.g., cattle, pigs), plantation, etc.
- the government spending must be equivalent to the outputs and desired agricultural growth towards the intended outcomes and impact
- Participant A suggested implementing already existing policies. He admits that:
- ‘Implement all declarations that have an impact on food security that it is already a signatory to such as the Maputo declaration on spending 10% of government budgets on agriculture and agricultural production’. Participant D suggested that the government should improve on advocacy for agricultural activities in the district, and also improve on resource allocation for agriculture.

Therefore, it can be inferred that, although government has made policies on food security in the Amathole district, they have not done enough concerning the implementation of these policies. Based on this, the following are suggestions on what more government should do:

- recognise communities as partners
- incorporate traditional methods of agriculture

- investment on agriculture with effective and efficient implementation
- embark on advocacy for agriculture
- better agricultural resource allocation

5.5 Summary of findings

Based on the analysis and interpretation above, the following are the summary of the findings:

- The major source of income for the vulnerable people of Amathole is pension money; this is followed by those that receive a salary as their source of income. The major source of water is tap water. The main source of food for the vulnerable people of Amathole is through purchase, this is followed by supply from friends or relatives, gifting, hunting, food aids and ‘food at work’ (10%).
- A large proportion of the people eat potatoes or other such foods (roots and tubers), followed by those who eat as maize, wheat, rice or other grains, and those who consume a different form of tea. More than the average also eat vegetables, meat, poultry or offal, sugar and honey. Fewer than the average eat food made from oil, fat or butter, cheese, yogurt, milk or other dairy products, food made from beans, peas or nuts, egg and fruits. But very few people from this group eat fish or sea food.
- The vulnerable people of Amathole rarely have access to enough food. Their level of access can be rated as 42.9% (i.e., below average).
- The vulnerable people of Amathole observed that the first factor stopping them from achieving food security is that grants do not increase at the rate of inflation, the second factor is death of the main food provider, third is poor salary, fourth is poor harvest due to drought and the fifth is income is not increased at the rate of inflation (27.0%).
- Thus, there is a significant composite contribution of all the identified factors on the level of food security of vulnerable people in the Amathole district. The independent variables accounted for 11.3% of the total variance in the food security.
- The identified variables that have significant relative contributions to level of food security of vulnerable people in Amathole are measures taken against food shortage, time of food shortage, causes of food shortage and available resources for agriculture.

Based on the qualitative analysis, the following are additional findings of the study:

- Although there seems to be a food security policy in the Amathole district, the district is not food-secure and the poverty level is increasing. Despite the fact that the district is in a rural area with abundant land for agriculture, this has not made the district food-secure.
- The courses of food insecurity in the Amathole district are poor agricultural activities, lack of government support for agricultural activities, over dependence on government grants, poor coordination of government programmes, non-provision of agricultural resources, unemployment, lack of access to funds and land degradation.

The following are the other ways by which people can improve food security in the Amathole district:

- adopting cooperative approach to agriculture
- government has to supply all the necessary resources for agriculture (e.g., dams, silos, etc.)
- recognition and use of indigenous knowledge of agriculture
- proper implementation of National Food Security Framework
- recognition of Community Asset-Based Model
- collaboration with NGOs and other agricultural partners
- maximum use of social capital
- Implementation of food gardens among the households and school agriculture to stimulate behavioural change among the people in the district

Various organisations relating to food security in the Amathole are of the view that, to solve the problem of food insecurity in the district, the following must be tackled:

- a research study to generate baseline data about food security in the district
- interventions that are informed by the findings of the research
- empowerment programmes for the youth and women to boost agricultural activities in the district
- create readily available market for farm produce to encourage the farmers
- agricultural education for the youth and women
- partnering with the business sector to finance agriculture
- better legislature towards the problem of food insecurity

Two major challenges facing government efforts to achieve food security in the Amathole district are administrative procedures and interest of the people.

Though the government has created policies on food security in the Amathole district, they have not done enough concerning the implementation of the policies.

The following are suggestions on what more the government should do, in order to achieve food security in the Amathole district:

- recognise the communities as partners
- incorporate traditional ways of implementing agriculture
- invest more in agriculture with effective and efficient implementation
- embark upon advocacy for agriculture and better agricultural resource allocations

5.6 Conclusion

Data collected using both qualitative and quantitative methods were consolidated and presented based on five key areas:

- demographic characteristics
- access to production resources
- sources of food, income and expenditure
- non- or off-farm incomes and household assets
- household risk perceptions and coping strategies

Percentages, proportions, averages and other descriptive statistics were used to present data obtained from the above key areas. The study used both qualitative and quantitative data. Coding enabled the data to be reduced into different themes and was presented in both graph and pie chart formats and analysed. The researcher made use of a technique called pie chart analysis for the purpose of displaying numerical data.

The main objective of presenting data in pie charts is to present it in a way that is easy to understand and to interpret. The results suggest that the Amathole district is vulnerable and food-insecure – something needs be done to improve the situation for the inhabitants of the area. The next chapter will provide a discussion on the findings of the study, which the ADM may consider. These findings could assist to improve food security, to develop an effective service delivery and to attempt to change moral attitudes, by focusing on mechanisms to maximise food security activities.

CHAPTER 6 : DISCUSSION OF FINDINGS

‘But if we want humanity to advance a step further, if we want to bring it up to a different level . . . then we must invent, we must make discoveries. If we wish to live up to the peoples’ expectations . . . we must turn over a new leaf, we must work out new concepts, try to set afoot a new man.’ (Fanon, 1961)

6.1 Introduction

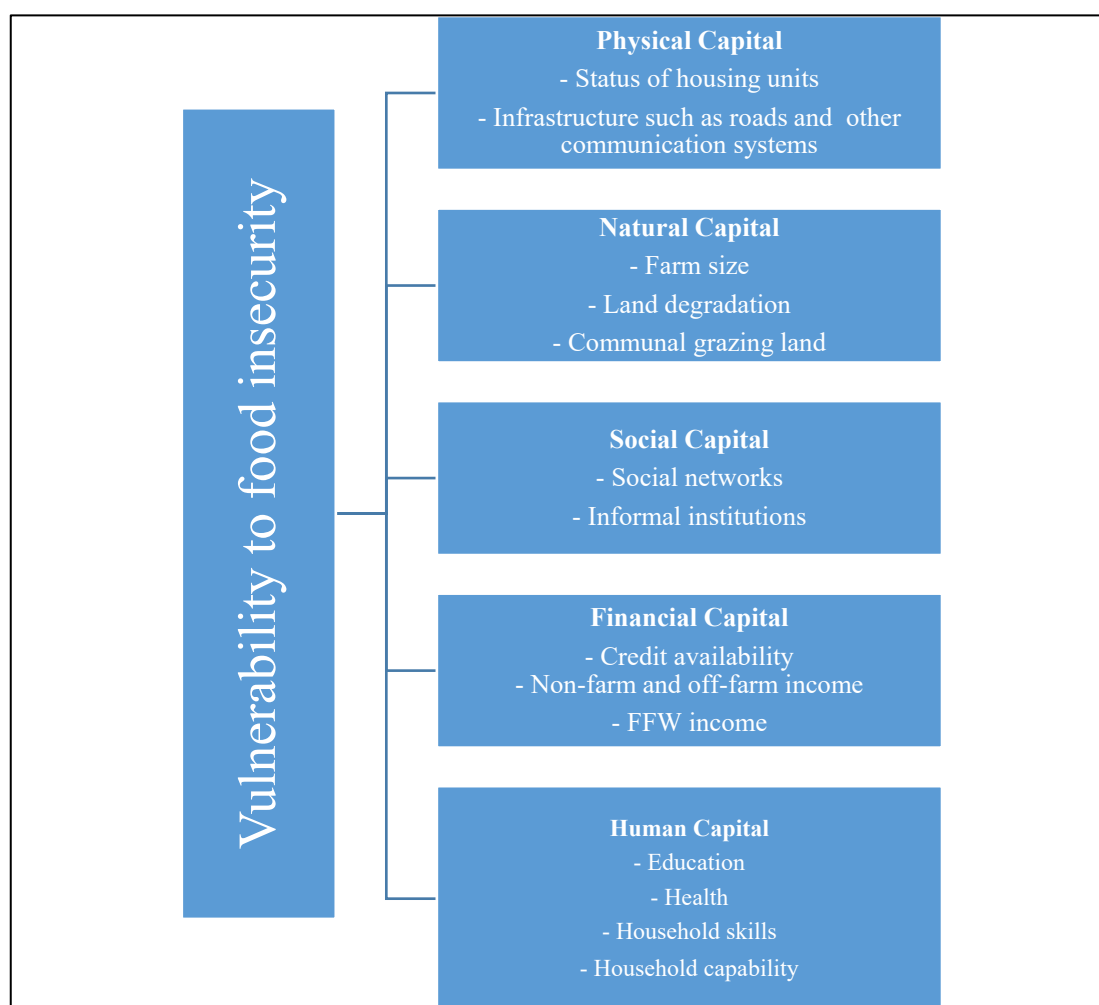
Chapter 6 is the discussion chapter, where the findings will be evaluated in light of the related literature and data presented in Chapter 5. This will establish the links, with the lessons learnt, from what has been experienced and found in the researched area and/or households of Amathole. It must be noted that the various data collection methods used by the researcher were an attempt to get a comprehensive view of the dynamics of food insecurity and vulnerability in the Amathole district of the Eastern Cape. As introduced in Chapter 1 of this research study, reducing vulnerability occupies a central place in policies of the present administration to reduce chronic poverty. ‘Vulnerability’ is understood as the likelihood that individuals, households or communities will find themselves in poverty in the future with incessant food insecurity levels. There is a growing body of research providing insight into how and when insecurity and vulnerability push people into deeper poverty levels that result in food insecurity and vulnerability. It is understood, and has become known, that exposure to major illness, natural hazards, economic and financial crises (to name a few of the most significant risks faced in developing countries) often result in an increased incidence of poverty that results in vulnerability and strife.

6.2 Conceptual framework: household vulnerability

In most cases, vulnerability indicators are related to capital assets such as human, social, physical, natural and financial. As can be seen in the conceptual framework (Figure 6.1) and the presented data from the study area, human capital indicators such as age and sex composition and education level of the household can affect households’ food security status. Infrastructure (physical capital) is used as an indicator of household food security and increases households’ financial and other capitals.

Financial income obtained from different sources such as non-farm and off-farm activities, credit and households' savings help to reduce vulnerability to food insecurity and to enhance households' human, physical and other capital. Access to land, for farming and grazing, is an important natural capital for improved food security outcome of households.

Figure 6:1 Conceptual framework to explore household vulnerability to food insecurity



Source: Modified from Deressa et al., 2008

From the discussion presented in this chapter, it can be argued that increasing capital assets for the low-income households can be used as a primary strategy for improving people's livelihood outcomes, as people require a range of capital to pursue their livelihood strategies. However, according to Baumann (2002), capital assets can be destroyed and created due to trends, shocks, and seasonality and need to be continually modified for the betterment of livelihood outcomes. An example is intensive use of agriculture on marginal lands that can

destroy the natural capital (soil degradation) or land management practices that can also improve the natural capital (land).

Further, Baumann (2002) suggests that sustainable development could be expected in the accumulation and substitution of different types of capital assets for better livelihood outcomes. In general, sustainable use of the five capitals (as shown in figure 6.1 above) can bring about food security outcomes, while stressed and unsustainable livelihoods can bring borderline food insecurity outcomes. In other words, a critical and accelerated depletion or loss of capital results in chronic food insecurity outcomes. If the capital assets are completely collapsed, the result is famine and/or catastrophic humanitarian crises, which are commonly true to the degraded and drought-prone areas of the northern highlands of Ethiopia where the country study is in place.

However, it must be said that the Eastern Cape has made significant strides towards alleviating poverty although most of its programmes have not yielded the desired results. It must be understood and, possibly, accepted that food insecurity, just like poverty alleviation, are both processes with long-term vision that cannot be achieved overnight – it relates to a multiplicity of phenomena like, but not limited to, the following;

- lack of capacity
- illiteracy levels
- political and administrative commitments
- lack of committed public officials and political leadership
- no competent staff to make it a reality
- insufficient human resource capable enough to deal with the complex situation
- no financial management to better manage financial resources
- lack of financial resources to fund the deserving and competing communities

According to Streak (2000: p.15) the dawn of the new political era in South Africa (1994) established greater political justice but has thus far done too little to address the issues of economic justice meaningfully. Further, Streak (2000) cites that, the main reason for this is that the gross power imbalances that characterise South African society have not been significantly changed for the better and for all as mentioned in the African National Congress's Freedom Charter (ANC's Freedom Charter, 1952). Poverty reduction indicates the goal and implies improving economic growth, reduction of unemployment and creating avenues for job opportunities. It also relates to educational poverty as well as growth of the individual and the

promotion of independence of each individual according to its own pace and optimum potential.

If Streak's (2000) sentiments are correct, it can be argued that with the reduction of poverty there will be social stability and economic growth (meaning free of vulnerabilities) and will become a food-secure nation. The available evidence is persuasive and suggests that the extent to which these hazards result in persistent poverty, is less overwhelming. As explained in Chapter 2, vulnerability is a core component of the insecurity trap that many of the chronically poor people are confronted with on a daily basis. Literature and the available evidence make the hypothesis that believes that there are three main channels through which this catastrophic dehumanising act occurs:

- large, widespread and repeated shocks that drive chronic poverty
- lack of an adequate number or quality of buffers to protect poor households against hazards and stresses, and help them withstand shocks
- the ways in which poor households respond to insecurity, which may minimise the impact of vulnerability on their lives in the short run, while keeping them in poverty in the long run

The drivers of chronic poverty (such as health shocks, economic crises, unexpected changes in household composition and natural hazards) are frequently followed by sustained periods of poverty among those worst affected. Shocks and crises increase entry into poverty, as well as increasing the persistence of poverty among those already poor. Women have traditionally been responsible for the well-being of most households – and they often endure the most of a shock. Such effects are magnified by large, repeated and covariate shocks and crises. The lack of availability and poor quality of buffers protecting households against shocks, acts as a direct channel. Chronic poverty may result from small, once-off shocks or stresses, where the capacity of vulnerable households to protect themselves is severely diminished. Even very poor households strive to reduce their vulnerability by accumulating assets, collecting entitlements and participating in networks. However, the chronically poor (in large quantities) are highly vulnerable because they have fewer buffers, or because the range and effectiveness of the buffers available to them fail to provide adequate protection. There is ample evidence that inadequate buffers ensure persistent poverty. A further channel can be considered as the indirect or feedback effects of vulnerability on persistent poverty. Faced with high levels of vulnerability and insecurity, households may adopt strategies expected to minimise the impact

of vulnerability on their living standards in the short run, but which may keep them in poverty in the end.

Rational responses to vulnerability adopted by poor households can create poverty traps from which it is hard to escape. The list of strategies that fit into this category is a long one, and can include:

- reducing the number and quality of meals
- postponing health-related expenditure
- withdrawing children from school and/or engaging in child labour
- responding to vulnerability or unemployment by shifting into informal or hazardous employment
- adopting less productive, but safer, crops
- resorting to patron-client systems as a means of protection

Feedback effects of this type are difficult to identify and measure empirically, but an emerging body of research is making this link with growing confidence. More importantly, the findings from this research suggest that these feedback effects may provide the strongest explanations for the impact of vulnerability on persistent poverty (A. R. Artino, 2012). Vulnerability, while central to chronic poverty, is obviously not the only factor determining poverty dynamics. Building and improving returns on assets, transformative societal change, eliminating discrimination, and improving social and economic relationships are all-important factors, and are discussed in the subsequent chapter. Reducing vulnerability interacts with these wider factors – for example, it can contribute to maintaining and building assets and returns, through increasing the risks people take with their assets. Overall, tackling vulnerability is important, but it is far from sufficient to eradicate poverty.

On advancing the concept of vulnerability and its dynamics the UN's FAO (2011), tasked with the management and containment of food insecurity, believes that hunger is usually understood to refer to the distress associated with lack of food. The FAO defines food deprivation, or undernourishment, as the consumption of food that is not sufficient to provide the minimum amount of dietary energy that individuals needs to live a healthy and productive life, given their sex, age, stature and physical activity level (FAO, 2011). The FAO describes undernutrition as a phenomenon that goes beyond calories and signifies deficiencies in any or all the following: energy, protein or essential vitamins and minerals. According to the FAO (2011), undernutrition results from an inadequate intake of food in terms of either quantity or

quality, poor utilisation of nutrients due to infections or other illnesses, or a combination of these factors.

These are caused by a range of factors including:

- household food insecurity
- inadequate maternal health or childcare practices
- inadequate access to health services, safe water and sanitation

‘Malnutrition’ refers more broadly to both undernutrition (problems of deficiencies) and over nutrition (problems of unbalanced diets, which include consuming too many calories in relation to energy requirements, with or without low intake of micronutrient-rich foods). In this research study, ‘hunger’ refers to the index based on the four component indicators:

- undernourishment
- child stunting
- child wasting
- child mortality

Taken together, the component indicator reflects deficiencies in calories as well as in micronutrients. The Global Hunger Index (GHI) reflects both aspects of hunger.

Figure 6:2 Vast tract of land that can be utilised for food security



Source: Researcher’s own picture

Looking at the global, regional and national trends, the FAO (2011) reports that since 2000 significant progress has been made in the fight against hunger. The 2000 GHI score was 30.0 for the developing world, while the 2016 GHI score was 21.3, representing a reduction of 29.0% (Figure 6.3). To put this into context, the higher the GHI score the higher the level of hunger. Scores between 20.0 and 34.9 are considered serious. The GHI scores for the developing world are also referred to, the global GHI scores for 2000 and 2016 are both in the serious category; the earlier score was closer to being categorised as ‘alarming’, while the later score is closer to the ‘moderate’ category (FAO, 2011). Underlying this improvement are reductions since 2000 in each of the GHI indicators especially in the prevalence of undernourishment, child stunting (low height for age), child wasting (low weight for height), and child mortality.

6.3 Poverty and grant dependency

Monetary measures are best captured by the Eastern Cape Socio-Economic Review and Outlook (SERO, 2017) in the form of income distribution that is often the most widely quoted when assessing poverty levels. According to SERO (2017), these measures often conceal the extent of inequalities, especially those concerning quality of life. The multidimensional approach, which draws on variables such as ownership of assets, access to basic services, employment, education and health, is more often used. A range of development indicators are considered, including: poverty headcount and intensity, income distribution and average household income, and grant dependency. As part of the 2016 Community Survey, STATS SA (2016) utilised the South African Multidimensional Poverty Index (SAMPI) to measure the extent of poverty in the country.

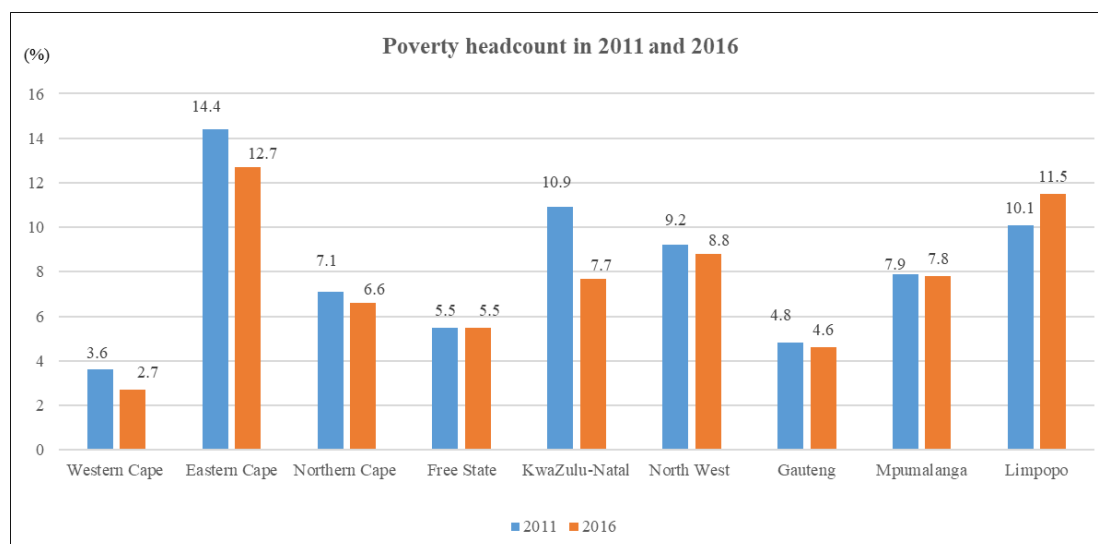
The SAMPI is an index that is constructed using eleven indicators across four dimensions, namely:

- health
- education
- living standards
- economic activity

Poverty headcount figures were then determined based on the proportion of households that are considered to be multidimensionally poor in terms of the index. Figure 6.3 below illustrates the poverty headcount across South Africa in 2011 and 2016, while Figure 6.4 shows the

comparable figures for each district in the Eastern Cape. Social welfare grant amounts do not increase sufficiently to meet the increases experienced in the price of food and other necessary household items. It is revealed in this study that most households are heavily reliant on the governments' social grants as a means of survival – for most of them it is the only income they have at their disposal for food and basic means of livelihoods. This form of income is too low for survival and is not sustainable to purchase enough food stuffs – households are doomed to sink deeper into food insecurity and debt (one result is loan sharks targeting the old at pension payouts points). The situation leaves some families who are dependent on social grants vulnerable to shocks and stressors as they have no savings, capital, assets or resources to pull themselves out of poverty. According to Scanlan (2003: p.89), food security in most cases has more to do with inequality than with anything else.

Figure 6:3 Poverty headcount in 2011 and 2016



Source: SERO, 2017

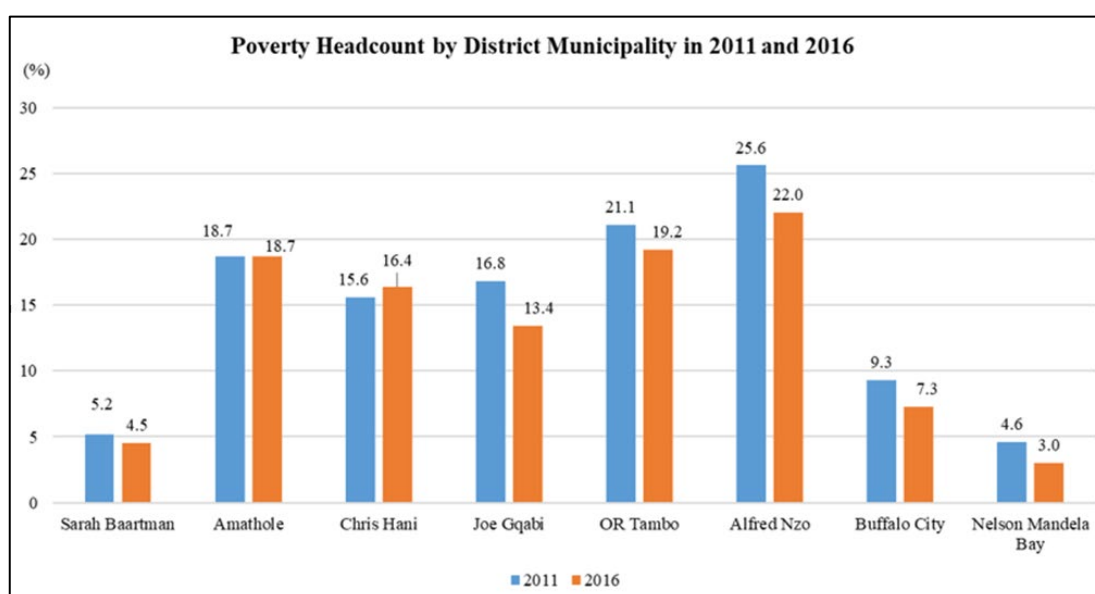
Most provinces reported a decline in the poverty headcount between 2011 and 2016. The lowest poverty headcounts were reported in the more urban provinces such as the Western Cape (2.7%) and Gauteng (4.6%). These were followed by the Free State (5.5%), the Northern Cape (6.6%), KwaZulu-Natal (7.7%), North West (8.8%), Limpopo (11.5%) and the Eastern Cape (12.7%).

Positively, the Eastern Cape's poverty headcount has declined by 1.7% since 2011. The Alfred Nzo district had the highest poverty head-count (22.0%) in the Eastern Cape during 2016. The Intsika Yethu local municipality, in the Chris Hani district, recorded the highest proportion of

people living under the poverty line at 27.7%. This represented an increase of almost 5.0% between 2011 and 2016. Based on the total population of Intsika Yethu municipality in 2016 (145 370 people), the 27.7% poverty headcount translates into 40 260 people living below the poverty line. The poverty headcount has dropped across all districts in the province except Chris Hani and Amathole. In Amathole, the level of poverty, as measured by the poverty headcount, remained unchanged while in Chris Hani it increased by 0.8% between 2011 and 2016. Despite the reduction in the poverty headcount between 2011 and 2016, the 2016 Community Survey (STATS SA, 2016) indicated that the intensity of poverty in the Eastern Cape has increased from 41.9% in 2011 to 43.3% in 2016. While the poverty headcount indicates the absolute number of people in an area that fall below the poverty line, the intensity measure records the extent to which people fall below the poverty line (that is, the average proportion of indicators in which multidimensional poor households are deprived). An increase in the intensity of poverty in the province is of particular concern, as it suggests that those living in poverty are getting poorer.

This is further highlighted by the 464 830 households in the Eastern Cape who reported that they had run out of money to buy food in the 12 months before the 2016 Community Survey (STATS SA, 2016). Nearly a fifth (17.6% or 311 260) of households in the Eastern Cape also indicated that they had missed a meal over the same period (STATS SA, 2016b).

Figure 6:4 Comparable figures for poverty headcount in each district of the province



Source: SERO, 2017

For a developing country, South Africa it has a well-established social welfare system with a sizeable percentage of social spending going towards social grants. According to SERO (2017), as of 2016, just under 17 million South Africans received some form of social assistance. As of January 2016, SASSA (2016) estimated that there were 16 893 570 grant recipients in South Africa. This represents a marginal 2.4% increase from the 16 494 520 registered in 2015. Despite this increase, the percentage of the total South African population dependent on social grants remained largely unchanged at 30.2% in 2016. Figure 6.6 reflects that the more rural provinces, and those with lower average household incomes (see Figure 6.3), are more dependent on social assistance. For example, despite the Eastern Cape having only 12.6% of the South African population, it accounts for 16.2% of all social grants. In addition, the Eastern Cape has the second highest number of social grant recipients in both absolute terms (2.7 million) as well as in proportional terms (16.2%) after KwaZulu-Natal. Despite Gauteng and the Western Cape accounting for 35.4% of the South African population, they only account for 23.0% of all social grant recipients.

Further, SERO (2017) reports that between the years 2015 and 2016, the total number of social grant recipients increased by 1.3% as compared to the national population growth rate of 2.4% in the same period. This was the second lowest growth rate of social grant recipients in South Africa after KwaZulu-Natal. The number of social grant recipients grew at a lower rate than the national average; 38.7% of the Eastern Cape's population is dependent on some form of social grant. This is the second highest in the country and contrasted to a national figure of 30.2%. Grant composition in the Eastern Cape largely mirrors the national figures, with the overwhelming majority of social grants being to support children (68.7%). The Eastern Cape has a slightly higher proportion of old age grant recipients (19.6%) relative to the national average of 18.8%. This is in line with the age profile of the province. If this situation remains unmoved, then it is a recipe for disaster as it is showing signs of being a welfare state (that is, unsustainable) as we are progressively getting deeper into dependency syndrome as both a province and district.

Table 6:1 Social grants in the Eastern Cape Region

Type of grant	Number of beneficiaries	Amount spent
Care dependency	2 046	R2 790 450
Child support (Total 0-18)	109 383	R65 757 760
Foster care	7 909	R9 172 330
Grant in aid	846	R270 720
Old age	50 969	R68 637 995
Old age (75 years and over)	21 308	R29 164 550
Permanent Disability	18 950	R25 577 032
Temporary Disability	743	R1 002 336
War Veteran	5	R6 850
Total (Amathole)	212 159	R202 380 023

Source: STATS SA and SASSA, 2016

6.4 Changing policy concepts of food security

According to the FAO’s policy brief of June 2006 (Issue 2) (2006), concepts of food security have evolved in the last thirty years to reflect changes in the current official policy thinking (Clay, 2002; Heidhues, Atsain, Nyangito, Padilla, Ghersi & Le Vallée, 2004). The term is described by the FAO (2006) as first originating in the mid-1970s, when the World Food Conference (1974) defined food security in terms of food supply – that is, assuring the availability and price stability of basic foodstuffs at international and national level: ‘Availability at all times of adequate world food supplies of basic foodstuffs to sustain a steady expansion of food consumption and to offset fluctuations in production and prices’.

In 1983, the FAO analysis brought with it a focus on food access, leading to a definition based on the balance between the demand and supply side of the food security equation: ‘Ensuring that all people at all times have both physical and economic access to the basic food that they need’. The definition was revised to include the individual and household level, in addition to the regional and national level of aggregation, in food security analysis. In 1986, the highly influential World Bank Report on Poverty and Hunger focused on temporal dynamics of food insecurity (Clay, 2002). The report introduced the distinction between chronic food insecurity (associated with problems of continuing or structural poverty and low incomes), transitory food insecurity (which involved periods of intensified pressure caused by natural disasters)

and economic collapse or conflict. This was complemented by Sen's (1981) theory of famine that highlighted the effect of personal entitlements on food access (that is, production, labour, trade and transfer-based resources). The widely accepted World Food Summit (1996) definition reinforces the multidimensional nature of food security and includes food access, availability, food use and stability. It has enabled policy responses focused on the promotion and recovery of livelihood options. Initially made popular by academics such as Chambers and Conway (1992), livelihood approaches are now fundamental to international organisations' development programmes.

They are increasingly applied in emergency contexts and include the concepts of vulnerability, risk coping and risk management. In short, as the link between food security, starvation and crop failure becomes a thing of the past, the analysis of food insecurity as a social and political construct has emerged (Devereux, 2000). More recently, the ethical and human rights dimension of food security has come into sharp focus. The right to food is not a new concept and was first recognised in the UN Declaration of Human Rights in 1948. In 1996, the formal adoption of the Right to Adequate Food marked a milestone achievement by World Food Summit delegates (1996). It pointed the way towards the possibility of a rights-based approach to food security. Currently over 40 countries (including South Africa) have the right to food enshrined in their respective countries' constitution and the FAO estimates that the right to food could be judicial in some 54 countries as revealed by McClain-Nhlapo (2004). McClain-Nhlapo (2004) further mentions that a new set of voluntary guidelines supporting the progressive realisation of the right to adequate food in the context of national food security was elaborated on by an intergovernmental working group under the auspices of the FAO Council (1996).

It cannot be underestimated that the Eastern Cape has made some significant strides towards the alleviation of poverty – testimony is that there are some programmes being implemented though not currently yielding any positive results. Poverty alleviation, as argued by Agenda 21 (1998: p.7), is a process and not a long-term vision to be achieved overnight as it relates to a number of engagements that are persistently trying to improve the precarious situation confronting the community and rendering it vulnerable. For the purposes of this study, it can be deduced from Agenda 21's (1998: p.7) assertion, that among the problems facing the developing countries is to treat poverty alleviation and food security and/or insecurity as an event, not a process, that needs sustainable solutions without compromising the future development endeavours. It needs to be noted that poverty is a long-term process that needs to

be dealt with. For prolonged strategies and programmes of action to yield positive results, the following must be taken into consideration:

- community empowerment
- dealing with literacy levels
- political and administrative commitments
- skills acquisition by both the civil service and unemployed youth
- a greater need for committed staff that have the required competencies
- improved resource management, especially financial management
- balanced resource allocation
- improved planning
- aligned government departments with sufficient human resources that will appropriately deal with aspects of work

Poverty reduction needs clear guiding goals that will imply that by improving economic growth, reducing unemployment and creating avenues for job opportunities this country is serious about food security. According to Streak (2000), combating educational poverty and growth at individual level and the promotion of independence of people will further contribute in the fight against vulnerabilities in all the communities both urban and rural. It is hoped that this will result in both social, economic and political stability as well as a sustainable and viable community.

6.5 Poverty alleviation strategy

It is clear, from the findings of this study, that the provincial targets of the poverty alleviation programmes are not known by the communities – these programmes include women, elderly, youth, disabled and the vulnerable. Most government employees who participated in the study are involved in the poverty alleviation programmes at district levels where most operations and implementation take place – surprisingly, they are not aware of the Provincial Anti-Poverty Strategy and Provincial Rural Development Strategy. It is also important to note that they were not aware of some of the critical mandates that guide the food security programmes in the Eastern Cape (for example, the Provincial Development Plan, Job Creation Strategy, integrated Provincial Rural Development Strategy). Yet it is regarded as the game changer when it comes to food production in the province. It seems that the government officials who are expected to implement these policies are not aware of what is supposed to be done and are making it difficult for the present government to realise the 2030 PGDP vision for the

downtrodden communities of the Eastern Cape. These policies aim to promote people's welfare or rather facilitate the conditions that are conducive for communities not to become vulnerable to calamities like food insecurity. In revisiting Agenda 21 (1998: p.7), it is stated that a multifaceted approach is a major tool for any state to deal efficiently and effectively with poverty and food insecurity vulnerabilities – particularly if the desire is urgent.

Agenda 21 (1998: p.7) states that an effective strategy for tackling the problems of poverty, development and environment simultaneously should focus on:

- resources
- production
- demographic issues
- enhance health care and education
- the rights of women
- maximise the role of the youth
- indigenous people
- local communities

This needs to be a democratic participation process in association with improved governance at all levels – that in the South African situation is the national, provincial and local government. All three spheres of government must work in unison and be supported by the private sector and civil society. Although the province has managed to put in place its own province-wide strategy for poverty alleviation, it is still using development strategies including RDP, GEAR, PGDP and other national strategies that lack provincial depth. The province completely lacks integration and coordination when it comes to food insecurity and poverty, the department (Social Development) that leads the strategy is reactionary in nature and that results in them being welfarist despite being developmental.

All of the strategies mentioned are good for the country but including other aspects of development (unrelated to poverty alleviation and food security) are not assisting in the redress of food security – strategies in the development landscape of the province are not directly making any inroads, instead there are long-winded excuses.

6.6 Leadership and top down planning of programmes

What the Eastern Cape is lacking is leadership, especially in the planning and implementation phases of its programmes. Despite planning instruments and tools provided by the government

and the constitution, the perception of the broader community is that government departments do not act in unison when providing services to the community, despite the acts and policies that guarantee service delivery to people. This is totally against the national government's spirit and intention as expressed on the spatial planning tool from the National Department of Planning, Monitoring and Evaluation (NDPE). It clearly puts planning at local level to ensure that it is integrated, demand-driven and aligned with other development initiatives, taking into consideration territorial advantages and enablers that can guarantee the government some quick wins for better service delivery and justice for communities. The kind of planning envisaged here is the one that speaks to total long-term ownership and sustainable partnerships.

Duplication and wasteful expenditure will be a thing of the past if the planning model from the DPME is better utilised by all government departments. This could result in government is doing more while spending less money. According to the South African government's guide to the outcomes approach (2010), change is not happening as rapidly and effectively as is required, despite all the achievements since 1994. Although the government sees its self as having successfully improved access to services and increased expenditure on service delivery; it is still not achieving the outcomes necessary to ensure adequate progress in creating a 'better life for all' (2010). According to them (2010), despite all their achievements since 1994, significant levels of poverty and food insecurity, unemployment and inequality persists in the whole country.

The other challenging factor on planning and leadership is the policy coordination framework within the province that is greatly needed. The principle will be to control the challenges when dispensing policy. As clearly shown by this thesis, there is a major gap on policy management and implementation by officials, especially the districts at the coalface of the present government sustainable service delivery integration and coordination implementation plan. As stated by the Eastern Cape Office of the Premier's Provincial Policy and Research Unit (2017), the provincial policy is faced with a situation where there are series of policies that are not properly understood within the bureaucratic system and lack alignment to the broader agenda. Out of the provincial policies, programmes and projects should be derived that will drive service delivery and, which will be in alignment with what the ruling party promised during their election manifest – and such programmes and projects should be in alignment with the government functioning and what the citizens want. Thus, policies should be able to cascade into programmes and projects; with alignment between government and citizens. It appears that the provincial policies are not properly articulated or documented that can serve as a

strategy, guide and parameter for the provincial programmes and projects. The fluidity of policies in the province is also not helping the situation; rather, it is creating a mass of policies, especially at implementation level, leading to confusion. Together with this, change continues in both political and administrative leadership; the province is unable to present structured and practical documents that can guide procedures to overcome some service delivery bottlenecks foreseen by the province. The unremitting failure of the government clearly shows that planning in the province is lagging resulting in several programmes being poorly implemented. These programmes were meant to develop people but have resulted in social grant dependency that is unsustainable and welfarist in nature. This kind of behaviour is a recipe for disaster and demonstrates heavy reliance of the vulnerable community to government – the areas under study shows no clear relief.

6.7 Top-down planning

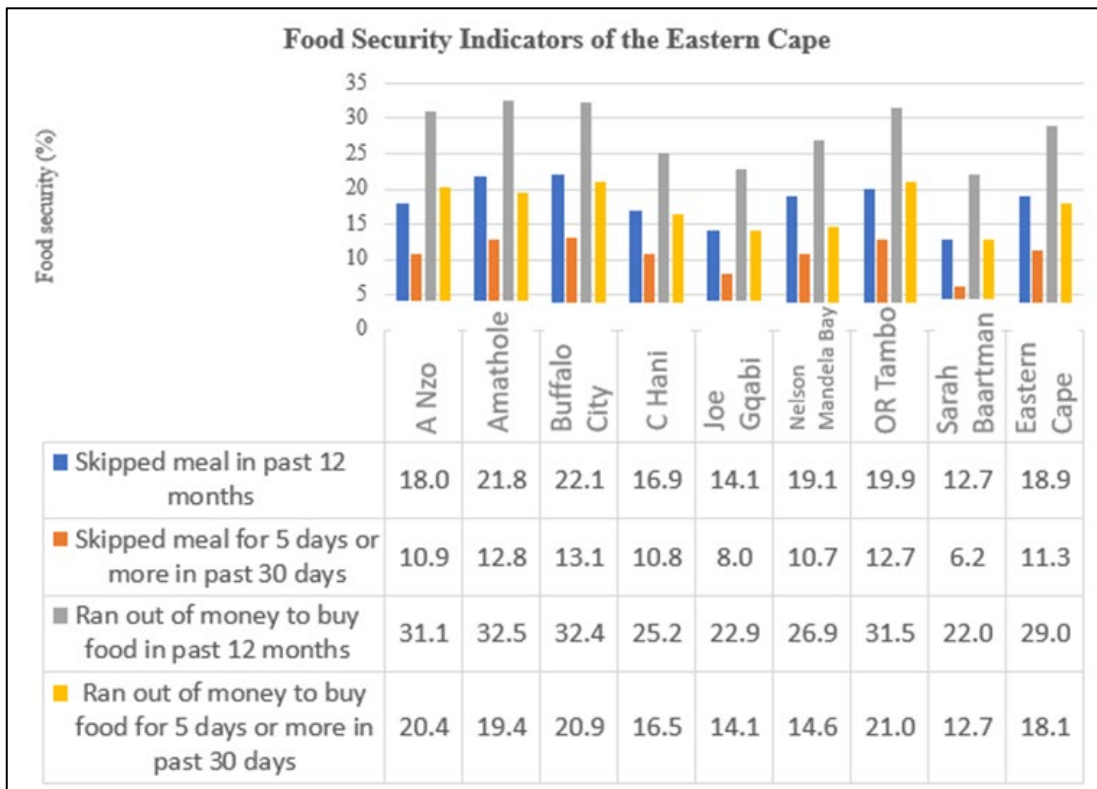
The results of the research study show a top-down, uncoordinated, silo mentality approach in the province. The strategies that should be implemented to fight poverty and food insecurity are not known by the same officials who are supposed to implement them.

This is against the intension of the spatial development planning approach by the province that was adopted to put planning at local level to ensure that it is integrated, demand-driven and aligned with other development initiatives. The spatial development planning is targeted at promoting ownership of development projects by communities as well as guaranteeing sustainability of such projects. In this manner of planning and execution, it is envisaged that the communities will be able to articulate and define deliverables; with government officials' help to overcome difficulty, it will be manageable and participation and buy in will be achieved by all stakeholders – with security of such development and skills transfer gained without any hindrance or political standoffs.

6.8 Food security discussions as revealed by the data

Access to food in most of the households is still one of the serious challenges in the province. Some contributing factors relate to socio-economic status like lack of job opportunities and low levels of education.

Figure 6:5 Food security indicators for the Eastern Cape



Source: ECSECC, 2016; CS & Quantec, 2016)

The following definitions of food security are observed:

- **UN’s FAO:** as having access by all people at all times to the food required for a healthy life.
- **The World Bank (1986)** and as defined by one of the Bretton Woods twins: the physical, social and economic access to sufficient, safe and nutritious food by all at all times to meet their dietary and food preferences.
- **The World Food Summit (1996):** exists when all people at all times have physical and economic access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for active and healthy lifestyles by all citizens.

Looking at the Amathole district as revealed by the data in Chapter 5, this research study notes that these definitions contain four different, but interrelated, components or dimensions that are in constant agreement with the presented data that Amathole is food-insecure.

By looking at the definitions given above, the study concludes that the four dimensions or the interrelated components are:

- accessibility: physical, social and economic means of food
- adequacy of available food
- utilisation
- quality and safety of food
- food supply stability

Conversely, the South African Food and Nutrition Security Policy (2013), the Department of Social Development (DSD) and the Department of Agriculture, Forestry and Fisheries (DAFF) harmoniously agreed with the notion that food security within the South African framework refers to nothing else but: '[A]ccess to and control over the physical, social and economic means to ensure sufficient, safe and nutritious food at all times, for all South Africans, in order to meet the dietary requirements for a healthy life'. The people of the Amathole district are exposed to food insecurity, as some of the above-mentioned components are not fulfilled. According to Altman, Hart and Jacobs (2009 p.345), the Amathole district, as in the rest of South Africa (as revealed by the collected data of the study) is characterised by high levels of poverty and inequality – often poor households suffer inadequate or unstable food supplies and poor nutrition. In Amathole (as in South Africa), it is generally understood that food insecurity and poverty are some of the outcomes of race-based, socio-economic development practises prevalent throughout the apartheid era. The industrial transformation that resulted in urbanisation and the current big push for cities in search of a better life and jobs has robbed many households by disturbing the African farming, rural capital, and wealth and agriculture expertise in the district. This research study strongly supports Hart's (ADM, IDP, 2015) narrative that these movements have exacerbated household vulnerability to hunger as confirmed by this research in Amathole, especially in the Mbhashe local municipality.

Historically, and currently, African households are located too far from markets to advance a more sustainable agricultural industry and men are compelled to work as migrant labourers in the cities as argued in Chapter 2 of this study. The loss of land and unemployment contributes to food insecurity among black people in South Africa. Poor resilience of non-agricultural income sources to buy food in the district contributes to the food insecurity in the province, not necessarily in the study area alone. It can be concluded that many households buy nearly 90.0% of their food and that food expenses can even amount to 60.0% to 80.0% of their total household income for low-income households. According to Du Toit (2011) and as observed

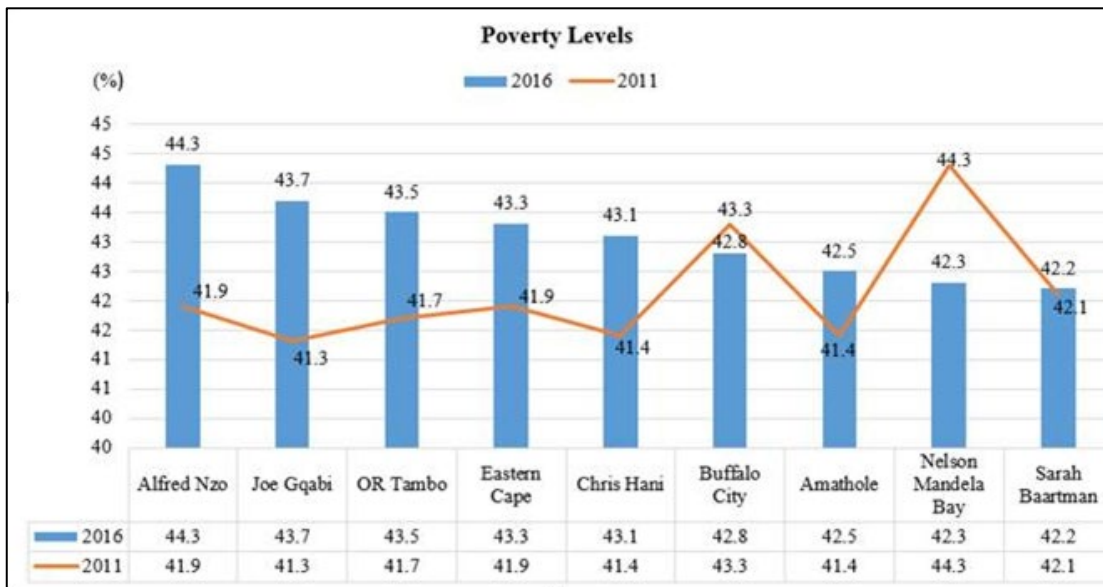
by this research study, in South Africa the effects of poverty and food insecurity are unequally spread. Further, Du Toit (2011) laments that Gauteng and the Western Cape have the lowest percentage of poor households, while the Eastern Cape, Limpopo and Mpumalanga have the majority of poor households. Clearly, the issue of food security should be discussed with other developmental issues such as poverty, commodity price increments that includes water and sanitation, social protection, electricity, rural and urban development, access to land, sources of income, changing household structures, health and education – to mention a few.

Food insecurity seems to be worsening and will continue to do so due to the ever-increasing high food prices, high living costs, poor land reform programmes and political instability. Continuing population and consumption growth levels also entail that the South African demand for food increases. The current incessant climate change in the district also has a significant impact on food security for future generations due to the seasonal shifts and temperature changes we are currently seeing. As we have seen from the data in Chapter 5 it could be predicted that food security is being threatened in terms of food production and availability, food accessibility and food system stability. The government presently addresses the current challenges by way of disaster and risk management programmes that include:

- school feeding schemes
- Nutritional Community Development Centres
- health services for pregnant and lactating women
- free health services for children younger than six years
- targeted cash transfers
- social grants for the destitute of the district

Although the South African government has done much to try and assist the situation, these programmes are not financially sustainable and viable for a long period. Social grants have played a crucial role to benefit the poor and vulnerable people in reducing poverty and food insecurity, but the levels of food insecurity are still high in the district as well as in the province.

Figure 6:6 Eastern Cape poverty levels



Source: ECSECC, 2017

The figure above reflects levels of poverty within the province aggregated per districts and metros. The total poverty levels for the province have increased from 2011 to 2016 with an average of 2.0%. By end of 2016, the unemployment in the province was 29.0% according to the narrow definition. This refers only to those who are still willing and looking for employment but excludes discouraged job seekers who have lost hope in ever finding employment (ECSECC, 2017).

Table 6:2 Dependency ratio per municipality

District and metros	Dependency ratio	
	2011	2016
Eastern Cape	65.9%	67.9%
Buffalo City	48.4%	55.4%
Nelson Mandela Bay	46.0%	57.4%
Sarah Baartman	52.0%	57.2%
Amathole	73.6%	62.3%
Joe Gqabi	71.2%	71.8%
Alfred Nzo	89.0%	83.8%
Chris Hani	74.1%	81.2%
O.R. Tambo	80.5%	76.8%

Source: ECSECC, 2017

The expanded definition of unemployment places Eastern Cape unemployment at 42.5%. There is a significant number of discouraged job seekers (426 000) of whom the majority are young people. The poor level of education and lack of work experience affects the youth in the province acutely. Two thirds of the Eastern Cape unemployed youth do not have a matric and 55.0% have no work experience. The opportunities within the labour market are closely linked to provincial educational levels and performance. These reflect the structural labour market inefficiencies which are as the result of the mismatch between the skills available and those demanded by the labour market (Eastern Cape Socio Economic Outlook Review, 2016).

The Eastern Cape's dependency ratio (the ratio of non-working age population to the working age population) remains high across all the districts. The higher the ratio, the greater pressure there is on the working age population to provide for those dependent individuals. In 2011, the dependency ratio was 65.9% and in 2016, it was 67.9% (STATS SA Community Survey, 2016). Despite the duty imposed on the state by the Constitution of the Republic of South Africa (1996), which is the supreme law of the land, it must be remembered that food security is not a legal concept per se, but it has neither obligation imposed nor provision of entitlement to the citizens of the country. Food security can be regarded as a precondition for the full enjoyment of the right to food. Fundamentally, the right to food is a basic human right issue that is recognised under both international and national laws in the country and should always be respected. This kind of right entitlement for all the people of the republic to have access to adequate food as well as the resources that are essential for the enjoyment of food security that is sustainable.

6.9 Sustainable livelihoods in the Amathole District Municipality

This research study was conducted in all the local municipalities of the Amathole district and one of the municipalities (Mbhashe) is known as the most vulnerable local municipality in the Eastern Cape, according to STATS SA (2016). Amathole's local municipalities are plagued by a severe lack of infrastructure and employment opportunities as well as administrative inefficiencies. Although South Africa is mostly considered as food-secure at a national level, more than a third of its population (particularly low-income households in rural areas) are said to be vulnerable to food insecurity. As shown in the data of Chapter 5 it was revealed that many households of Amathole are increasingly relying on purchased foods, they are vulnerable to food inflation spikes and crises that cut household income. The data supports that food security ought to be a priority policy issue for South Africa as the Constitution of the Republic dictates, according to the South African Constitution (1996, Section 27) there is a

major need for the country to reduce and (if possible) eliminate vulnerability to, and the negative consequences of, food insecurity within South Africa. Food security is enshrined in the South African Constitution and it is clearly stated that citizens have the right to have access sufficient food and water.

One is bound to conclude, from the South African Constitution (1996, Section 27), that the state is mandated by legislation and other measures within its available resources, to avail all progressive realisation of the right to sufficient food for its citizens – as guaranteed by the constitution and as cited in the Integrated Food Security Strategy for SA (2015). The South African republic's IFSS mention that its primary objective is to overcome rural food insecurity by increasing the participation of food-insecure households in productive agriculture sector activities; however, results show that the issue is not essentially agriculture alone but has more to do with total household income. It is not only agriculture that plays an important role in putting food on the table for low-income households – this will continue while there is a heavy reliance on social grants, and salaries, in the study's area. The evidence infers that the people of Amathole's food security status is dependent on household incomes (57.0%) and less on a function of food that individual households produce from their own consumption since agriculture occupies 5.5 % on the sources of food to the vulnerable people of Amathole.

The majority of people in Amathole consume food that is purchased, followed by food given by relatives or friends and shows that agriculture is no longer a primary food source. Rather, it is a secondary source, which confirms that food security needs a multidimensional strategy if we are to win the war on poverty and food insecurity in the district. Although agriculture is the secondary food source it does not necessarily mean that agriculture is not important to the functioning of households in these areas – implies that the nature of agriculture production in the area has changed as households have entered the capitalist wage labour market. It is noted that agriculture and farming in the area need a major boost in terms of both commercialisation and economic injection to make it attractive and youth-friendly starting from the school curriculum. Most households of Amathole (both urban and rural) seem to be net deficit food producers. Many of the households in the communal areas where agriculture has become a residual activity say that agriculture is not important to the functioning of households and is only conducted after most other activities necessary for the functioning of a household.

6.10 Conclusion

This chapter presented the discussion of findings (and some of the salient aspects) raised by both officials and community members on the implementation and management of the Poverty Alleviation Strategy, Integrated Food Security Strategy and Rural Development Strategy in both the district and the province. The findings demonstrate that a proper Integrated Food Security Strategy (which is not just treating food security as a measly pillar of the Poverty Alleviation Strategy) it needs a well-coordinated and fully integrated management. Without a strategic framework, government departments can engage in yearly planning but can hardly develop proper plans with measurable indicators, that can be measured and that will make an impact in vulnerabilities and food insecurity – resulting in sustainable development in the district. Without this, the Amathole district cannot achieve its goal as a food-secured district.

By looking at the statistics discussed in Chapter 5 it is clear that the district must promote social inclusion, implement social capital initiatives and build safer communities, amongst other actions. There is also a great need for the district to ensure income security, create economic opportunities and jobs, since the study reveals that many people of this district rely solely on grants for survival (figure 5.1), as well as better targeting access to basic services and assets. Furthermore, based on the analysis of both the data as presented and a review of the literature (Chapter 5), the results of this study have implications for policy administrators in the district. This data suggests that food insecurity is a possible factor that may affect the success of government development programmes, sources of food, water and the provision of basics services. It is therefore suggested that future research should be conducted on various food insecurity and hunger interventions that are being implemented across the district's poorest of the poor households, to evaluate the effectiveness of those programmes. This, as a result of the data from both Chapters 3 and 5 revealing that people of Amathole are food-insecure.

CHAPTER 7 : SUMMARY OF FINDINGS, CONCLUDING REMARKS AND RECOMMENDATIONS

‘It took me quite a long time to develop a voice, and now that I have it,
I am not going to be silent.’ (Albright, M)

7.1 Introduction

This chapter will provide the summary of findings in relation to the problem, as unearthed by the methods used to extract the information from the data, and in relation to the themes extracted from the sub-questions raised by this research thesis. The conclusions drawn and recommendations reached, with their implications, conclude the chapter. This thesis has revealed that social assistance of government through the welfare grant system proves to be an indispensable form of primary income for the majority of households. Salaries (for those who are employed) are used as a secondary source of food – as food is mostly now purchased from urban supermarkets. This is unlike in the past, when rural areas were distinguished as places where households themselves mostly produced food. Although it was not part of this thesis, it is worth mentioning that in the study areas there are no income generating opportunities available, other than a sporadic government project. The EPWP is a government project that employs very few people on a short-term basis, with a minimum stipend that is determined by the minister of labour (since the project is a type of an anti-poverty strategy).

This final chapter will revisit some of the assumptions made in Chapter 2 that deal with the literature review and will relate them to the finding Chapter 5 of this thesis. After which point, a discussion on food insecurity and vulnerability in the Eastern Cape in particular (this case study) will ensure that a concluding argument is made. At this stage it is probably wise to revisit the definition of food security as adopted by the IFSS (2002, p.6), which postulates it as universal physical, social and economic access to sufficient, safe and nutritious food by all South Africans at all times, to meet their dietary and food preferences for an active and healthy life. According to the research findings of this thesis, the Amathole district is clearly not food-secure. The district (as revealed by the study) does not have access to sufficient, safe and nutritious food (especially at all times) as per the IFSS.

Because households do not have access to enough of the right type of food to meet either their dietary or food preferences, they are not able to lead an active and healthy lifestyle. As previously alluded to in the study, and even although some households in Amathole may not

be chronically food-insecure according to this working definition of food security as adopted by the own government in the IFSS (2002), they still cannot be considered to be food-secure. We know that vulnerability keeps people poor, and drives others into poverty. Social protection offers an important solution to vulnerability as revealed in the findings of Chapter 5 of this research study.

Moreover, it is generally believed that social protection can reduce chronic poverty through several channels:

- First, social protection prevents people entering into poverty, and reduces the duration of poverty through maintaining minimum consumption levels.
- Second, social protection is capable of providing a basis for escaping poverty, both for the present generation and the next – through facilitating asset accumulation, increasing demand for health and education, and creating ‘multipliers’ in local economies, through enhanced demand for locally produced goods and services.
- Third, social protection helps build the social compact between citizen and state, through moving towards a minimal standard of well-being, below which people should not fall. Furthermore, it can increase agency, economic choice and a sense of entitlement; thus, enhancing the bargaining power of chronically poor groups.

Given the above statements, then, it can be argued that in addition to tackling the insecurity trap that is so characteristic of chronic poverty, social protection can also play a significant role in challenging other chronic poverty traps. Social protection offers a broad menu of instruments to address different vulnerabilities. While in any given situation, there will be no easy solution capable of dealing with all varieties of vulnerability, social assistance in the form of cash transfers is particularly effective in reaching, and including the chronically poor. We know that modest, targeted social assistance schemes are not only desirable, but also feasible and affordable in the context of most countries; however, these sentiments cannot confidently be raised as far as South Africa is concerned. They can also be initiated now, whereas developing more long-term and sustainable social insurance programmes can take much longer, and do not effectively address poverty at times, let alone chronic poverty, in the early decades.

While knowledge of what needs to be done is increasingly available, initiating and sustaining social protection is challenging – ideologically, politically and institutionally. For these

reasons, progress is slow, especially in chronically deprived countries. There are a number of key challenges, which include:

- The views of the elite that social protection will lead to dependency, can be challenged through contributions to an informed public debate on the nature and causes of poverty and how to address it.
- The concerns of civil servants in ministries of finance that the long-term commitments required will be fiscally destabilising, can be challenged through detailed analysis of the interactions between poverty, vulnerability, social protection and growth.

Making social protection the central pillar of strategy to eradicate poverty is one of the two major development challenges of the coming decade. The other is how to engage with this agenda in fragile, or, in the correct terminology, chronically deprived countries especially on the African continent as shown by the literature review. Here, we hypothesise that social protection contributes not only to a social compact between citizens and the state, but also to economic growth, with substantial benefits at the lowest strata of society. While countries undergoing, or recently recovered, from conflict may find the social protection agenda difficult to engage with, countries with even a modicum of government can develop self-help schemes with a relatively high degree of visibility and accountability. The importance of social protection, and the number of ongoing policy experiments, means that monitoring and evaluation are critical as we need to know what works best, where, and to provide solid evidence for public and political debates that enhances policy imperatives that are not only sustainable but beneficial to the downtrodden and vulnerable communities. By 2020, the world should be able to produce a social protection strategy, which would contribute strongly to poverty eradication in a large number of lower-income countries, and by 2030, should be able to address the poverty that is aggressively pushing the world into catastrophe – especially those defenceless communities who are entirely dependent on social grants.

The crucial role that social protection and salaries have been shown to play (according to this study) – with important income generation, well-being and diet of the households that are on the poverty and vulnerability fringe – has significance for policy of poverty reduction and food security, as well as rural development in this area.

Although the majority of households interviewed in this study derive a significant share of their income from social protection, they would rather, prefer to sell any surplus from their own fresh produce, in limited local or national markets – and this would be a better income

solution. In relying on social grants which are not sustainable, which are difficult to maintain and where system costs are relatively high, there are substantial inefficiencies along the value chain – with waste, poor institutional support and hardly any quality improvements or benefits. This was seen during the court case and parliamentary debacle between the DSD and the Post Office (*Daily Dispatch*, 2017). As a result, it became clear that there is a need to go back to food security basics, like forming food gardens, and supporting small-scale farmers in the district who urgently need special attention and support. In order to assist in increasing the capacity of small-scale farmers in food production in the Amathole district and subsequently to enable them to earn better income from their produce farming, they need to be supported by civil, private and public sectors.

Some private organisations seem to have already started investing in the agricultural sector – especially in the maize and hemp production through the ECRDA, which is a government entity whose responsibility is agricultural-related. It is clear that poverty and food security efforts by public entities alone may not be able to attain desirable outcomes. For the Eastern Cape government to abdicate its responsibilities to entities and to civil society is not a strategic move and it does not assist the country's development. Clearly, as articulated in Chapter 6 of the study, there is a lack of integration and leadership from the government while its citizens are languishing in poverty and food insecurity. Therefore, small-scale farmers need all forms of support in order to engage sustainably and effectively in viable, conducive farming that is output-oriented with an agenda of creating jobs for the poor and less skilled communities of the Amathole district. Amongst other things that might be needed by both the household food gardeners and small-scale farmers, will be an access to farming land, fertilisers, extension services, fresh produce farming skills, financial credit, packaging, refrigerated transportation and processing. All of the above needs, or areas of intervention and support, require a significant government and strong political commitment (not necessarily in the area alone), but in the province, as it lags behind in agricultural development and sinks deeper into food insecurity and poverty levels. Such commitments are only possible in a country where politicians appreciate and encourage communities to be self-sufficient and developmentally creative on their own. This is contrary to the existing situation of seemingly creating a welfare state by the current wave of social grants, which are not sustainable but ever-increasing: social spending with no economic return.

All of the politicians (local government councillors and national government MPs) who operate in the district should appreciate the enormous economic opportunities that the district has to offer. Both the agricultural front and the oceans economy present income generation for the area, as well as the potential for diversification of farming (cash crops); as we know, the Eastern Cape is mostly maize-dominated. Climate conditions alone cannot be regarded as the factor that determines the pattern of livelihoods, food security, insecurity and vulnerability. It must be noted that geographical elements tend to define household options for obtaining food and income. The ability to exploit those options and to survive in a crisis is determined largely by wealth. In other words, what people currently have or own by way of land, capital and livestock, together with their educational status and access to political, economic and social networks, determines the ways in which they will be able to access food and cash as well as the way in which they will respond to sudden or long-term change. Gender and social status (as noted by this research study), seem to play an important role in determining access to food and cash, and response to shocks and change. It is suggested that female-headed households with little or no land at all must be greatly supported by government, industry and civil society, as they are facing the triple challenges as articulated by Ngumbela (2015). Poor, female-headed households with a little patch of land may work for better-off households to get money to buy food, and the more better-off may use profits from agriculture as capital to engage in trade. In the event of a crisis (e.g., food insecurity), poor and better-off households will be affected differently; this, therefore, warrants separate scrutiny and integrated support by all stakeholders involved in food security and community development to avoid vulnerabilities – especially, those that are brought about by food insecurity. The investigation of differences between households is central to building a meaningful analysis of food security and vulnerability to the different hazards that are facing the environment today.

The main observation of this research study is that food insecurity and vulnerability are complex and multifaceted realities not only facing the Amathole district, but the world over. The two are variables interlinked and each is a cause of the other. That is to say, while food insecurity makes people vulnerable to various shocks and natural disasters (e.g., drought, disease, earthquakes, volcanic eruptions, etc.), their vulnerability to such catastrophes exacerbates their poverty, food security status and therefore, their vulnerability to future shocks. The severe socio-economic problems caused by HIV/AIDS, drought and floods in some parts of the country (e.g., triggered by El Niño on the African continent at large, Katrina in the United States (US) and the reported monsoon rains in South Asia), are largely due to

insufficient coping capacities of those countries, which in turn are caused by the wide prevalence of poverty.

Having observed the unhealthy symbiotic link between vulnerability and poverty, this research thesis strongly recommends and concludes that all efforts of poverty alleviation should take into account those factors, which exacerbate the vulnerability of the countless poor people who are food-insecure. The complexity of food insecurity and vulnerability means that no single solution for all situations or locations (e.g., one-size-fits-all). Food insecurity (just like poverty) is mainly viewed as an indicator to lack of access to resources and income opportunities. However, using words from Yodmani (2001), it must be noted that there are other aspects of social positioning (i.e., geographical location, age, gender, class, ethnicity, community structure, community decision-making processes, and political issues) that determine the vulnerability of poor people. Poorer households often identify vulnerability as a condition that takes into account both exposure to serious risks and defencelessness against deprivation. Defencelessness in turn, is often seen as a function of social marginalisation, which ultimately results in economic marginalisation.

Hence, the proposal by this research study is that the perception of the links between food insecurity and vulnerability calls for a clearer understanding of these variables. Consequently, this research study is an effort to comprehend the dynamics of food insecurity and vulnerability in the Amathole district in the Eastern Cape, using an interdisciplinary approach in search of such an understanding. Thus, it is important to have a clear knowledge of the location in the process of designing food insecurity and vulnerability alleviation programmes. It means that any successful programme must use a multidisciplinary solution in designing approaches to confront these polygonal challenges facing the world at this time. These programmes (amongst other things) should address social determinants of health. These are problems of promoting health and high illiteracy levels in the district – which have been found to be among major causes of perpetuated poverty and vulnerability. Since income poverty is one of the most notable aspects of poverty, there should be a concerted effort by the government, private sector and civil society to improve the country's aging infrastructure, and other production support services, to increase the income of the poor. The study has noted that poverty and food insecurity are narrowly based on an indicator of welfare; hence, the name, the welfare approach, which refers to the micro-economic concept of utility. The study strongly recommends that infrastructure development must be improved as a matter of urgency, to help commercialise and modernise agriculture – since the Eastern Cape regards agriculture as a

game-changer as far as food security is concerned. Good governance and complete rule of law are important in alleviating non-income forms of poverty.

Government programmes should be seen to reduce vulnerability to natural disasters by educating the poor on basic precautionary measures and ensuring that they have access to pertinent forecast information. In addition, findings revealed that there is no provincial food security strategy in the district; it seems that only the national Department of Agriculture has a food insecurity strategy, but is not properly implemented by all of the nine provinces of the country. As a result, the ADM is using various legislation as a basis for the implementation of food insecurity strategy in the municipality.

Further, this study recommends that a food insecurity strategy be developed as a matter of urgency to provide a framework for food security in the district. Also emanating from the findings of the research study is that most government departments and local municipalities that make up the district municipality, have different strategic objectives that could easily complement each other, but currently result in duplication and silo mentality. The existence of a food security strategy will ensure that there is a single goal for the district municipality, and each local municipality will be contributing to its achievements with a clear definition of roles and responsibilities. Thus, no one in the district would go to bed hungry or fearing where the next meal would come from. The absence of a specific food security strategy (and the weak strategic coordination in the entire district), results in different spheres of government, local municipalities and sectors of the municipality developing strategies that are duplicated (and that operate in silos), which result in spot development. They also completely fail to make headway and do not mutually reinforce each entity's efforts as far as poverty and food security is concerned. The situation needs a completely integrated approach that will bring sustainable development – entirely led by the local sphere of government, under the auspices of a local economic development participatory approach.

7.2 Youth agricultural entrepreneur development

This research thesis strongly recommends that both the province and district should strengthen the youth household food security programmes that need to target training of unemployed youth in agricultural production and marketing, to support food-insecure households. These youths are to be paid wages, which must be linked to performance.

These learnership programmes for the youth should also target the out-of-school youth to be put through the land reform programme that can yield profits through working on the land. (e.g., EPWP programmes, the Comprehensive Agricultural Support Programme (CASP.) Given that the province is currently running two agricultural colleges in different districts, namely Tsolo Agricultural and Rural Development Institute and Fort Cox Agriculture and Forestry Training Institute, it is recommended that the two institutions should be encouraged to customise their curricula towards the training of youth as agricultural entrepreneurs, to progress sustainable commercial farming across all districts.

7.3 Rural infrastructure

It is strongly recommended that this province should come up with a policy imperative that seeks to support integrated rural spatial development planning – which is an imperative for the implementation of The Spatial Planning and Land Use Management Act 16 of 2013 (SPLUMA). In line with SPLUMA, all the provincial districts should be encouraged to draw up their own spatial rural development frameworks, local municipality planning tribunals and land use schemes, which will necessitate the design of spatial information systems to enhance geo-spatial planning and information management, for rural development in the province (and the entire country). In this province, infrastructure backlogs remain prevalent in the areas of social, economic and basic infrastructure, which makes it difficult for the district municipalities to meet their targets for the provision of basic services – especially in the rural areas. The current rural infrastructure of the province is characterised by poor social and economic infrastructure, due to historical neglect and poor spatial planning in the country. Further, the infrastructure is aggravated by the poor integration, coordination and poor implementation of government infrastructure plans. Further, it is strongly suggested that in order to improve the development and food security, the province must develop an infrastructure portal for the benefit of, and to be shared by all municipalities; this is to avoid duplication (provincial and municipal). Thus, before a new project is launched, it can be ascertained if a similar project is not already in operation. The future infrastructure must include investment maps to assist in decision-making by management, programme implementers, project managers and communities.

The formation of such a government system of will have to work concertedly with the provincial GIS unit in order to spatialize the programmes that are assisting with pushing the food insecurity barriers. The other recommendation, which is extremely relevant for rural industrial infrastructure development, includes paying adequate attention to tourism, industrial

facilities like Industrial Development Zones (IDZ), Spatial Economic Zones (SEZ), industrial parks and Agri-Parks, oceans economy, Strategic Infrastructure Projects (SIPS), agriculture and agro-logistics. On the main, the above will only be realised once there is strong agricultural roads and renewable energy that will link and facilitate the Agri-Parks and strategic catalytic projects.

7.4 Food security framework act

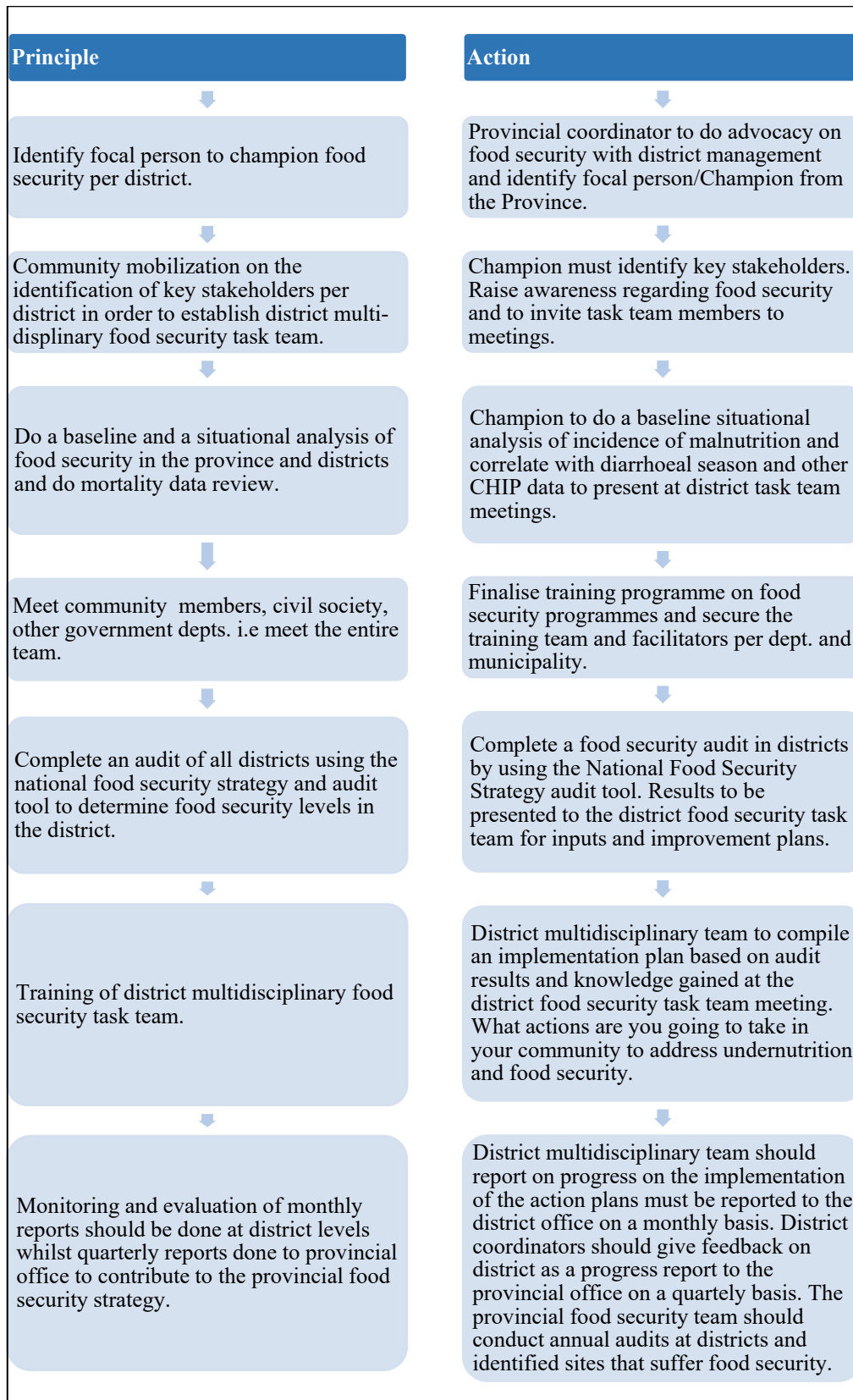
Food security has been taken into consideration since the inception of the constitutional rights (Section 27) of South Africa. The Constitution of South Africa states that every citizen has the right to have access to sufficient food and water, and that ‘the state must by legislation and other measures, within its available resources, avail to progressive realisation of the right to sufficient food’ (Constitution of SA, 1996). It is against the stated the legislation above that this research thesis strongly recommends that the constitutional power is utilised to ensure meaningful results and thus to alleviate food insecurity in the country. Taking legislative measures, for the progressive awareness of the right to have access to sufficient food into account, as well as the advantages that the Food Security Framework Act can provide, the researcher suggests that this be enacted as a matter of urgency before further vulnerable situations emerge in the country.

When drafting the Act, the legislatures should have due cognisance of the recommendations made by world organisations (like the UN’s FAO), as well as the lessons learnt from other jurisdictions that have already enacted such framework acts, like Brazil and Guatemala. Other South African framework acts for qualified socio-economic rights can also be consulted. More specifically, it is recommended that the proposed South African Food Security Framework Act, at least can make series of provisions for South Africa and make the dream for equality a reality. The proposed South African Food Security Framework Act can make the following provisions:

- defining the content or scope of the rights and its principles
- enforcing mechanisms and remedies
- efficiency gains and constant monitoring
- prioritising the most vulnerable areas for intervention
- education and awareness creation
- emergency measures
- international cooperation

- civil society representation and participation
- financial assistance from all stakeholders
- donor community assistance
- addressing land issues
- addressing labour issues
- social security and safety nets
- nutrition, food safety and consumer projects or behaviour

Figure 7:1 Proposed food security working group framework



Source: Researcher’s own construction

7.5 Government obligation

South Africa is generally regarded as a country in a transition regarding nutrition. Stunting and micronutrient deficiencies coexist with a rising incidence of overweight people and obesity. The situation desperately calls for a redress of the situation to avoid a vulnerable situation in the district. The lack of effectiveness of nutrition interventions by both the provincial government and the ADM is not a discussion point of this thesis; however, what is needed presently is the identification of children and adults at risk of malnutrition, and the appropriate links and referral need to be made to relevant stakeholders. Both the province and the Amathole District Municipality under discussion show that they are in need of more sustainable solutions to address malnutrition, and should include actions from other sectors (such as social services) who are in a position to address care for those who suffer from SAM.

Once again, this thesis strongly recommends that, for the province to be successful in fighting food insecurity on all fronts it needs a framework that will guide an implementation of a comprehensive food security management strategy. The framework will be used as a guide to implement a comprehensive package of care and support for the households that are food-insecure and vulnerable. The proposed framework should be guided by a strategy that involves different levels of interventions to avoid major vulnerabilities in the Amathole district. The strategy should include different levels of interventions like:

- Ward-based community outreach teams, community-based screening and early identification of households at risk of malnutrition for links and referral.
- District level response that will concentrate on moderate acute malnutrition cases before they become too severe and catastrophic to deal with.
- Provincial level where management of severe cases of acute malnutrition will be collectively handled by the multidisciplinary teams that will be led by both the departments of social development and agriculture.

In the cases mentioned above, it is advisable that the multi-sectoral approach be employed at all costs to avoid the current practice of the government benevolently issuing food parcels and social grants, which are not sustainable and are shrinking due to the economic meltdown. The inclusive process would assist the government by dispelling the notion that it (the government) is creating a welfare state approach, rather than a developmental state, where communities are encouraged to collaborate with the state and civil society in developing skills and entrepreneurial capacity. For this proposed food security framework to be meaningful and

successful for the province it must involve three phases, with each phase cognisant of the following:

- Must meet all the community members and all multi-sectorial stakeholders based at ward level.
- Province to train all district coordinators and outreach team members and households on food security programme and livelihoods.
- Supporting and monitoring implementation by the provincial and district task teams with the full support of the all elected public political officials to give credence to the intervention.

Based on the findings and concerns raised in the course of the study, this section provides future direction for further food security research and rural development programmes undertaken in the study area.

Figure 7:2 A Diagrammatic example of a perfect situation



Source: Researcher's own construction

7.6 Food security research

The major determinants of food insecurity that are identified in this study should be considered as a starting point in the search for a more comprehensive indicator of vulnerability of food insecurity in households. Future research should certainly explore different variable causes of food insecurity and vulnerability in the Amathole district in a concerted effort to capture the detailed dimensions of these issues by communities in distress. In addition, the use of different methods of aggregation should further be investigated to deepen the understanding of the dynamics and holistic nature of vulnerability to food insecurity. Future research studies, using the sustainable livelihoods framework, should incorporate more absolute food security analytical tools to understand the role of key assets and livelihood strategies on livelihood outcomes. Furthermore, it should be noted that this study only looked at understanding the current dynamics of vulnerability to food insecurity across agro-ecological zones. Thus, since vulnerability can be thought of as a continuum, it is important that future research should consider examining a household's vulnerability to food insecurity over time.

The study highlights eight main interrelated areas for urgent intervention of rural development programmes in the study area. These include:

- promotion of rural development
- improving agricultural production
- promoting income diversification and creating income-generating opportunities
- promoting irrigation
- improving agricultural extension and social services
- providing credit services and government support
- promoting coordination between stakeholders
- commercialise agriculture (new opportunity)

7.7 Promotion of rural development

To ensure every citizen's right to food, it is essential to make rural development socially inclusive and environmentally sustainable. This can be done by promoting modernised, small-scale agriculture, while at the same time bringing some of the amenities of urban life to the countryside, starting with universal networks of social, educational and health services. Indigenous knowledge systems need to be combined with modern technology to optimally fulfil household food needs and allow excess capacity to be used for job creation. While South Africa has become urbanised, the major portion of the population is still lives in rural areas,

and uneven development remains a structural feature on the trajectory of the province, resulting in districts having to fend for themselves, with fewer resources to address the situation. Although a series of policies and interventions have been put in place and the present political set up is addressing apartheid's legacy, there is, however, growing recognition that vast inequalities remain in rural areas.

7.8 Improving agricultural production

Efforts should be made to improve agricultural production, since almost all of the households in the area depend entirely on social grants. However, this study concludes that the Amathole district should determinedly try to engage on agriculture – where agricultural production for household food consumption, crop diversification, the selection of an appropriate variety of crops (drought and disease resistant, early maturing, and high yielding) – and the improvement of methods of cultivation should be the primary objectives of rural development programmes.

7.9 Promoting income diversification and creating income-generating opportunities

Promoting income diversification and creating income-generating opportunities should be critical areas of concern to mitigate the vulnerability of food insecurity in households. In the context of smallholder subsistence farming, access to various sources of income has a great deal of significance in times of shocks and disasters. Given the high frequency and severity of agricultural problems as a source for risk of food insecurity in the study area, access to supplementary sources of income is essential to use as a buffer against food deficit risks and associated shocks and disasters.

Therefore, it is important to make income-generating activities accessible to increase the income of households and further to improve their coping strategies.

7.10 Promoting irrigation

Promoting irrigation in the study area is critical to reduce the risk of unviable, low return, rain-fed agriculture. There are rivers and small streams in the study area suitable for irrigation and attention should be given in this respect to augment agricultural production and further to improve food security conditions of households in the study area.

7.11 Improving agricultural extension and social services

Improving agricultural extension and social services are also critical areas to mitigate vulnerability of food insecurity households in the study area. Appropriate extension services have to be expanded and farmers in the study area should be introduced to improved seeds and farm implements. Particular emphasis should be placed on market extension and social services (the improvement of schools, clinics, road transport, marketing and distribution facilities), to positively affect the food security conditions of households in the study area.

7.12 Providing credit services and government support

Credit services and government support are crucial conditions in order to improve farming practices including the use of improved seeds, fertilizers, pesticides and farm implements. Therefore, there should be appropriate government support and credit institutions that are based in the contexts of the local situations and interests of the community, to improve food security of households in the study area. Furthermore, the cost of agricultural inputs is often not affordable for poorer households, and this is where government subsidies and support is needed.

7.13 Promoting coordination between stakeholders

Above all, promoting coordination between all stakeholders is both a necessary and sufficient condition to take households out of the vicious circle of poverty and food insecurity. Vulnerability of food insecurity of households is not only a failure of the agricultural sector; it is the consequence of the complex interaction of biophysical and socio-economic factors. Solid integration and coordination between the agricultural sector and other sectors of the economy are central to rural development. In general, well-coordinated stakeholders with holistic and forward-looking approaches in dealing with the problem of food insecurity, can mitigate a household's vulnerability to this issue in the rural district of Amathole.

7.14 Commercialisation of agriculture: new opportunity

Despite the high agricultural potential in the area, the Eastern Cape is still regarded as predominantly rural province, which faces severe socio-economic developmental challenges. Approximately 54.8% of its population lives in poverty, and the rural areas continue to be economically marginalised. Thus, agriculture provides an opportunity for the province to provide employment for its largely unskilled population, while also increasing food security,

and contributing to other sectors through the agricultural value chain. The district should be taking a new direction to embrace the commercialisation of agriculture in rural communities. This, by targeting smallholder and communal farmers who must derive optimal economic value out of their agricultural activity, through customised collaboration with organised commercial partners. This approach will provide investment, technology capabilities, training and mentoring, and capital to promote transformation in the sector. The recent trend of the declining national and provincial economies relative to growth rates (required to service the development agenda and address the scourge of socio-economic inequality, poverty and underdevelopment), is an increasing threat to the stability of the country. A brief overview of the economic status and movement in associated factors that have direct bearing on the socio-economic trends shows that the Eastern Cape is contributing 7.7% to the South African economy, the fourth highest province contribution after Gauteng, KwaZulu-Natal and the Western Cape provinces.

7.15 Conclusion

The research objectives of the study were to:

- understand the dynamics of food insecurity and vulnerability
- investigate the causes of food insecurity
- investigate the South African government's approach to dynamics of food insecurity and vulnerability
- determine the factors that lead to food insecurity and vulnerability in the Amathole district
- evaluate the impact of food insecurity on food availability, access and utilisation in the Amathole district
- evaluate the impact of food insecurity on the local communities in the Amathole district

It is clear that the old ways of working in government are not functioning. Therefore, there are calls for new thinking, with the cluster approach being one of the many phenomena suggested to fast track and assist sustainable service delivery to vulnerable communities. The cluster system has been an innovation in the quest for streamlined and integrated government work. Clusters allow the government to concentrate on policy and political matters, so that they are not bogged down by the technical detail of policy implementation. Therefore, clusters play an important role in making sure that all policy implementation includes promoting a joint work ethos. What is left to the implementer is to do the groundwork and to guard against duplication and silo mentality that results in unsustainable, uncoordinated service delivery and unrelenting

protests by communities, and unnecessary duplication that depletes the resources, which are always in short supply for an ever-growing population.

Integrated development planning is one of the key tools that the local government must implement in its developmental role. In contrast to the role played by planning in the past, integrated development planning is seen as a function of municipal management and is part of an integrated system of planning delivery. As pointed out in Chapter 1, the Amathole district was chosen as a case study and the results of the evaluation do not necessarily relate to the whole of the Eastern Cape, although it could possibly apply to some other parts of the country. Furthermore, this study is recommended for other affected areas in South Africa, based on the findings and conclusions above. Many of the recommendations were derived from people's comments when asked what they would like the government to do, in order to control the situation in Amathole before it gets becomes untenable. The main observations of this thesis are that food insecurity and vulnerability are complex, multifaceted concepts that are interlinked in such a way that each one is a cause of the other. It is clear that while food insecurity makes people vulnerable to various shocks such as disease and hunger, their vulnerability to such shocks exacerbate their poverty – hence, their vulnerability to future shocks. Suffice to say, the severe socio-economic problems caused by disease and floods – which in turn was caused by, for example, El Niño in some parts of Africa and by monsoon rains in South Asia, as well as the incessant drought and unending conflicts in some parts of the African continent – are largely due to low coping capacities. Having observed the involved link between the two, that is, food insecurity and vulnerability, this study strongly recommends that all efforts should take into consideration those factors, which worsen and ravage the vulnerability of the poor. Finally, this study has made it clear that good governance in alleviating poverty not only has to do with administration, but all resources and rules of law. Any programme should seek to reduce vulnerability to natural disasters by educating the poor, on basic precautionary measures, and making sure that they have access to important forecast information.

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APPENDICES

APPENDIX I

Covering Letter

QUESTIONNAIRE REGARDING ASPECTS OF FOOD INSECURITY AND VULNERABILITY DYNAMICS

THE AIM AND NATURE OF THE RESEARCH STUDY

The goal of this study is to investigate the dynamics of food (in) security in relation to the vulnerable groups (household members) in the Amathole District of the Eastern Cape Province, South Africa. A secondary goal is to develop a framework for establishing an information system for monitoring food (in) security and vulnerability in the Eastern Cape Province.

PURPOSE

The main purpose of the study will be accompanied by the following objectives:

To investigate factors that inhibit the achievement of food security in the vulnerable group in the Amathole District. Some examples of inhibiting factors could be unemployment, unfavourable weather conditions (for engaging in small-scale farming), laziness in people and inadequate access to land as a means of executing small-scale farming.

To explore strategies that can be used as a means of fighting food insecurity in vulnerable groups in the Amathole District.

To identify key indicators that could be used in monitoring policies for food security of vulnerable groups in the Amathole District. In other words, to find out ways of identifying whether food security policies are being implemented effectively or not.

RESEARCH PROCEDURE

You are requested to participate in the questionnaire that will be completed by the researcher. The questionnaire will take approximately 30 minutes of your time complete.

All data gathered during this study will be handled and stored confidentially and only the members of the research team will have access to the data. Data published in the thesis or journals will not contain any information which may result in the identification of respondents.

Your anonymity will be assured at all times. We however request your personnel number to label the questionnaire and to ensure traceability for follow up procedures.

It is possible that you may not derive any benefit personally from your participation in the study, although the knowledge gained by means of the study may benefit other persons or communities.

By agreeing to take part in the study, you are also giving consent that data gathered be used by the researchers for scientific purposes as they see it fit. Consequently will further be assured as your name will not be recorded.

POSSIBLE BENEFITS OF THE STUDY

The present study shall provide knowledge regarding household food utilisation, food handling practices and food security status. The knowledge gained will then be utilised to introduce educational information based on areas with food insecurity and vulnerability challenges. The aim is to enhance household food security through optimum use of available resources and mechanisms.

The questionnaire will consist of questions regarding the food insecurity and vulnerability dynamics and demographic information. Results will be used to improve problem areas, feedback will be presented to the concerned parties at the end of the study.

INFORMATION

Should you require more information, please do not hesitate to contact Xolisile Ngumbela, (Doctoral Degree student) at xolisile.ngumbela@gmail.com and 072 396 2321 or contact my supervisors, Professors Ernest Nene Khalema at 031 - 260 2288 or at khalema@ukzn.ac.za and Thokozani Ian Nzimakwe at 031 – 260 2606 nzimakweth@ukzn.ac.za.

WITHDRAWAL OF PARTICIPATION

Participation in the study is completely voluntary and you have the right to withdraw from the study at any given time, should you wish to do so. However, you are kindly requested not to withdraw from the study without careful consideration.

RIGHTS OF THE RESEARCH SUBJECT

For questions about your rights while participating in this study, you may contact the Institutional Review Board at University of Kwa-Zulu Natal, The Research Ethics Committee at 031 - 260 4557.

DECLARATION OF CONSENT

I declare that I willingly participate in this study by completing the questionnaire. The purpose of this research study was explained to me and I declare that I fully understand the content thereof. I was given the opportunity (if so preferred) to discuss any aspects of the study with the researcher and hereby voluntary agree to participate in the study. I would hereby like to exempt the university or any employee or any student of the University from any liability which I might incur during this study.

If I have any questions or concerns about my rights as a study participant, or if I am concerned about an aspect of the study or the researchers then I may contact:

HUMANITIES & SOCIAL SCIENCES RESEARCH ETHICS ADMINISTRATION

Research Office, Westville Campus

Govan Mbeki Building

Private Bag X 54001

Durban

4000

KwaZulu-Natal, SOUTH AFRICA

Tel: 27 31 2604557 - Fax: 27 31 2604609

Email: HSSREC@ukzn.ac.za

I further more waive my right to institute any claims whatsoever against the university which may arise during the study or the conduct of any person involved in the study, except for claims arising from proven negligent conduct of the university or its employees or students.

My signature below indicates that I have agreed to participate in this study. You will be given a copy of this consent form to keep with your records.

Signature of the respondent:-----

Signed at -----on this -----day of -----2017

Signature of the researcher:-----

Signed at -----on this -----day of -----2017

Thank you for your willingness to participate in this research study. It is highly appreciated!!!

APPENDIX II

RESEARCH TITLE: UNDERSTANDING THE DYNAMICS OF FOOD INSECURITY AND VULNERABILITY IN THE AMATHOLE DISTRICT IN THE EASTERN CAPE PROVINCE, SOUTH AFRICA.

I have read the information presented in the information letter about a study being conducted by Xolisile Gideon Ngumbela towards the Doctor of Administration degree in the School of Management, IT and Governance at the University of the KwaZulu-Natal.

This study has been described to me in a language that I understand and I freely and voluntarily agree to participate. My questions about the study have been answered to my full satisfaction.

I fully understand that my identity will not be disclosed and was informed that I may withdraw my consent at any time by advising the student researcher.

With full knowledge of all foregoing, I agree to participate in this study.

Participant Name : _____

Participant Signature : _____

Date : _____

Place : _____

Student Researcher : Xolisile Gideon Ngumbela

Student Researcher Signature: _____

Student Number : 216076788

Telephone Number: 040 609 6090

Mobile Number : 072 396 2321

Email : xolisile.ngumbela@gmail.com

I am accountable to my supervisor: Professor Ernest Nene Khalema

School of Built Environment and Development Studies

Telephone : +27 31 260 2288

Fax : +27 31 260 7840

Email : khalema@ukzn.ac.za

APPENDIX III

UKZN HUMANITIES AND SOCIAL SCIENCES RESEARCH ETHICS COMMITTEE
(HSSREC)

IMVUME YOTHATHO NXAXHEBA

Umhla:.....

Umbuliso,

Igama lam ngu Xolisile G. Ngumbela nongumfundi kwi Dyunivesithi I KwaZulu-Natal ndenza isidanga sobugqirha kwi Public Administration. Iinkcukacha zam zimi ngolu hlobo (072 396 2321 unomyayi; 043 736 6380 eyase khaya; 040 609 6090 ngexesha lomsebenzi; ifeksi 086 6736 553 kuze ikhasi le imeyile ibe ngu xolisile.ngumbela@gmail.com)

--

IMVUME YOKUTHABATHA INXAXHEBA KUPHANDO

Mna (Igama)ndiye ndacaciselwa ndaqonda malunga nophando esihloko sithi (Ukuqonda banzi namazwembezwebe malunga nokunqongophala kokutya kwingingqi kaMasipala ombaxa i Amathole, eseMpuma Koloni) ngu Xolisile Gideon Ngumbela- umphandi ongumfundi kwi Dyunivesithi I KwaZulu-Natal nowenza isidanga sobugqirha kwi Public Administration (akenzeli nzuzo koko ukuphumelela isidanga sobugqirha kwi Public Administration).

Umphandi undicacisele malunga nenjongo ngqo ezizama ukuphunyezwa lolu phando.

Ndiye ndalinikwa nethuba lokubuzwa imibuzo malunga nophando olu ndeva neempendulo ezindanelisileyo ngokuncamisayo, nangokungaphaya kwamathandabuzo.

Ndiyavakalisa ndibhengeza kanjalo ukuba uthatho nxaxheba lwam kolu phando lukhululekile kwaye ndiyavuma ngokusemthethweni, kodwa apho kuthe kwakho ukungaboni ngasonye

ndiyakurhoxa ngokusesikweni noxa oko kungasayi kuchaphazela oko kuyinzuzo emalunga nam njengomhlali nommi.

Ndixelelwe malunga nemiba yentlawulo kunye nemiba ebhekisele kwimpilo okanye umonzakalo onokuthi ubekhona kum ngexa uphando luqhuba.

Kuyekwachatshazelwa nombamba wokuba ekhe ndanemibuzo okanye iinkxalabo ezimalunga nolu phando ndinganxibelelana no Xolisile Gideon Ngumbela- umphandi ongumfundi oonkcukacha zakhe zizezi, (072 396 2321 umoyayi; 043 736 6380 eyase khaya; 040 609 6090 ngexesha lomsebenzi; ifeksi 086 6736 553 kuze ikhasi le imeyile ibe ngu xolisile.ngumbela@gmail.com)

Ekhe ndaneentandabuzo malunga nokuthatha inxaxheba kolu phando kunye namalungelo am njengomthathi nxaxheba okanye amaxhala malunga nemiba ethile nophando olu okanye umphandi loo nongumfundi ndiyazi ukuba ndivumelekile ukuba ndinxibelelane, nale ofisi ilandelayo ye Dyunivesithi i KwaZulu-Natal:

UKZN HUMANITIES AND SOCIAL SCIENCES RESEARCH ETHICS COMMITTEE
(HSSREC)

IMVUME YOTHATHO NXAXHEBA

HUMANITIES & SOCIAL SCIENCES RESEARCH ETHICS ADMINISTRATION
RESEARCH OFFICE, WESTVILLE CAMPUS

Govan Mbeki Building

Private Bag X 54001

Durban

4000

KwaZulu-Natal, SOUTH AFRICA

Tel: 27 31 2604557 - Fax: 27 31 2604609

Email: HSSREC@ukzn.ac.za

Isiqinisekiso mvume esongezelelweyo, Nalapho sifuneka khona

Ndiyavuma ndiqinisekisa ukuba:

Kungashicilelwa Isandi/ Iingxoxo zasesidlangalaleni zesininzi Ewe /

Hayi

Kungashicilelwa kwisithathi mifanekiso / Iingxoxo zasesidlangalaleni zesininzi

Ewe / Hayi

Kungasetyenziswa ifoto zam/ Iingxoxo zasesidlangalaleni zesininzi Ewe /

Hayi

Isibophelelo (Umthathi Nxaxheba)

Umhla

Isibophelelo (Inggina)
(Apho kuyimfuneko khona)

Umhla

Isibophelelo (Umguquli Lwimi)
(Apho kuyimfuneko khona)

Umhla

APPENDIX IV

UKZN HUMANITIES AND SOCIAL SCIENCES RESEARCH ETHICS COMMITTEE
(HSSREC)

APPLICATION FOR ETHICS APPROVAL

For research with human participants

Information Sheet and Consent to Participate in Research

Date:

Greetings,

My name is Xolisile G. Ngumbela from (Provide information about the researcher (name, department/institution and various contact numbers and email addresses)

CONSENT TO PARTICIPATE

I (Name) have been informed about the study entitled (provide details) by (provide name of researcher/fieldworker).

I understand the purpose and procedures of the study (add these again if appropriate).

I have been given an opportunity to ask questions about the study and have had answers to my satisfaction.

I declare that my participation in this study is entirely voluntary and that I may withdraw at any time without affecting any of the benefits that I usually am entitled to.

I have been informed about any available compensation or medical treatment if injury occurs to me as a result of study-related procedures.

If I have any further questions/concerns or queries related to the study I understand that I may contact the researcher at (provide details).

If I have any questions or concerns about my rights as a study participant, or if I am concerned about an aspect of the study or the researchers then I may contact:

HUMANITIES & SOCIAL SCIENCES RESEARCH ETHICS ADMINISTRATION

Research Office, Westville Campus

Govan Mbeki Building

Private Bag X 54001, Durban, 4000

KwaZulu-Natal, SOUTH AFRICA

Tel: 27 31 2604557 - Fax: 27 31 2604609

Email: HSSREC@ukzn.ac.za

Additional consent, where applicable

I hereby provide consent to:

Audio-record my interview / focus group discussion	YES / NO
Video-record my interview / focus group discussion	YES / NO
Use of my photographs for research purposes	YES / NO

UKZN HUMANITIES AND SOCIAL SCIENCES RESEARCH ETHICS COMMITTEE
(HSSREC)

APPLICATION FOR ETHICS APPROVAL

For research with human participants

Information Sheet and Consent to Participate in Research

Signature of Participant

Date

Signature of Witness
(Where applicable)

Date

Signature of Translator
(Where applicable)

Date



Tel: 046 645 7400/7451 Fax: 046 645 2562
8 Somerset Street Fort Beaufort, 5720 P.O.Box 36, Fort Beaufort, 5720

Enquiries: P.Madotyeni

Mr Xolile Ngumbela
Bisho
5605

Dear Sir

RE: PERMISSION TO CONDUCT RESEARCH

Your email dated 20th February 2017 bears reference

Kindly note that your request to conduct research has been approved by the municipality and you will forward a list of documents that you will like to peruse in the municipality.

You are further advised to liaise with the office of the Municipal Manager regarding the date and time that you wish to visit the municipality in order to plan well for your visit

Regards,


L MENZE
INTERIM MUNICIPAL MANAGER

DATE: 16/3/2017

RAYMOND MHLABA MUNICIPALITY

APPENDIX V

UKZN HUMANITIES AND SOCIAL SCIENCES RESEARCH ETHICS COMMITTEE
(HSSREC)

IMVUME YOTHATHO NXAXHEBA

Umhla:.....

Umbuliso,

Igama lam ngu Xolisile G. Ngumbela nongumfundi kwi Dyunivesithi I KwaZulu-Natal ndenza isidanga sobugqirha kwi Public Administration. Iinkcukacha zam zimi ngolu hlobo (072 396 2321 umoyayi; 043 736 6380 eyase khaya; 040 609 6090 ngexesha lomsebenzi; ifeksi 086 6736 553 kuze ikhasi le imeyile ibe ngu xolisile.ngumbela@gmail.com)

IMVUME YOKUTHABATHA INXAXHEBA KUPHANDO

Mna (Igama)ndiye ndacaciselwa ndaqonda malunga nophando esihloko sithi (Ukuqonda banzi namazwembezwe malunga nokunqongophala kokutya kwingingqi kaMasipala ombaxa i Amathole, eseMpuma Koloni) ngu Xolisile Gideon Ngumbela- umphandi ongumfundi kwi Dyunivesithi I KwaZulu-Natal nowenza isidanga sobugqirha kwi Public Administration (akenzeli nzuzo koko ukuphumelela isidanga sobugqirha kwi Public Administration).

Umphandi undicacisele malunga nenjongo ngqo ezizama ukuphunyezwa loluphando.

Ndiye ndalinikwa nethuba lokubuza imibuzo malunga nophando olu ndeva nempendulo ezindanelisileyo ngokuncamisayo.

Ndiyavakalisa ndibhengeza kanjalo ukuba uthatho nxaxheba lwam kolu phando lukhululekile kwaye ndiyavuma ngokusemthethweni, kodwa apho kuthe kwakho ukungaboni ngasonye ndiyakuroxa ngokusesikweni noxa oko kungasayi kuchaphazela oko kuyinzuzo emalunga nam.

Ndixelelwe malunga nemiba yentlawulo kunye nemiba ebhekisele kwimpilo okanye umonzakalo onokuthi ubekhona kum ngexa uphando luqhuba.

Kuyekwachatshazelwa nombamba wokuba ekhe ndanemibuzo okanye iinkxalabo ezimalunga nolu phando ndinganxibelelana no Xolisile Gideon Ngumbela- umphandi ongumfundi oonkcukacha zakhe zizezi, (072 396 2321 unomyayi; 043 736 6380 eyase khaya; 040 609 6090 ngexesha lomsebenzi; ifeksi 086 6736 553 kuze ikhasi le imeyile ibe ngu xolisile.ngumbela@gmail.com)

Ekhe ndaneentandabuzo malunga nokuthatha inxaxheba kolu phando kunye namalungelo am njengomthathi nxaxheba okanye amaxhala malunga nemiba ethile nophando olu okanye umphandi loo nongumfundi ndiyazi ukuba ndivumelekile ukuba ndinxibelelane, nale ofisi ilandelayo ye Dyunivesithi i KwaZulu-Natal:

UKZN HUMANITIES AND SOCIAL SCIENCES RESEARCH ETHICS COMMITTEE
(HSSREC)

IMVUME YOTHATHO NXAXHEBA

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Private Bag X 54001

Durban

4000

KwaZulu-Natal, SOUTH AFRICA

Tel: 27 31 2604557 - Fax: 27 31 2604609

Email: HSSREC@ukzn.ac.za

Isiqinisekiso mvume esongezelelweyo, Nalapho sifuneka khona

Ndiyavuma ndiqinisekisa ukuba:

Kungashicilelwa Isandi/ Iingxoxo zasesidlangalaleni zesininzi Ewe /
Hayi
Kungashicilelwa kwisithathi mifanekiso / Iingxoxo zasesidlangalaleni zesininzi
Ewe / Hayi
Kungasetyenziswa ifoto zam/ Iingxoxo zasesidlangalaleni zesininzi Ewe /
Hayi

Isibophelelo (Umthathi-nxaxheba)

Umhla

Isibophelelo (Inqina)
(Apho kuyimfuneko khona)

Umhla

Isibophelelo (Umguquli Lwimi)
(Apho kuyimfuneko khona)

Umhla

APPENDIX VI

RESEARCH TITLE: UNDERSTANDING THE DYNAMICS OF FOOD INSECURITY AND VULNERABILITY IN THE AMATHOLE DISTRICT IN THE EASTERN CAPE PROVINCE, SOUTH AFRICA.

I have read the information presented in the information letter about a study being conducted by Xolisile Gideon Ngumbela towards the Doctor of Administration Programme at the School of Management, It and Governance at the University of the KwaZulu-Natal.

This study has been described to me in a language that I understand and I freely and voluntarily agree to participate. My questions about the study have been answered to my full satisfaction.

I fully understand that my identity will not be disclosed and was informed that I may withdraw my consent at any time by advising the student researcher.

With full knowledge of all foregoing, I agree to participate in this study.

Participant Name : _____

Participant Signature : _____

Date : _____

Place : _____

Student Researcher : Xolisile Gideon Ngumbela

Student Researcher Signature: _____

Student Number : 216076788

Telephone Number: 040 609 6090

Mobile Number : 072 396 2321

Email : xolisile.ngumbela@gmail.com

I am accountable to my supervisor: Professor Ernest Nene Khalema

School of Built Environment and Development Studies

Telephone : +27 31 260 2288

Fax : +27 31 260 7840

Email : khalema@ukzn.ac.za

APPENDIX VII

AMATHOLE LOCAL GOVERNMENT DIRECTORY

AMATHOLE DISTRICT MUNICIPALITY

40 Cambridge Street, East London, 5201

Tel: +27 43 701 4000 / Fax: +27 43 742 0337

Email: info@amathole.gov.za

Website: www.amathole.gov.za

Amahlathi Local Municipality

Tel: +27 43 683 5000 / Fax: +27 43 683 2970

Website: www.amahlathi.gov.za

Great Kei Local Municipality

Tel.: +27 43 831 1028 / Fax: +27 43 831 1483

Website: www.greatkeilm.gov.za

Mbhashe Local Municipality

Tel: +27 47 489 5800 / Fax: +27 47 489 5800

Website: www.mbhashemun.gov.za

Mnquma Local Municipality

Tel: +27 47 401 2400 / Fax: +27 47 491 0195

Website: www.mnquma.gov.za

Ngqushwa Local Municipality

Tel: +27 40 673 3095 / Fax: +27 40 673 3771

Website: www.ngqushwamun.gov.za

Raymond Mhlaba Local Municipality

Tel: +27 46 645 7400/ Fax: +27 46 645 2562

Website: www.raymondmhlaba.gov.za

Appendix – for Ethical Clearance Application

The target population will be randomly chosen from the settlements who benefitted from the Eastern Cape's Department of Health's programme of Partnership for the Delivery of Primary HealthCare programme that was funded by the European Union. According to Mouton (1996:138) the random sample was therefore drawn from the strata and every household within the strata had an equal chance of being selected. When the researcher will make the following decisions. The research assistant's will have one questioner per household and had to interview only one person per household. The primary target for the study will be the head of the household. If the head of the household is unavailable the next adult person will be interviewed. In a situation where the whole household is unavailable or refuses to be interviewed another household will be added to the list of the chosen sample.

Feedback will be given to both the participants and local municipalities through council meetings that the District Municipal manager has agreed upon. Potential value of findings that the research study will yield the potential value in that: The study will provide insights on dynamics of Food Insecurity and Vulnerability in the Amathole District. The study will also help in pointing out the scope for future research on the subject as well as areas for policy considerations and Government Departments' intervention strategies hence the anticipation of the policy holders as well during the data gathering stage.

HSSREC Research Office Contact Details – 031 260 4557 is included on the consent form and letter of introduction

Consent documents is translated on the into a local language (see attachment)

The study will be only concentrated on the household heads that will be randomly selected. And where there is a household headed by the under 21 years of age, the researcher will take the next household.

*Note well: The above information is explicitly explained in chapter three of the study. That is Research Methodology Chapter of the study.

APPENDIX VIII

RESEARCH TITLE: UNDERSTANDING THE DYNAMICS OF FOOD INSECURITY AND VULNERABILITY IN THE AMATHOLE DISTRICT IN THE EASTERN CAPE PROVINCE, SOUTH AFRICA.

I have read the information presented in the information letter about a study being conducted by Xolisile Gideon Ngumbela towards the Doctor of Administration Programme at the School of Management, It and Governance at the University of the KwaZulu-Natal.

This study has been described to me in a language that I understand and I freely and voluntarily agree to participate. My questions about the study have been answered to my full satisfaction.

I fully understand that my identity will not be disclosed and was informed that I may withdraw my consent at any time by advising the student researcher.

With full knowledge of all foregoing, I agree to participate in this study.

Participant Name : _____

Participant Signature : _____

Date : _____

Place : _____

Student Researcher : Xolisile Gideon Ngumbela

Student Researcher Signature: _____

Student Number : 216076788

Telephone Number: 040 609 6090

Mobile Number : 072 396 2321

Email : xolisile.ngumbela@gmail.com

I am accountable to both my supervisor and co-supervisor and governed by Humanities and Social Sciences Research Ethics Committee of the University of KwaZulu-Natal.

Professor Ernest Nene Khalema (Supervisor)

School of Built Environment and Development Studies

Telephone : +27 31 260 2288

Fax : +27 31 260 7840

Email : khalema@ukzn.ac.za

Professor Thokozani Ian Nzimakwe (co-supervisor)

School of Management, IT and Governance

Telephone : +27 31 260 2606

Fax : +27 31 260 7840

Email : nzimakweth@ukzn.ac.za

HUMANITIES & SOCIAL SCIENCES RESEARCH ETHICS ADMINISTRATION

RESEARCH OFFICE, WESTVILLE CAMPUS

GOVAN MBEKI BUILDING

Private Bag X 54001

Durban

4000

KwaZulu-Natal, SOUTH AFRICA

Tel: 27 31 2604557 - Fax: 27 31 2604609

Email: HSSREC@ukzn.ac.za

APPENDIX IX



Amathole District Municipality
All correspondence to be addressed to:

Municipal Manager
Waverly Office Park, 3 - 33 Phillip Frame, Chiselhurst, 5247
P.O Box 320 * East London * South Africa * 5200
Telephone: 043 701 4000 * Facsimile: 043 721 2874
Email: info@amathole.gov.za * Web Address: www.amathole.gov.za

College of Law and Management Studies
School of Management, IT & Governance
University of Kwa- Zulu Natal
Westville
4041

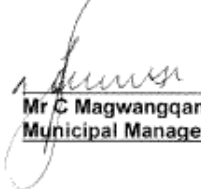
Dear Mr X.G Ngumbela

Re: Permission to conduct Research Study at ADM.

The above subject matter refers.

Kindly note that your request to conduct research in Amathole District Municipality has been approved.

Yours Faithfully



Mr C Magwangqana
Municipal Manager

10-10-2016
Date _____

Commitment Towards Selfless, Excellent & Sustainable Service Delivery To All Our Communities

College of Law and Management Studies
School of Management, It and Governance
University of Kwa-Zulu Natal
Westville
4041

The Municipal Manager
Amathole District Municipality
East London
5201

Dear Sir

REQUEST FOR PERMISSION TO CONDUCT A RESEARCH STUDY AT AMATHOLE DISTRICT MUNICIPALITY.

I am a student at the University of Kwa-Zulu Natal, doing doctorate in Public Administration. As you might be aware that any post graduate study involves the completion of a Thesis, it is against this background that permission is requested to undertake research in your Municipality.

The title of my Thesis is "**UNDERSTANDING THE DYNAMICS OF FOOD INSECURITY AND VULNERABILITY IN THE AMATHOLE DISTRICT IN THE EASTERN CAPE PROVINCE, SOUTH AFRICA**", and is undertaken under the supervision of Professors Ernest Nene Khalema at 031 - 260 2288 or at khalema@ukzn.ac.za and Thokozani Ian Nzimakwe at 031 – 260 2606 nzimakweth@ukzn.ac.za

The objectives of this research are to:

The goal of this study is to investigate the dynamics of food (in) security in relation to the vulnerable groups (household members) in the Amathole District of the Eastern Cape Province, South Africa. A secondary goal is to develop a framework for establishing an information system for monitoring food (in) security and vulnerability in the Eastern Cape Province.

The goal will be accompanied by the following objectives:

- 1.1 To investigate factors that inhibit the achievement of food security in the vulnerable group in the Amathole District. Some examples of inhibiting factors could be unemployment, unfavourable weather conditions (for engaging in small-scale farming), laziness in people and inadequate access to land as a means of executing small-scale farming.
- 1.2 To find out about strategies that can be used as a means of fighting food insecurity in vulnerable groups in the Amathole District.
- 1.3 To identify key indicators that could be used in monitoring policies for food security of vulnerable groups in the Amathole District. In other words, to find out ways of identifying whether food security policies are being implemented effectively or not.

The research study shall make use of interviews with key selected participants/respondents chosen from your municipality. The potential respondents/participants will include households and government officials that participating in the policy implementation realm. The study will be beneficial to the Municipality, Local Government and Provincial Government departments as the results and recommendations will assist the policy holders in understanding the dynamics of food insecurity and vulnerability in the Amathole District.

The ethical research principles will be strictly adhered to throughout the research process so as to maintain a high standard of work ethic and high quality of the research being undertaken. The information obtained will be used only for the research purpose and will ensure anonymity and confidentiality of potential research participants.

Hoping that this request will receive your favourable consideration, I therefore request the granting of permission to interview and collect the necessary information from the participants.

Yours Sincerely

.....
X. G. Ngumbela

RESEARCHER – BA Ed; BA Hons & MPA

072 396 2321 – Cell

043 736 6380 – After Hours

040 609 6090 – Office Hours

xolisile.ngumbela@gmail.com

APPENDIX X



Beacon Hill Office Park - Corner of Hargreaves Road and Hockley Close - Private Bag X9039 - Bisho - 5605 - REPUBLIC OF SOUTH AFRICA
Tel: +27 (0)43 605 5018 - Fax: +27 (0)43 605 5470 - Email address: Syabulela.pet@ecded.gov.za - Website: www.socdev.ecprov.gov.za

Mr. X. G. Ngumbela
Researcher
School of Management, IT and Governance
University of Kwa-Zulu Natal
Private Bag X54001
Westville
4000

Dear Sir

RE: REQUEST FOR PERMISSION TO CONDUCT A RESEARCH STUDY AT AMATHOLE DISTRICT MUNICIPALITY


The above matter bears reference.

This department hereby acknowledge receipt of your letter. Kindly be advised that the department is unable to accede to your request due to an overwhelming number of requests of this kind that we receive on a daily basis.

You are therefore, advised to engage other Departments or Institutions in this regard. I however, wish you the utmost success throughout your efforts you are showing in developing your career.

Any inconvenience suffered in this regard is regretted.

Yours in Good Governance.


S. KHANYILE
SUPERINTENDENT GENERAL
DEPARTMENT OF SOCIAL DEVELOPMENT
DATE: 24/08/2016

Building a Caring Society. Together.

APPENDIX XI

AM AHLATHI
Masipala, Municipality, Munisipaliteit

Private Bag X4002
Stutterheim
Oos-Kaap / Eastern Cape
SOUTH AFRICA
4930

Tel: +27 (0)43 683 5000
Tel: +27 (0)43 683 5001

OUR REF:
ONS VERW:



12 Maclean Str
Stutterheim
Oos-Kaap / Eastern Cap
SOUTH AFRIC
493

Fax: +27 (0)43 683 112
Website: www.amahlathi.gov.za

YOUR REF
U VERW

21 February 2017

TO WHOM IT MAY CONCERN
UNIVERSITY OF KWA-ZULU NATAL
Westville
4041

RE: REQUEST TO USE AMAHLATHI MUNICIPALITY ON THESIS FOR HIS DOCTORATE

Your letter submitted to my office bears reference
Permission is hereby granted to your request to use Amahlathi Municipality on a Thesis for your
Doctorate programme: PUBLIC ADMINISTRATION: **Understanding the dynamics of food
insecurity and vulnerability in the Amathole district in the Eastern Cape Province, South
Africa.**

Hoping that the research findings will assist the municipality in addressing shortcomings in the
selected focus area. It would therefore be appreciated if the research results can be made
available to the municipality

Regards,

BK SOCIKWA
MUNICIPAL MANAGER

All Correspondences to be addressed to the Office of the Municipal Manager
Imbalelwano zonke zithunyelwa kwi-Ofisi ka-Manejala woMasipala
Korrespondensie gerig te word aan die Kantoer van die Bestuurder

APPENDIX XII



Province of the
EASTERN CAPE
COOPERATIVE GOVERNANCE
& TRADITIONAL AFFAIRS

Head of Department

Tyamzashe Building · Phalo Avenue · Private Bag X0035 · Bhisho · 5605
Eastern Cape · REPUBLIC OF SOUTH AFRICA

Tel: +27 (0)40 609 5656 · Fax: +27 (0)40 635 0439 · website: www.ecprov.gov.za/lga/

College of Law and Mangement Studies
School of Management, It and Governance
University of Kwazulu Natal
Westville
4041

Dear Sir

REQUEST FOR APPROVAL TO CONDUCT A RESEARCH STUDY: MR X.G NGUMBELA

- The Department would like to acknowledge the receipt of the research request.
- The Department is unable to assist you, because the research is based at Amathole District Municipality.

It is recommended that you write to the Municipal Manager: Amathole District Municipality.

Regards

Ms N. Mosehana

Head of Department: Cooperative Governance and Traditional Affairs

Date 06 December 2016



Ikama eliqambileyo!

College of Law and Management Studies
School of Management, It and Governance
University of Kwa-Zulu Natal
Westville
4041

The Head of Department
Department of Cooperative Governance and Traditional Affairs
P. O. Box 0035
Bhisho
5605

REQUEST FOR APPROVAL TO CONDUCT A RESEARCH STUDY

I am currently doing Doctorate in Public Administration Degree (D. ADMIN) at the University of Kwa-Zulu Natal, Westville Campus. One of the requirements for this qualification is to conduct research study in the related field. The research study that I have proposed to do is **“UNDERSTANDING THE DYNAMICS OF FOOD INSECURITY AND VULNERABILITY IN THE AMATHOLE DISTRICT IN THE EASTERN CAPE PROVINCE, SOUTH AFRICA.”**

This research study will provide details about food insecurity and security in relation to issues of vulnerability in the Amathole District in the Eastern Cape Province. The advent of the democratic transformation in South Africa in 1994 brought with it the high hope that poverty, unemployment and inequity would be significantly reduced from the very high levels that had existed during the Apartheid era. However, this expectation was not achieved effectively as expected. Instead, the challenges of poverty, unemployment and inequity have continued to be encountered up until today. One of the symptoms of these challenges is food insecurity.

The concept 'food insecurity' at its core exists with food security. Food security implies that people in a society have adequate food at all times as a means of sustaining a healthy and active life. Food security is also about, firstly, the availability of food that is safe and nutritious and, secondly, the ability of people to procure and acquire good quality food in a manner that is socially acceptable. This would involve, for example, obtaining food without using measures such as stealing, scavenging, using emergency food supplies.

Benefit of this study to the department is that a summary of findings will be made available on request from the Departments of Social Development, Health, Rural Development and Agrarian Reform and the Amathole District Municipality and these findings may be used to develop policy guidelines in developing food security strategies and vulnerability coping mechanisms in Amathole District Municipality and to suggest remedial action that can promote or inhibit poverty alleviations strategies in the entire District.

Hoping that this request will receive your favourable consideration

Thanking you in advance

Yours Sincerely



X. G. Ngumbela

RESEARCHER – BA Ed; BA Hons & MPA

072 396 2321 – cell

043 – 736 6380 – home

040 609 6090 – work

xolisile.ngumbela@gmail.com

APPENDIX XIII

Search Images Maps Play YouTube News Gmail Drive More »
xolisile.ngumbela@gmail.com | Account | Settings | Help | Sign out
You are currently viewing Gmail in basic HTML. Switch to standard view | Set basic HTML as default view

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Inbox (6)
Starred
Sent Mail
Drafts
All Mail
Spam (1)
Trash
Contacts
Labels
Notes
Unwanted
Edit labels

« Back to Inbox Archive Report Spam Delete
More Actions... Go

Newer 9 of 20 Older
Print New window

REQUEST FOR RESEARCH Inbox

Mfundo Gubanca <gubancam@mbhashemun.gov.za>
To: xolisile.ngumbela@gmail.com
Cc: mbolan@mbhashemun.gov.za
Reply | Reply to all | Forward | Print | Delete | Show original

Thu, Feb 23, 2017 at 9:40 PM

Good day Mr Ngumbela

I kindly confirm that your request for research is approved, please see the attached document.

Yours in Developmental Local Government.



Mfundo Gubanca
Admin Clerk MMs Office
Mbhashe Local Municipality
Tel:047 489 5808
Cell: 073 975 6719
fax:047 489 1137

Disclaimer

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Include quoted text with reply

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Gmail view: [standard](#) | [basic HTML](#) [Learn more](#)

[Terms](#) - [Privacy](#) - [Gmail Blog](#) - [Google Home](#)

The goal will be accompanied by the following objectives:

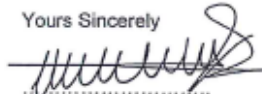
- 1.1 To investigate factors that inhibit the achievement of food security in the vulnerable group in the Amathole District. Some examples of inhibiting factors could be unemployment, unfavourable weather conditions (for engaging in small-scale farming), laziness in people and inadequate access to land as a means of executing small-scale farming.
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The research study shall make use of interviews with key selected participants/respondents chosen from your municipality. The potential respondents/participants will include households and government officials that participating in the policy implementation realm. The study will be beneficial to the Municipality, Local Government and Provincial Government departments as the results and recommendations will assist the policy holders in understanding the dynamics of food insecurity and vulnerability in the Amathole District.

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Hoping that this request will receive your favourable consideration. I therefore request the granting of permission to interview and collect the necessary information from the participants.

Yours Sincerely



X. G. Ngumbela

RESEARCHER – BA Ed; BA Hons & MPA

072 396 2321 – Cell

043 736 6380 – After Hours

040 609 6090 – Office Hours

xolisile.ngumbela@gmail.com

College of Law and Management Studies
School of Management, It and Governance
University of Kwa-Zulu Natal
Westville
4041

The Municipal Manager
Mbhashe Local Municipality
P. O. Box 2
Idutywa
5000

Dear Sir

REQUEST FOR PERMISSION TO CONDUCT A RESEARCH STUDY AT AMATHOLE DISTRICT MUNICIPALITY.

I am a student at the University of Kwa-Zulu Natal, doing doctorate in Public Administration. As you might be aware that any post graduate study involves the completion of a Thesis, it is against this background that permission is requested to undertake research in your Municipality.

The title of my Thesis is "UNDERSTANDING THE DYNAMICS OF FOOD INSECURITY AND VULNERABILITY IN THE AMATHOLE DISTRICT IN THE EASTERN CAPE PROVINCE, SOUTH AFRICA", and is undertaken under the supervision of Professors Ernest Nene Khalema at 031 - 260 2288 or at khalema@ukzn.ac.za and Thokozani Ian Nzimakwe at 031 - 260 2606 nzimakweth@ukzn.ac.za

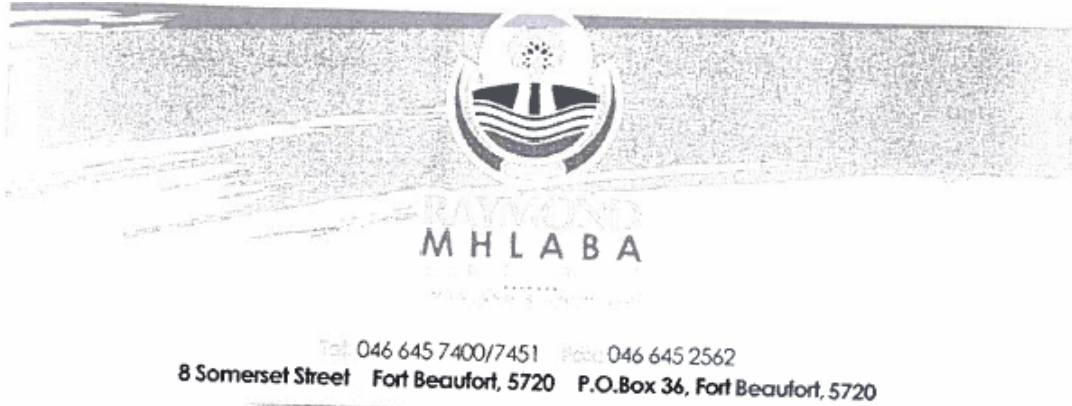
The objectives of this research are to:

The goal of this study is to investigate the dynamics of food (in) security in relation to the vulnerable groups (household members) in the Amathole District of the Eastern Cape Province, South Africa. A secondary goal is to develop a framework for establishing an information system for monitoring food (in) security and vulnerability in the Eastern Cape Province.

Page 1 of 2

Approved
Rosmond
21/02/17

APPENDIX XIV



Enquiries: P.Madotyeni

Mr Xolile Ngumbela
Bisho
5605

Dear Sir

RE: PERMISSION TO CONDUCT RESEARCH

Your email dated 20th February 2017 bears reference

Kindly note that your request to conduct research has been approved by the municipality and you will forward a list of documents that you will like to peruse in the municipality.

You are further advised to liaise with the office of the Municipal Manager regarding the date and time that you wish to visit the municipality in order to plan well for your visit

Regards,

L MENZE
INTER/M MUNICIPAL MANAGER

DATE: 16/3/2017

RAYMOND MHLABA MUNICIPALITY

APPENDIX XV

QUESTIONNAIRE ON HOUSEHOLD FOOD SECURITY & VULNERABILITY
(QH_FSV)

The information requested in this questionnaire is meant for a research thesis for a Doctor of Administration Degree offered by the School of Management, IT and Governance, College of Law and Management Studies at the University of KwaZulu-Natal. The privacy of the interviewees is guaranteed and information provided to the researcher shall not be used for any other purpose without approval nor acknowledgement from the respondents.

The following questions are adapted from the profiling tool used by the University of Fort Hare centre for Risk and Vulnerability Science Centre developed by Dr L. Zhou (Centre’s Director).

Questionnaire number.....Enumerator name.....
 Municipality Name..... Community name.....
 Name of respondent.....Coordinates.....
 Date.....Ward.....

HOUSEHOLD DEMOGRAPHIC INFORMATION					
1. Head of household					
a. Gender		Male		Female	
b. Marital status		Married	Single	Divorced	Widowed
c. Age	< 21 years	21- 29	30-50	51-60	>60
d. Highest level of education of household head					
	No formal or informal education	Informal education	Grade 0-7	Grade 8-12	Tertiary education

e. Highest level of education of any household member						
	No formal or informal education	Informal education	Grade 0-7	Grade 8-12	Tertiary education	
2. What is your principal occupation?						
3. What is your religion		Christianity	Traditional	Muslim	Other (specify)	
4. What is the size of your household?			Adults (≥ 16)	Children (< 16)		
		Male				
		Female				
5. What are your sources of income? (Rank 1 as the most important source of income)						
	Source		Amount in the last 4 weeks		Rank	
	Crops					
	Vegetables					
	Livestock					
	Poultry					
	Salary/wages					
	Pension/grants					
	Trade (transport, resale of goods)					
	Sale of wild foods					
	Craftwork (mats, baskets, pots)					
	Community projects					
	Other (specify)					
6. Which of the following water sources do you have access to in your village?						
Tap	Stream/River	Tank	Dam	Borehole	Spring	Other:
B. HOUSEHOLD FOOD SECURITY STATUS						
1. What are your sources of food? (Rank 1 as the most important source of food)						
Own crop production		Purchase		Wild food collection		Food aid
Own livestock products		Barter		Food for work		Steal
Food at work		Gifts of food		Loans		Stocks
Food at school		Fishing		Hunting		Friends/relatives
Other sources of food(Specify):						
2. What types of foods did you or anyone else in your household ate yesterday during the day and night at your home. (didn't eat=0 and ate=1)						

Any foods made from maize, wheat, rice or any other locally available grain e.g., samp, pap, bread		
Any potatoes or any other food made from roots or tubers,		
Any vegetables		
Any fruits		
Any meat, poultry or offal		
Any eggs		
Any fresh or dried fish and seafood		
Any foods made from beans, peas or nuts		
Any cheese, yogurt, milk or other milk products		
Any food made from oil, fat or butter		
Any sugar or honey		
Any other foods such as coffee, tea and condiments		
3. On average, how many meals do you have per day?		
4. Do you think you have access to enough food?		Yes No
5. How do you rate your level of access to food nowadays as compared to last year?		
No change	Better	Fair Worse off
Please note:		
Question 6 is about food accessibility in the past 4 weeks (1 month)		
6. If yes to the following questions, How often did this happen? 0= Never; 1 = Rarely (once or twice in the past four weeks); 2 = Sometimes (three to ten times in the past four weeks); 3= Often (more than ten times in the past four weeks)		
a. Did you worry that your household would not have enough food?		
b. Were you or any household member not able to eat the kinds of foods you preferred because of a lack of resources?		
c. Did you or any household member have to eat a limited variety of foods due to a lack of resources?		
d. Did you or any household member have to eat some foods that you really did not want because of a lack of resources to obtain other types of food?		
e. Did you or any household member have to eat a smaller meal than you felt you needed because there was not enough food?		
f. Did you or any household member have to eat fewer meals in a day because there was not enough food?		

g. Was there ever no food to eat of any kind in your household because of lack of resources to get food?					
h. Did you or any household member go to sleep at night hungry because there was not enough food?					
i. Did you or any household member go a whole day and night without eating anything because there was not enough food?					
7. When do you encounter food shortages? (you may tick more than once)					
Any time of the month	Just before month end	Before harvesting	After drought	Other times:	
8. What is causing food shortages in your household? (Rank)					
	Income not increasing at the rate of inflation				
	Poor harvest due to drought				
	Poor harvest due to high temperatures				
	Poor harvest due to low temperatures (snow)				
	Poor harvest due to pests and diseases				
	Poor harvest due to hail storm				
	Poor harvest due to late rainfall				
	Loss of livestock due to pests and diseases				
	Loss of livestock due to snow				
	Loss of livestock due to drought				
	Loss of livestock due to high temperatures				
	Lack of water sources/reservoirs				
	Lack of agricultural inputs				
	Poor salaries				
	Retirement				
	Retrenchment				
	Grants not increasing at the rate of inflation				
	Increase in household size				
	Death of the main food provider				
	Other (specify)				
9. What adjustments or possible solutions have you made to avoid food shortages if any or improve your diet? (you may tick more than one option)					
Borrow food from shops for future payments			Relied on food aid		
Borrow money from friends or relatives			Look for petty jobs		

Dispose household goods or other assets	Petty trading
Use credit cards	Sale livestock
Sale crops	Get loans from money lenders, banks
Reduction in non-food household expenditure	Reduce in the amount of food
Reduce the number of meals per day	Did not pay credits already owed
Resort to prostitution and external relationships to secure food	Over-use of natural resources (e.g., excessive fishing and collection of firewood)
Changed area of residents (moved to a cheaper place)	Producing or trading forbidden

Other adjustment mechanisms:

10. On average, what percentage of your income did you spend on food?

<25%	25%-50%	51%-75%	>75%
------	---------	---------	------

C. AGRICULTURE

1. What agricultural activities do you practice?

Livestock	Crop	Vegetable	None
-----------	------	-----------	------

2. Which crops and vegetables did you grow last season? (Rank 1 as the most commonly grown crop/vegetable)

			Purpose of production	
Crop/vegetable	Rank	Area (L x W)	Consumption	Sale

3. What do you consider to be the main problem in crop and vegetable production? (Rank 1 as the most important problem)

Problem	Rank	Problem	Rank
Labour		Low temperature	
Input supply		Low rainfall	

High costs of inputs		Hail storm					
Lack of equipment		Lack of water sources					
High temperatures		Theft					
Snow		Lack of Capital					
Land shortage		No proper structures (no fence)					
Late planting		Lack of skills					
No markets		Pests					
Other (specify):							
4. What type of livestock species do you keep? (Rank specie)							
	Class	Cattle	Goats	Sheep	Chickens	Pigs	Other (specify)
	Number						
	Rank						
5. Why do you keep livestock? (Rank 1 as the most important reason)							
Use	Rank		Use	Rank			
Meat			Sales				
Milk			Status				
Draught power			Dowry				
Manure			Ceremonies				
Skin			Other				
6. What problems are you facing in raising your livestock? (Rank 1 as the most important)							
Problem			Rank	Problem			Rank
Shortage of feed resources				Lack of organized markets			
Low bull numbers				Poor extension			
High mortality and reproductive wastage				Veterinary services			
Lack of suitable breeding stock				Institutional support			
Lack of control of parasites and disease				Lack of infrastructural			
Lack of community rangeland management				Stock theft			
Lack appropriate skills for livestock production				High temperatures			
Low rainfall				Floods			
Snow				Predators			
Other (specify)							

D. ASSETS AND NEEDS ANALYSIS			
1. Which of the following resources and skills do your household members have?			
Resource	Tick	Skills	Tick
Arable land		Crop and vegetable production	
Backyard garden		Livestock keeping	
Chicken Fowl		Building /Construction	
Kraal		Sawing/ Knitting	
Livestock		Driving	
Small business		Ploughing (land cultivation)	
Agricultural equipment/tools		Fishing	
Building tools		Bricklaying	
Excess accommodation		Shoe making	
Car		Hairdressing	
Tractor		Mechanics	
Draught power		Plumbing	
Labour		Painting	
Water for crop production		Art	
Water for livestock production		Baking	
Water for gardening		Teaching	
Water for industrial purposes		Child caring/baby seating/housekeeping	
Plantation/orchards		Welding	
Employment opportunities		Electrician	
Other (specify):		Other (specify):	
2. Does the household own the following animals			
Cow(s)		Goat(s)	
Chicken(s)		No Livestock	
Sheep(s)		Other livestock (specify)	
3. Record whether the household has the following assets			
Cell phone		Dishwasher	
Landline telephone		Washing machine	
Television		Computer (desktop/Laptop)	
Radio		Motorcycle/Scooter	
Refrigerator		Bicycle	

Microwave		Own a house/land (other than the one you live in)	
4. Which of the following projects are you interested in (please rank)?			
Project			Rank
Poultry			
Livestock			
Gardening (vegetable production)			
Dry land crop production			
Irrigation project			
Mushroom production			
Bee keeping			
Sewing			
Construction and maintenance of infrastructure e.g., roads			
Brick laying/ building			
Craft work/ art			
Fishing			
Catering and event management			
Petty trading at homestead			
Street vending			
Baby-sitting/ day-care			
Food for work			
Baking			
Training and education in relevant skills			
Value adding			
Other (specify):			

Thank you for your willingness to participate in this research study. It is highly appreciated!!!

THANK YOU

APPENDIX XVI

FOOD SECURITY POLICY MAKERS AND IMPLEMENTERS INTERVIEW SCHEDULE' (FSP-MIIS)

NAME OF INTERVIEWEE.....

LOCATION.....

DEPARTMENT OF INTERVIEWEE.....

POSITION OF INTERVIEWEE IN THE DEPARTMENT.....

DATE INTERVIEWED.....

INSTRUCTIONS TO THE INTERVIEWER

The interview would last between 45 minutes and 1hr

The interviewed would be recorded

The information is only for research purpose and would be handled with confidence

Quotation is subject to interviewee's acceptance.

Ensure that the sampling procedure has been followed before starting the interview.

Only the chosen officials per plan should be interviewed.

Choose and agree on the appropriate venue and time.

Greet the respondent of the survey and ask if they are willing to participate.

Tell the respondent the time it will take and make sure they are comfortable to go with it.

Before commencing with the questionnaire, complete the information requested above.

Read the questions the way they appear in the questionnaire, with explanation if there is need.

Do not skip any question because you think it is unnecessary unless that is what is expected.

Record the answers that the respondent gives rather than making up what you think the respondent is saying or what you think they should have said.

Ensure the respondent is not being influenced by anyone when answering the questions.

Ensure that all the questions are answered unless they do not apply.

Give opportunity to the respondent to ask any questions or give comments on the interview if need be.

Thank the respondent after the survey and assure them that their answers will be treated with all confidentiality.



Does Eastern Cape have any current food security policy?

Yes	No
-----	----

If yes, can you briefly explain the policy?

.....

.....

.....

Do you believe Amathole District is a food secure Municipal District?

Yes	No
-----	----

If yes, please explain. If no, explain why not and what areas do you think to be most food-insecure.

.....

.....

.....

In your own assessment, has poverty levels been increasing or decreasing in Amathole District during the past five years? Why do you say that?

.....

.....

.....

What do you think are the causes of food insecurity in the area?

.....

.....

.....

What other ways would people do to improve food security in the area?

.....

.....

.....

What successes have you had in reducing vulnerability to food insecurity at household levels?

.....
.....

What have been your major challenges? How have you tried to deal with these challenges?
With what success?

.....
.....
.....

From your organization's point of view, how best can poverty and food insecurity be tackled?

.....
.....
.....

How effective would this be in increasing food security at both household and community scale?

.....
.....
.....

What role do you think planners play in food security?

.....
.....
.....

Do you think the Government is doing enough to alleviate the problem of food shortages in this area?

.....
.....
.....

Do you think it is possible to legislate for food security?

Yes	No
-----	----

Do you think legislating it will help considering the complex factors influencing food security?

.....
.....
.....

What else do you think the Government need to do?

.....
.....
.....

Participant

Signature.....Date.....

Thank you for your participation. Do you have anything that you may wish to ask, add, explain or retract?

Civil organisations can help, but they also need help

19 26. (24-30)

POVERTY

Xolisiile Ngumbela

Despite democracy, the Eastern Cape province remains trapped in structural poverty but a recent study brings the good news that civil society organisations at ground level can alleviate it.

In the Eastern Cape, the Amathole district is particularly poor.

Human Development Index figures from the 2013 Global Insight Report indicate a poverty rate for the district of 41.1%. Amathole is a category C2 municipality, which points to its largely rural character, low urbanisation rate, and limited staff and budget. The district's Integrated Development Plan Review 2008-2009 shows that 70% of its 1.7-million populace fell below the poverty line, with a 49% unemployment rate.

This means the Amathole people are vulnerable to poverty and some experience abject poverty, which emanates from illiteracy, unemployment and no access to infrastructure as well as economic and social

vulnerability.

The Eastern Cape has the highest percentage of people receiving social grants, at 40.5%, compared with the national average of 30%. Although grants have a positive effect, to be sustainable, social assistance needs to be coupled with access to basic social services and jobs.

The Eastern Cape has an anti-poverty strategy. In line with the goals of this strategy, the departments of social development and health have funded a large number of sustainable livelihood projects in the Amathole municipality.

Although most of the civil society organisations in these projects are reportedly doing well, some reports suggest that they face problems as a result of poor alignment with the municipality's strategic plans and that they are poorly managed and monitored.

The study looked at three civil societies in Amathole, which worked in the areas of gender-based violence, community/home-based care, health awareness, education and income generation. Primary data for the

study came from key informants from the districts and villages such as community leaders and government officials. Secondary data came from documents related to the programme and scholarly reviews.

The study's findings showed civil society organisations play an important role in making improvements to the general wellbeing of people, although the interventions were not necessarily focused directly on poverty-alleviation strategies. Any initiatives these organisations undertook formed part of their projects, such as combining an HIV project with a job creation project.

The organisations made a direct contribution to poverty alleviation

by creating employment for 331 people, although 64% of these were part-time posts.

Providing assistance to their beneficiaries also involved the organisations in diverse methods that indirectly alleviate poverty, such as creating opportunities for self-employment, addressing food security issues and raising awareness about health and safety issues.

On a less positive note, the study found that the organisations experienced numerous problems, with a shortage of funding being among the key difficulties. In certain instances, problems were a consequence of competition – for example, for donor funds – among the organisations' participants.

Researchers point to the tendency for the civil society organisation space to be treated as though it is free of problems and political tensions, which has the effect of depoliticising the situation. This approach puts the organisations at a disadvantage because when political tensions arise they are not acknowledged or dealt with.

Another problem was that people in these organisations did not have the knowledge and skills to execute their activities effectively. They were forced to rely on the services of consultants, with the extra expense. Organisations were also unable to deal with implementation complexities.

The organisations used the logical framework analysis (LFA) to plan and monitor their projects. This is a useful tool in that it graphically shows diverse components of an intervention, such as the relationship between objectives, activities and intended outcomes. The LFA should alert organisations to unexpected changes if understood and used effectively.

Considering the usefulness of civil society organisations in supplementing government poverty-eradicating strategies, the department of social development should attend to their difficulties.

Xolisiile Ngumbela is a doctoral student of administration at the University of KwaZulu-Natal

The civil society organisation space tends to be treated as though it is free of problems and political tensions

MAIL @ GUARDIAN - 03-2017

APPENDIX XVII

QUESTIONS FOR FOCUS GROUP

NAME OF INTERVIEWER.....

LOCATION.....

NUMBER ON THE GROUP.....

DATE INTERVIEWED.....

TIME OF THE INTERVIEW.....

INSTRUCTIONS TO THE INTERVIEWER

The interview would last between 45 minutes and 1hr

The interviewed would be recorded

The information is only for research purpose and would be handled with confidence

Quotation is subject to interviewee's acceptance.

Ensure that the sampling procedure has been followed before starting the interview.

Only the chosen officials per plan should be interviewed.

Choose and agree on the appropriate venue and time.

Greet the respondent of the survey and ask if they are willing to participate.

Tell the respondent the time it will take and make sure they are comfortable to go with it.

Before commencing with the questionnaire, complete the information requested above.

Read the questions the way they appear in the questionnaire, with explanation if there is need.

Do not skip any question because you think it is unnecessary unless that is what is expected.

Record the answers that the respondent gives rather than making up what you think the respondent is saying or what you think they should have said.

Ensure the respondent is not being influenced by anyone when answering the questions.

Ensure that all the questions are answered unless they do not apply.

Give opportunity to the respondent to ask any questions or give comments on the interview if need be.

Thank the respondent after the survey and assure them that their answers will be treated with all confidentiality.



What is the staple food in Amathole District?

.....
.....
.....

What are the main ways people get food in Amathole District?

.....
.....
.....
.....

Do people have enough food in Amathole District?

.....
.....
.....

In your opinion do you think there is food insecurity in Amathole District?

.....
.....
.....

What do you think are the causes of food shortage and food insecurity in Amathole District?

.....
.....
.....

Do you think the government is doing enough to alleviate the problem of food shortage in Amathole District?

.....
.....
.....

What else do you think the government need to do?

.....
.....
.....

Thank you for your willingness to participate in this research study. It is highly appreciated!!!



August 27, 2017

X. G. Ngumbela

College of Law and Management Studies
School of Management, It and Governance
University of Kwa-Zulu Natal
Westville
E- mail: xolisile.ngumbela@gmail.com

Subject: Review report of the research paper

Title: Assessing the Role of Civil Society in Poverty Alleviation: A Case Study of Amathole District in the Eastern Cape Province of South Africa

Manuscript ID: H-19489

Dear X. G. Ngumbela,

Thanks a lot for your interest in **International Journal of Humanities and Social Science**. Your research problem is of interest to us. Your manuscript has been reviewed by two reviewers. Please find the reviewers' comments and suggestions as attached with this letter. The editorial board has decided to publish your paper with no modification.

Please don't feel hesitation to contact with the editor for any query.

I look forward to hearing from you.

With thanks,

Dr. J. Sabrina Mims-Cox

Chief Editor, International Journal of Humanities and Social Science (IJHSS)
Contact: editor@ijhssnet.com

Attachments:

1. Terms and Conditions (Page 2)
2. Reports of Reviewers (Page 3 & 4)
3. Payment Instructions (Page 5)

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-

Report of Internal Reviewer

Evaluation Criteria	Yes	No
The paper makes original contribution	√	
The papers is well organized	√	
Author Guidelines has been followed properly in preparing the manuscript	√	
The paper is based on sound methodology	√	
Literature review is adequate	√	
Analysis and findings support objectives of the paper	√	

Decision regarding the paper

- (*) Accept the paper in its current format
- () Accept the paper with the minor changes
- () Resubmit with the major changes
- () Decline the submission

Comments and Suggestions

This paper is well organized and followed the manuscript guidelines of IJH55 at a large extent. The introduction section is good and shows the importance of the study. Literature review is adequate. Findings of the study are consistent with the analysis. Data analysis methods are praiseworthy. In my opinion, it should be published.

Report of External Reviewer

Evaluation Criteria	Yes	No
The paper makes original contribution	√	
The papers is well organized	√	
Author Guidelines has been followed properly in preparing the manuscript	√	
The paper is based on sound methodology	√	
Literature review is adequate	√	
Analysis and findings support objectives of the paper	√	

Decision regarding the paper

- (*) Accept the paper in its current format
- () Accept the paper with the minor changes
- () Resubmit with the major changes
- () Decline the submission

Comments and Suggestions

'Good starting is the indicator of good finishing'- this proverb can be applied in this study. Well consistent analysis and sound sentence constructions and concrete and concise conclusions are some positive features of this paper. I recommend this research paper to publish in IJH55.

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-----The End-----

APPENDIX XVIII



06 September 2017

Mr Xolisile Gideon Ngumbela (216076788)
School of Management, IT & Governance
Westville Campus

Dear Mr Ngumbela,

Protocol reference number: HSS/1462/017D

Project title: Understanding the dynamics of food insecurity and vulnerability in the Amathole District in the Eastern Cape Province, South Africa

Approval Notification – Expedited Application

In response to your application received on 17 August 2017, the Humanities & Social Sciences Research Ethics Committee has considered the abovementioned application and the protocol has been granted **FULL APPROVAL**.

Any alteration/s to the approved research protocol i.e. Questionnaire/Interview Schedule, Informed Consent Form, Title of the Project, Location of the Study, Research Approach and Methods must be reviewed and approved through the amendment/modification prior to its implementation. In case you have further queries, please quote the above reference number.

PLEASE NOTE: Research data should be securely stored in the discipline/department for a period of 5 years.

The ethical clearance certificate is only valid for a period of 3 years from the date of issue. Thereafter Recertification must be applied for on an annual basis.

I take this opportunity of wishing you everything of the best with your study.

Yours faithfully

Dr. Shenuka Singh (Chair)

/ms

Cc Supervisor: Professor EN Khalema and Professor TI Nzimakwe
Cc Acting Academic Leader Research: Professor Isabel Martins
Cc School Administrator: Ms Angela Pearce

Humanities & Social Sciences Research Ethics Committee

Dr Shenuka Singh (Chair)

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