

**THE IMPACT OF WOMEN'S FOOD SECURITY PROJECTS: A CASE OF NNTSAKO
AND JOPI VILLAGES IN GREATER TZANEEN MUNICIPALITY,
LIMPOPO PROVINCE**

By

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DECLARATION

I, Ishmael Yingisani Baloyi, declare that *The Impact of Women's Food Security Projects: A Case of Ntsako and Jopi Villages in Greater Tzaneen Municipality, Limpopo Province* is my own work and that all the sources that I have used or quoted have been indicated and acknowledged by means of complete references and that this work has not been submitted before for any other degree at any other institution.

.....
Ishmael Yingisani Baloyi

.....
Date

DEDICATION

To my late father Mr. Masenyani Wilson Baloyi and my mother Mrs. Mphephu Catherine Baloyi; my wife, Thembi Vonani Baloyi, and my kids, Mpfxelelo, Mpfxeto and Ntoto Baloyi. Thanks for your support. I love you all.

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- a) This mini-dissertation is based on Ntsako and Jopi women food security projects of Limpopo province. Permission to use material and facilities from the Limpopo Department of Agriculture is gratefully acknowledged. The opinions expressed are those of the author and do not necessarily represent the policy of Limpopo Department of Agriculture.

- b) I praise God's name for guiding and keeping me safe during my entire study period.

- c) The following people are gratefully acknowledged for their assistance during the course of the study:
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ABSTRACT

This dissertation describes a study undertaken in Limpopo Province and is based on the LADEP Project which was created through an established working partnership of the Finnish government and LDA extension services. The study aimed to assess the impact of women food security projects on household food security. For many poor people globally, in particular in sub-Saharan Africa, food security continues to be a challenge today. The poverty levels and increase in the prevalence of the HIV/AIDS pandemic, reduced rainfall accompanied by changing climatic patterns, environmental degradation, the complexities associated with urbanization, globalization as well as technology shift in the agricultural sector and capitalistic market economies all play a role in the food security crisis.

The study investigated the dynamics of food security in two villages in Limpopo Province: Jopi and Ntsako. This research has highlighted some of the factors that influence food economy and food security of poor rural dwellers. Achieving household food security for poor rural households requires an integrated approach in terms of poverty eradication as well as deliberate efforts with regards to food production and distribution within a framework of ecological integrity, with an aim of empowering the poor and ensuring that their household food security is guaranteed. The basic finding, and the one which impacts directly on the household food security of Jopi and Ntsako projects is that the majority of the people in these village depend on government grants, and are therefore classified as poor. However, as a survival mechanism, some women with experience in agriculture have resorted to farming, as well as initiating group farming projects to improve their socio-economic situation. Given the threats to sustainability of these projects, the study recommends that the government to mobilize financial resources to support the activities of these projects. There is also an increased demand for more training on various aspects of management and production for members to maximize output. The study also identifies the significance of a continuous monitoring and evaluation of projects on a regular basis.

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ACRONYMS

AIDS	Acquired Immune Deficiency Syndrome
CASP	Comprehensive Agricultural Support Programme
CRDP	Comprehensive Rural Development Programme
DAFF	Department of Agriculture, Forestry and Fisheries
FAO	Food and Agriculture Organization
HIV	Human Immune-deficiency Virus
HSRC	Human Sciences Research Council
IFSNP	Integrated Food Security Support Programme
IFSS	Integrated Food Security Strategy
LADEP	Limpopo Agricultural Development Programme
LDA	Limpopo Department of Agriculture
MAFISA	Micro Agricultural Financial Institutions of South Africa
NAFU	National African Farmers' Union
RSA	Republic of South Africa
SPSS	Statistical Package for Social Science
UNDP	United State Development Programme
USAID	United State Agency for International Development

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CHAPTER 1

1. INTRODUCTION

1.1 Background

In 2000, the South African Cabinet decided to launch an updated national food security strategy to streamline, harmonize and integrate diverse food security subprograms in South Africa into the Integrated Food Security Strategy (DAFF, 2002:11). From this document it is clear that agricultural projects and policies are expected to have the capacity to have major effects on household food security. These effects are expected to take place through employment and incomes, as well as through markets (USAID, 2011: 2).

The current food security challenge in South Africa consists of two dimensions. The first dimension seeks to maintain and increase the ability of South Africa to meet its national food requirements. The second dimension seeks to eradicate the widespread inequalities and grinding poverty among the majority of households that is manifested by inadequate and unstable food supplies, lack of purchasing power, weak institutional support networks, poor nutrition, inadequate safety nets, weak food emergency management systems and unemployment (DAFF, 2002: 19)

According to Du Toit (2011:1), the issue of food insecurity has been critical in many parts of the world, including South Africa. In South Africa, food security received much attention after 1994 when the country became a democracy. The Constitution of the Republic of South Africa, 1996 (Act 108, section 27(1)(b) of 1996) indicates that every South African citizen has a right to sufficient food and water, and social security. In the light of the above, the DAFF was mandated to develop agricultural policies and support programmes to ensure that South African citizens are given opportunities that would enable them to meet their basic food needs (RSA, 1996).

African women are key to the development of rural areas through their contribution to sustainable agriculture and rural development, including food security. Hence, the role of African women in fighting food shortages cannot be underestimated (Women in Agricultural Development, 2011: 2). Men's overall access to food is dependent on the work of rural women. Women farmers produce most of the foods and are responsible for ensuring that their families' basic needs are met. Women's access to financial services, agricultural extension, education, health care and human rights are, therefore, crucial to ensuring food security for all (Camara *et al.*, 2011: 141).

Agriculture in South Africa has a central role to play in building a strong economy and, in the process, reducing inequality by increasing incomes and employment opportunities for the poor (Ministry for Agriculture and Land Affairs, 1998: 2). In order to increase income and employment opportunities for poor people and rural women, programmes are implemented by the DAFF. The following are examples: the Limpopo Agricultural Development Programme (LADEP); Comprehensive Agricultural Support Programme (CASP); FetsaTlala; Ilima-Letsema; Micro Agricultural Financial Institutions of South Africa (MAFISA) and Landrace.

Limpopo Province depends economically to a great extent on agriculture. The majority of the population in this province lives in rural areas, and agriculture has been the main source of growth and development in their local economies for many decades. In 2003, LADEP project was created through an established working partnership of the Ministry for Foreign Affairs of Finland and Limpopo's Department of Agriculture. Through LADEP projects, women farmer groups were formed and capacitated in the following District: Mopani (5), Sekhukhune (2), Capricorn (3), Vhembe (6) and Waterberg (1). Extension officers seconded to the project were also capacitated to implement the project through on-farm training and demonstrations.

LADEP Project focused to enhanced sustainable income generating activities of smallholder farmers through Integrated Natural Resource Management techniques. The project was implemented according to four components: (1) Integrated rural management planning; (2) integrated rural development; (3) institutional strengthening and (4) coordination of development resources (Olsen *et al.*, 2012: 58). LADEP project targeted unemployed women and smallholder subsistence women farmers who could neither meet annual food requirements nor address the growing poverty problem. Agricultural interventions were therefore necessary to address the challenge of food security shortage in a much holistic approach through the use of improved integrated rural development, soil and water management technologies and crop varieties to encourage them to make substantial investment in agriculture.

In South Africa, the LADEP project was implemented in Limpopo Province in four districts, namely Mopani, Vhembe, Sekhukhune and Capricorn. In Mopani District, the programme was implemented in Maruleng Municipality in one village community called Willows, and in Greater Tzaneen Municipality it was implemented in Ntsako, Sedan, Jopi, Mulati and Mavele villages.

1.2 Problem Statement

According to Tegegne (2011: 4), women are an integral part of farming households, bear the most responsibilities for household food security and contribute to household well-being through their income-generating activities. Karl (2009: 11) notes that women play important roles in food security as food producers, food processors and preparers, and food providers for their families. According to Van Zyl & Kirsten (1992: 170), South Africa is therefore characterized by surpluses and exports amidst food shortages. The dimensions of the food security problem in South Africa are subsequently discussed in terms of the national supply of, and demand for food; the number of people living under circumstances of food insecurity; pricing policy and the food distribution system. This is followed by an analysis of the number of people living under circumstances of food insecurity, pricing policy and the food distribution system as reported by the Committee for the Development of a Food and Nutrition Strategy for Southern Africa (1990). The

current study seeks to find out the impact of rural women food security projects on household food security.

1.3 Research Question

The question guiding this study is: What is the impact of women food security projects on household food security?

1.4 Objectives of the study

The objectives of the study are to:

- (i) Assess the impact of women's food security projects on household food security.
- (ii) Assess the financial viability of the women food security projects.

1.5 Hypotheses

The research hypothesis for this study, denoted as H1, is stated as follows:

- H1: There is a significant relationship between differences in overcoming family's household food insecurity and the extent of participation in women food security projects.
- H1: Women food security projects are financially viable.

1.6 Definition of terms

- Impact: **Measure** of the **tangible** and intangible effects (consequences) of one thing's or **entity's** action or **influence** upon another.
(<http://www.businessdictionary.com/definition/intangible.html>).

- Impact assessment: A means of measuring the effectiveness of organizational activities and judging the significance of changes brought about by those activities. (International Federation of Red Cross and Red Crescent Societies www.ifrc.org/docs/.../impact-handbook.p...).
- Food security: at the World Food Summit organized in 1996, nations agreed to the definition of food security as “When all people, at all times, have physical and economic access to sufficient, safe, nutritious food to meet their dietary needs and food preferences for an active and healthy life” (World Food Summit,1996). Hence, the existence of the necessary conditions for human beings to have physical and economic access, in socially acceptable ways, to food that is safe, nutritious and in keeping with their cultural preferences, so as to meet their dietary needs and live productive and healthy lives (IICA, 2009: 1).

1.7 Significance of the Study

The study assesses the impact of rural women food security projects in Ntsako and Jopi villages. The study is significant for decision-makers as it provides recommendations for improving the performance of women food security projects.

1.8 Outline of Research Report

Chapter One

Chapter One serves as an introductory chapter. It deals with the background of the study which includes the statement of the problem, objectives and research questions. It also includes an explanation of the research methodology, design, study area(s), respondents, data collection, population, sample and data analysis, presentation of findings and definition of concepts. This chapter introduces the reader to the various areas of the study showing how it was conducted.

Chapter Two

Chapter Two contains a review of the literature and documents related to the topic under study. A brief discussion of the review of earlier studies on the impact of rural women on food security projects is also included in this chapter.

Chapter Three

In this chapter the procedures followed for data collection, the type of study, instruments used for data collection, population, and the sample used are described.

Chapter Four

This chapter deals with data collection, data analysis and data interpretation. Information collected from respondents and review of documents will be analyzed and interpreted.

Chapter Five

As the final chapter, this chapter presents the conclusion and recommendations. It addresses the background to the study, the problem statement and indications as to why the study was conducted. Further, it addresses the aims and objectives of the study, and the research questions, pointing out if they were sufficiently met. At the end of the study the significance of the study has to be clear. One has to be able to draw the significance from the discussion and analysis of the various aspects presented in the study.

1.9 Conclusion

The focus of this research is on the impact of women's food security projects: A case of Ntsako and Jopi villages in Greater Tzaneen Municipality, Limpopo Province. Chapter one is an introductory chapter wherein the problem has been defined and justified, objectives of the study outlined, purpose laid out, definition of terms made and limitation as well as delimitations stated. The next chapter focuses on the literature review of this study.

CHAPTER 2

2. LITERATURE REVIEW

2.1 Introduction

This chapter provides a brief background of food security status in the world and in South Africa in particular. It then looks at the definitions of household food security. It also reviews the literature including what conclusions have been drawn by other researchers. The literature review looks at how the issue of food security is dealt with nationally and also in terms of the projects undertaken locally by communities and the government.

2.2 The concept of food security

Besides the definition of food security presented earlier, Gross *et al.*, (2000: 5), explain that food has an important social role, keeping families and communities together. In situations of food insecurity, food and nutrition security can be achieved only when sufficient culturally adapted food is available within households and communities to meet its biological and social needs. Therefore, food security is achieved, if adequate food (quantity, quality, safety, socio-cultural acceptability) is available and accessible for and satisfactorily utilized by all individuals at all times to live a healthy and happy life (Gross *et al.*, 2000: 4). Food security, therefore, refers to the ability of individuals to obtain sufficient food on a day-to-day basis (Du Toit, 2011: 2).

2.2.1 Issues that have an impact on household food security

In order to achieve food security, it is important to understand what the term constitutes. There are three distinct but inter-related components as discussed by (DAFF, 2002: 16):

Food availability: Effective or continuous supply of food at both the national and household levels. It is affected by input and output market condition, as well as production capabilities of the agricultural sector.

Food access or effective demand: Ability of a nation and its households to acquire sufficient food on a sustainable basis. It addresses issues of purchasing power and consumption behavior.

Reliability of food: Utilization and consumption of safe and nutritious food.

Food distribution: Equitable provision of food to points of demand at the right time and place. This spatial/time aspect of food security relates to the fact that a country might be food secure at the national level, but still have regional pockets of food insecurity, at various periods of the agricultural cycle.

Food availability in an urban area is largely determined by food supply to cities. Food supply systems include a complex distribution chain which involves wholesalers, intermediaries, distributors and street vendors. Such a distribution chain has the potential of increasing the price of food which has a negative consequence due to vulnerability of the urban poor to price increases. This vulnerability mainly stems from limited income or limited opportunities to generate income. Notably, access to food goes hand-in-hand with income availability. The urban poor often pay more for food since they are forced to buy small quantities of food due to limited income (Van der Merwe, 2011: 2).

Figure 1 is a schematic representation of the issues that have an impact on household food security

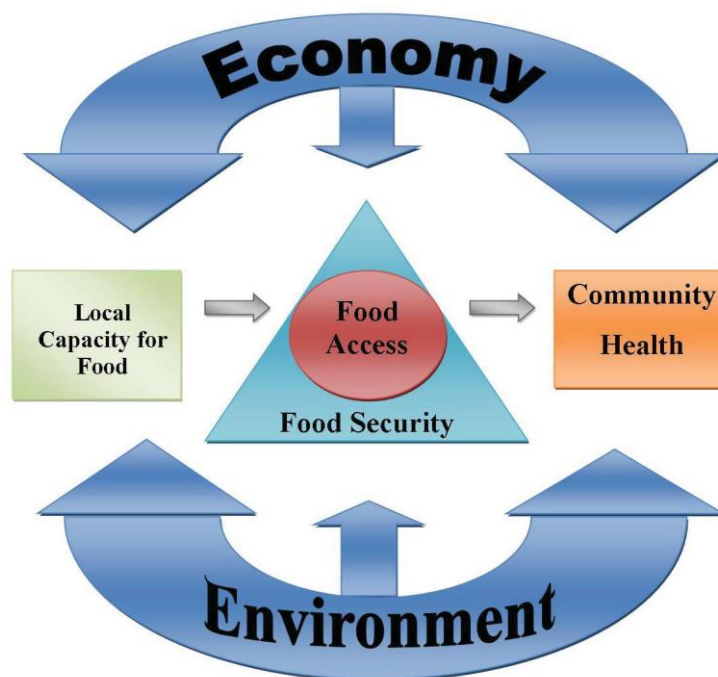


Figure 1: Issues that have an impact on household food security.

Source: Igoe (2011).

Local Capacity for Food: This concept can be defined as the ability of the local area to produce, import and process food. There may be certain local products that are produced on a fairly large scale (e.g. Tomatoes, Okra). There may also be small community and individual household gardens that serve to provide food at a smaller scale. In the figure, the “Local Capacity for Food” directly impacts “Food Security” and as a result, “Food Access”. For example, if there is a place where there is limited local capacity for food, such as occurs in a more urban environment, the food security of the region will be negatively impacted (Igoe, 2011: 32).

2.3 Global Food Security

Since the development of the very first definition of food security at the World Food Conference held during 1974 in Rome, the thinking around food security has changed and the measurement of food security has evolved. The measures served to set in place an international regime in which the supply of food, and the ability of countries to acquire it, became essential features. It is ironic that this period of thinking and action on food security at a global level coincided with a time in which poverty alleviation and food distribution began to be given greater attention in international disclosure on development. This period was the era of integrated rural development, basic needs projects, and employment missions. There was something of a mismatch between food security and wider development thinking (Devereux & Maxwell, 2005: 24).

Mehra & Rojas (2008: 2) report that food security, poverty reduction and economic development are inter-related and depend critically on improvements in agriculture. They require strategies that focus on increasing food productivity and incomes among small-scale farmers and access to income and employment for rural poor people who lack access to land. Most poor and food insecure people live in rural areas and depend primarily on agriculture for their livelihoods. Furthermore, Mehra & Rojas believe that on average, agriculture provides 64 percent of employment and represents 34 percent of gross domestic product (GDP) in the poorest countries. Although the vast majority of people affected by the rise in food prices live in the poorest countries of sub-Saharan Africa and South Asia, hunger and food insecurity are present among poor, rural and indigenous people in all developing regions.

There is a general consensus that households access food mainly through three sources: markets, subsistence production and transfers from public programmes or other households (Ruel *et al.*, 1998: 11). Historically, rural households produced most of their own food, whereas urban households purchased most of their food (Ruel *et al.*, 1998: 12). According to Baiphethi & Jacobs (2009: 460), in urban areas there are two crucial components affecting household food security: the ability to earn cash income and the price of food.

According to a Food and Agriculture Organization (FAO) report (2004: 2), empowering people to grow their own food for subsistence or income generation will provide nourishment and potential income to many people in a country. The FAO (2008: 4) report reiterated that agriculture was considered one of the sectors that could play a significant role towards food security in a country. The report furthermore revealed that the majority of people living in rural areas had access to land, but lacked the necessary skills and access to resources to farm sustainably.

The roles being played by women farmers in food production, which enhances the level of food security of households in many developing countries, is enormous and significant. This may be considered true because women have been noted as constituting the majority of subsistent farmers that are actually responsible for producing a large percentage of food crops for consumption in these countries (Banmeke & Olowu, 2005: 237).

A lack of infrastructure still seems to be the main hurdle that women living in rural situations need to overcome. Other real obstacles such as poverty, ill-health, lack of safety and security, and illiteracy can be linked directly to the fact that these women need to cope without infrastructure. Better access to finance, better roads, electricity, water and education for themselves and their children will help the women to free themselves from the poverty traps they were caught in for generations (NAFU, 2007: 18).

According to Oniang (2005: 150), despite women's importance in agricultural production, they usually have lower levels of physical and human capital than men. These disparities persist because of legal, socio-cultural and institutional factors that create barriers for women. Beyene (2008: 140) suggests that other variables, such as non-labour income and distance to the regional capital are found to have a negative influence on the participation decisions of farm households. Baipheti & Jacobs (2009: 461) suggest that this is largely dependent on whether the households diversified out of agriculture due to a lack of opportunities for on-farm innovation or whether they are exploiting a particularly high demand for their labour off-farm.

Women are crucial in the translation of the products of a vibrant agriculture sector into food and nutritional security for their households. They are often the farmers who cultivate food crops and produce commercial crops alongside the men in their households as a source of income. When women have an income, substantial evidence indicates that the income is more likely to be spent on food and children's needs. Women are generally responsible for food selection and preparation and for the care and feeding of children. Women are the key to food security for their households (www.worldbank.org).

2.4. Food Security in South Africa

Urban influx due to large-scale rural-urban migration is a major global demographic trend. South Africa is experiencing such rapid urban influx as large volumes of people are migrating to cities, particularly inner city areas. The main drive for such migration is the search for better employment and education opportunities. Through this, new social systems have evolved in the inner cities in South Africa and thus pose a major challenge to the South African government. One of the biggest challenges is ensuring food security. This brief outlines this challenge and looks at determinants of food security, food production, food security strategies, the role of income and income availability as well as possible alternatives for ensuring food security in urban areas (Van der Merwe, 2011: 1).

South Africa is characterized by a situation of food security at the national level but not at the household level for much of the population (Department of Agriculture, 2002:19). More than 14 million people in South Africa are estimated to be vulnerable to food insecurity. The development of as many as 1.5 million children under the age of 6 has been stunted by malnutrition (HSRC, 2004: 4). South Africa adopted a rights-based approach to food security in 1996 (Koch, 2011: 15). In 2000, the integrated Food Security Strategy (IFSS) was formulated. In addition, the Department of Agriculture established a Special Programme for Food Security which aimed to “establish short-term food programmes such as food gardens to augment food shortages in rural households and to sustain long-term food security for all (Koch, 2011: 16).

According to Van der Merwe (2011: 3), food security primarily depends on the amount of food that is produced in a country. If sufficient amounts of food are not produced domestically countries need to import. This in turn increases the price of food which in turn leads to higher levels of food insecurity. South Africa produces its main staple foods and exports any surplus amounts of food which is mainly sourced from large-scale commercial farms. Field crops, livestock and horticulture are the main agricultural sectors of South Africa with wine and fruit production growing substantially in the past decade. South Africa has a dualistic agricultural economy, meaning a well-developed commercial farming sector co-existing with a small-scale farming sector, which is mainly practiced as the basis of subsistence farming (Van der Merwe, 2011: 3).

South Africa faces the following key food security challenges: to ensure that enough food is available to all, now and in the future; to match incomes of people to prices in order to ensure access to sufficient food for every citizen; to empower citizens to make optimal choices for nutritious and safe food; to ensure that there are adequate safety nets and food emergency management systems to provide for people who are unable to meet their own food needs from their own efforts and to possess adequate and relevant information to ensure analysis, communication, monitoring, evaluation and reporting on the impact of food security programmes on the target population (DAFF, 2002: 5).

In response, the Government of South Africa is implementing the Integrated Food Security Strategy (IFSS) of 2002. The strategy ensures that food insecure groups in the country:

- Gain access to agricultural productive resources;
- Gain access to income and job opportunities to enhance their power to purchase food;
- Are empowered to eat nutritious and safe food;
- Have access to state provided relief measures that may be short to medium-term and on a sustained basis, depending on the nature of given interventions particularly where the group is unable to access

sufficient food because of disability or extreme destitute conditions, and

- There is a continuous monitoring and evaluation of food security and nutrition status in the country through the Food Insecurity and Vulnerability Information System Management (DAFF, 2002: 5).

South Africa's agricultural policy has had food self-sufficiency as a major objective until recently. This goal has largely been achieved; a surplus is produced in most of the agricultural commodities. Despite this efficiency, large inequities, inefficient food distribution networks and high levels of malnutrition are experienced. South Africa is therefore characterized by surpluses and exports amidst food shortages; a situation of "hunger and malnutrition next to the granary" is therefore typical. This situation requires a review of the policy of self-sufficiency (Van Zyl & Kirsten, 1992: 170).

2.4.1 Food security and climate change

According to Dube *et al.* (2013: 1), the increase of greenhouse gas concentrations in the atmosphere is raising average temperatures. The consequences include changes in precipitation patterns, more frequent extreme weather events and shifting seasons. The accelerating pace of climate change, combined with global population and income growth, threatens food security everywhere.

Furthermore, Dube *et al.* (2013: 1) state that agriculture is vulnerable to climate changes. Higher temperatures eventually reduce yields of crops and livestock and tend to encourage pathogen proliferation. Greater variation in precipitation increases the likelihood of short-run crop failures and long-run production declines. Although there might be gains in some crops in some regions of the world, the overall impact of climate change on agriculture are expected to be negative above a global mean temperature rise of 2 °C, threatening global food security (Dube *et al.*, 2013: 2).

Climate change affects regions differently, but the poorest regions experience the worst impacts because they are very vulnerable. Countries low on the Human Development Index already experience the greatest reduction in rainfall and the greatest increase in its variability, with implications for agricultural production and livelihoods (UNDP HDR 2011: 33). In Africa, current and possible future impacts include increased sea level rise and coastal erosion, stresses on fresh water resources, deforestation, increased intensity and recurrence of disasters and the spread of malaria. Many African countries are dealing with poverty, a lack of good governance, debt, conflicts, and disease, including HIV/AIDS; all this reduces their capacity to adapt to climate change (UNDP, 2012: 6).

The agriculture sector is predicted to come under substantial stress from climate change-induced increases in temperature, variability in rainfall and extreme weather events that could trigger crop failures, pest and disease outbreaks, and the degradation of land and water resources (UNDP, 2012: 1).

2.5 Government programmes and policies on Food Security

Agricultural production determines food availability. The stability of access to food through production or purchase is governed by domestic policies, including social protection policies and agricultural investment choices that reduce risks (such as droughts) in the agriculture production cycle (World Bank, [n.d.]: 11).

The issue of food (in) security has been critical in many parts of the world including South Africa. The right to food is enshrined in international and national law. In South Africa, food security received much attention after 1994 when South Africa became a democratic country. The right of access to sufficient food was embedded in section 26 and 27 of the South African Constitutional law of 1996. The constitution indicates that every South African citizen has a right to sufficient food and water and social security (Aliber, 2009: 11).

USAID (2011: 2) shows that it is clear that agricultural projects and policies have the capacity to have major effects on household food security. These effects take place through employment and incomes, and through market prices, with these, in turn, affected by crop selection and choice of agricultural technology.

While South Africa is considered food secure at the national level, it is food insecure at the household level (Baiphethi & Jacobs, 2009: 461). Review of existing literature shows that a number of challenges facing food security in South Africa has been identified and documented and these include among others, the need to:

- Ensure that food is available to all now and in future to address the dire need of food security for the majority of South African poor;
- Align people's income to food prices to ensure affordability and increase access to sufficient and safe food (NDA, 2013: 3).

A number of government programmes and policies have been documented in the literature, which are worth noting:

2.5.1 The Integrated Nutrition Programme (INP) of 1995: Department of Health

The INP was one of the key strategic health programmes aimed at reducing morbidity and mortality rates and prevention of malnutrition and has achieved some targets, such as the implementation of primary health care and increase in food and nutrition security among others (Department of Health, 1995).

2.5.2. The Integrated Food Security Strategy (IFSS) of 1996: Department of Agriculture, Forestry and Fisheries (DAFF)

The IFSS was first introduced in 1996, following the world food and security summit held in Rome in 1996, aimed to address the adverse impact of apartheid and unite the country towards a common goal of ensuring food security for all. As a consequence of the policy debates on agriculture and food security, the IFSS turned out to be a

multidimensional strategy, structured mainly around household food security in rural areas. The arrangements proposed in the strategy appear to be an innovative blend of mechanisms, with clear programmes and coordinating units to stimulate and support programmes that would engage creativity with food insecurity (Du Toit *et al.*, 2011).

The IFSS identifies five objectives as follows:

- Increased household production and trading;
- Improved income generation and job creation opportunities;
- Improved nutrition and food safety;
- Increased safety nets and food emergency management systems, and
- Improved analysis and information system management (NDA, 2013: 7).

Ntsako and Jopi women food security projects fall under this programme.

2.5.3 The Comprehensive Agricultural Support Programme of 2005 (CASP)

The Comprehensive Agricultural Support Programme (CASP) was an initiative involving a range of government departments and incorporates the Household Food Production Programme, which was targeted at those household that fail to access surplus food. CASP also focused on skills and knowledge transfer, financial and marketing advice with the aim to promote wealth through agriculture and improve national and household food security (<http://www.afra.co.za/default.asp?id=1169>).

2.5.4 Micro Agricultural Finance Initiatives of South Africa (MAFISA) of 2006

MAFISA was launched in 2005 by the National Department of Agriculture (NDA) and the Development Finance Institution of South Africa (DFI) with the aim of providing credit to aspiring Black farmers and the working poor, to improve livelihoods and reduced poverty through the creation of viable business ventures.

2.5.5 The Comprehensive Rural Development Programme (CRDP) of 2009: Department of Agriculture, Forestry and Fisheries (DAFF)

In 2009 the government launched the CRDP as an effective poverty and food insecurity response through maximizing the use of natural resources. The three pronged strategy of the CRDP is focused on coordinated agrarian transformation, rural development and improved and integrated land reform (DARDLR, 2009).

2.5.6 The New Growth Path (NGP) and National Development Plan (NDP)

Vision 2030 of 2012

The NGP introduced in 2010 by the Economic Development Department (EDD) and the NDP Vision 2030 of 2012 is a national body whose development policies aim at improving livelihoods and reducing inequalities through job creation. Both policies articulate a vision of an integrated rural economy with land reform, job creation and rising agricultural production contributing to this vision. The NGP specifically outlines the potential of agriculture to generate 1 million jobs in agriculture through an effective land reform programme and growth of irrigated and land based agriculture (EDD, 2010).

2.5.7 Food Security Policy of 2012: DAFF

In 2012, DAFF published a Food Security Policy, with limited consultation. The stated goal of the policy is to improve South Africa's adequacy and stability of access to safe and nutritious food at national and household levels (DAFF, 2012).

2.6 Gender on Food Security

Mehra & Rojas (2008: 6) report that from gender analysis, the international development community also learned that women face significant barriers in agriculture, especially inequalities in access to and control over crucial resources and inputs such as land, labour, fertilizer and formal finance. Women also face barriers to membership in rural

organizations and cooperatives, agricultural inputs and technology such as improved seeds, training and extension, and marketing services.

According to USAID (2011: 3), women play a vital role in advancing agricultural development and food security. They participate in many aspects of rural life in-paid employment, trade and marketing, as well as many unpaid activities, such as tending to crops and animals, collecting water and wood for fuel, and caring for family members. Women also manage household consumption and food preparation. UNDP (2012: 1) notes that women play vital roles in ensuring food security and enhancing agricultural productivity, such as soil and water conservation, a forestation and crop domestication.

Perenzee (2010: 5) points out that farming are a means of survival for women, their families and the community at large. Emerging women farmers are therefore heavily dependent on the income generated through farming. However, the author believes that emerging women farmers, regardless of whether they are involved in mixed-or women-only farming projects are confronted with a host of obstacles, which include:

- **Fertilizer, tools and other inputs:**

A study on an irrigated rice project in the Gambia found that less than 1 percent of women owned a seeder, a weeder or multipurpose cultivation instrument, compared to 27 percent, 12 percent and 18 percent, respectively, of men. Similar differences were found in Kenya and Zambia. Research in Burkina Faso on men and women who grew the same crop on individual plots showed that most inputs, such as labour and fertilizer went to the men's plots (Mehra & Rojas, 2008: 7). UNDP (2012: 3) reports that the empowerment of women and girls is critical for agricultural development and food security. There is also a strong economic rationale for this; if women farmers were given the same access to resources (such as finance, fertilizers) as men, women's agricultural yields could increase by 20 to 30 percent; national agricultural production could rise by 2.5 to 4 percent and the number of malnourished people could be reduced by 12 to 17 percent.

- **Difficulties accessing and securing land**

The processes for acquiring land on which to farm are complicated, unfamiliar, time-consuming and costly as they involve several engagements with municipal officials who are located at offices which are far from where women farmers reside. Many women expressed feeling intimidated when engaging with government officials.

- **Pressure to ensure that land is used productively in order to demonstrate the viability of their farming projects**

Women indicated that based on the agreement with the municipality, in order to ensure that they do not have the land taken away they need to make optimal use of the land. However, they face social and environmental challenges which hamper productive use of the land, for example inadequate supply of water, no drought support, lack of resources to put up fencing, as well as inadequate infrastructure such as roads to enable ease of movement and transportation of produce as well as affordable labour. All these factors affect women's ability to utilize the land optimally, thus threatening their continual access to municipal land (Perenzee, 2010: 5).

Quisumbing & Meinzen-Dick (2001: 1) note that women play important roles as producers of food, managers of natural resources, income earners, and caretakers of household food and nutrition security. Giving women the same access to physical and human resources as men could increase agricultural productivity, just as increases in women's education and improvements in women's status over the past quarter century have contributed to more than half of the reduction in the rate of child malnutrition. In many countries, increasing assets that women control also has a positive impact on the next generation, particularly on education and health (Quisumbing & Meinzen-Dick, 2001: 1).

According to Perenzee (2010: 7), emerging women farmers present their involvement in farming projects in relation to their care-giving roles towards the family and community. The fact that they have to assume multiple roles, continue to be subjected to barriers in accessing land and becoming independent as well as the devaluing of their contribution is not something with which these women critically engage. A possible explanation for the lack of critical engagement could be attributed to the fact that the discrimination which women experience is normalized to such an extent that those women collude in their own oppression.

Furthermore, the author implies that the consideration that women can own land and have authority over land is not something which registers within the reality in which women operate. Another possible explanation for the absence of critical engagement is that women have made a purposeful decision to accept their circumstances because the consequences of challenging it will alienate them further, resulting in the limited support systems which currently exist (i.e. family and community) also becoming inaccessible (Perenzee, 2010: 7).

Agriculture remains a core sector for food security - as a source of food, but also of employment, raw materials, foreign exchange and other resources essential for economic development (Maxwell, 2005: 16). Evidently so, women's involvement in agriculture has long been viewed as improving the quality of life, especially in rural areas. James (1995: 102) points out that the role played by women in agriculture can therefore be eluded to the gendered power relations that exist in a patriarchal society. Since rural areas in South Africa are predominantly patriarchal, the existing gender relations give a perception that men are breadwinners and the women's roles are complimentary to male productivity (James, 1995: 102). Attesting to that Gebremedhin (2002: 93) says that the knowledge and skills of women should be strengthened so as to assist in the development of their communities as well as alleviating poverty.

Hemson (2002: 2) states that women's roles still revolve around nurturing the household while men tend to take on the role of provider. Rural women make a tremendous

contribution to food and agricultural production. They also play a crucial role in determining and guaranteeing food security and well-being for the entire household. Equitable, effective and sustainable agriculture and rural development cannot be pursued without an explicit recognition of these realities.

USAID (2011: 2) endorses that increasing opportunities for women can have a powerful impact on productivity and agriculture-led growth. Women are just as efficient agricultural producers as men and can achieve similar yields when given equal access to resources, including training and services. USAID reports further that in Kenya, researchers found that women could increase their crop yields by approximately 20 percent if given the same access to the same resources as men. In Burkina Faso, it has been estimated that overall household production could increase by about six percent through more equitably distributing of fertilizer and labor between male and female-farmed plots. The Food and Agriculture Organization of the United Nations (FAO) estimates that if women had the same access to productive resources as men, they could increase yields on their farms by 20–30 percent (USAID, 2011: 2).

Simson (2003: 63) argues women's role in the economy has often been underestimated, and their work in agriculture has for long been taken for granted. While policy makers have accommodated women's productive roles in population, health and nutrition programmes, they have overlooked their gender contribution to food security. This situation however is changing with the growing evidence that income in the hands of women contributes more to the household food security and child nutrition. Such knowledge about women's key role in food security is essential to enhance their potential. Women play important roles as producers of food, managers of natural resources, income earners, and care takers of household food and nutrition security. Hence, giving women the same access to physical and natural resources as men could increase agricultural productivity (Simon, 2003: 63).

Compounding the impact of poor support services is the fact that researchers and extensionists, who are the backbone of agricultural development in South Africa, lack sufficient communication, gender awareness and people-oriented skills. They need basic training in these skills and disciplines in order to comprehend the realities encountered at the farm and household levels to enable them to develop appropriate technologies and provide suitable services required by diverse types of farmers. Conventional agricultural training in its current form is often inadequate to people's realities (Hart & Aliber, 2012: 6).

2.7 The benefits from Food Security projects

In South Africa the cause of hunger and malnutrition is not the shortage of food, but rather an inadequate access to food by certain categories of individuals and households in the population. Statistics South Africa has shown that food insecurity is not an exceptional, short-term event, but is rather a continuous threat for more than a third of the population. The vast majority of South Africans buy their staple foods from commercial suppliers, rather than growing it themselves, and they are therefore dependent on having (direct or indirect) access to cash (NDA, 2006: 1).

Sowman & Gawith (2004: 45) contend that projects promote unique opportunities and play a crucial role in creating a holistic, engaging educational atmosphere for today's youth: one that encourages hands-on experiences, healthy eating and curiosity about the natural world. Community Gardens Project brings neighbours together and empowers people to supplement their food supply by growing it themselves. Community gardening stimulates social interaction, encourages self-reliance, truly beautifies neighborhoods and produces nutritious foods, while reducing family food budgets. Each garden is an autonomous neighborhood-based effort where friends share work and responsibility.

UNDP (2012: 18) remarks in the context of agriculture and food security benefits, that it is important that men and women of all ages, ethnicities, religion, and socio-economic levels have enough food and that it should be readily available, accessible, and appropriately used. Agriculture remains a core sector for food security - as a source of food, but also of employment, raw materials, foreign exchange and other resources essential for economic development (Maxwell 2005:16).

According to Du Toit (2011: 11), empowering people to grow their own food for subsistence or income generation will provide nourishment and potential income to many people in the country. Therefore, increase investment in agriculture will help redress the current inequalities.

According to Stellenbosch University (2010: 3), the food security project aims to reconceptualize the food security challenge to create new models of practice in the food system. Through the integration of in-depth research findings on key issues in the food value chain, collaboration across disciplinary boundaries, capacity building and systematic impact assessment with the aim of benefiting the long-term food security of countries, people and communities will benefit.

Bryan & Joseph (2005: 51) conclude that government initiatives not only target support to women, but also the entire citizenry. When citizens are organized, their role and their voice in decision-making processes are increased, especially by building strong public relationships between local community-based organizations and the public and private sector. Citizens should be afforded space to develop their understanding and eventually take part in the matters of governance; their understanding of matters of development will help them participate in poverty alleviation initiatives. Their understanding will further contribute in the process of sustaining these particular programmes (Bryan & Joseph, 2005: 103).

2.8 Water and Food Security

Water is one of the essential resources in food production, making it a critical factor in food security. Achieving food security of growing numbers of people with the same amount of water is an important societal concern. Food security is the outcome of many interrelated factors, one of which being water, an essential resource for food production. People's access to water in rural areas, and the price of water, affects their food security (Wenhold *et al.*, 2007: 331).

Wenhold *et al.* (2007: 331) furthermore finds that access to water for livestock and particularly for the irrigation of crops, including food crops, is one of the ways poverty and food insecurity can be reduced in rural areas. This has resulted in water being called the dividing line between poverty and prosperity, as it is a cross-cutting tool for the achievement of the Millennium Development Goals. Food production is the most water-intensive activity in society and water is the number one food-limiting factor in many parts of Asia and sub-Saharan Africa. Agriculture accounts for 70% of the worldwide human fresh water use (Gerbens-Leenes & Nonhebel, 2004: 547).

According to Gerbens-Leenes & Nonhebel (2004: 548), food security and increasing water scarcity have a dominant place on the food policy. Food security requires sufficient water of adequate quality because water is prerequisite for plant growth. Furthermore, the authors' remark on the projections for 2025 indicating that more than half of the world's population will live regions dependent on food imports due to water scarcity.

2.9 Conclusion

This chapter has provided an analysis of food insecurity, both globally and in South Africa in particular. The chapter has therefore attempted to provide the factors that contribute to food insecurity and has explained the reasons behind the persistence of hunger for some of the most vulnerable people in society. Improving food security requires an understanding not just of who is food insecure today and why they are so,

but also of who is likely to be food insecure in the future and why so. The solution lies in increasing food availability, food access and food adequacy for all. It became clear that women do or can play a critical role in promoting food security. The issue is what enhancement strategies are required in order to empower and capacitate them in more critical productive roles? This theoretical basis should help in the analysis and interpretation on the actual field data and results.

Although food security and nutrition are often used to justify agricultural interventions, there has been relatively little intentionality in the design of such interventions to ensure that food security and nutrition impacts are positive and significant. The studies discussed in this study, however, indicate that such impacts can often be anticipated, and that agricultural projects can be oriented in ways that maximize positive impacts. While reducing household food insecurity may be a more direct result of such an intentional orientation, reduced malnutrition may also be possible in some projects.

Efforts are therefore needed to sensitize those responsible for the design of agricultural projects, and to increase awareness among senior agriculture officials in the government and in international assistance organizations. As part of this sensitization, it should be noted that while it is clear that agricultural interventions can significantly affect food security and sometimes nutrition, there is also evidence that a healthier, better nourished work force can help increase agricultural productivity where labour is one of the limiting factors in the production process.

CHAPTER 3

3. RESEARCH METHODOLOGY

3.1 Introduction

This chapter outlines the methodology used and the specific data gathering tools employed in the study. The study focuses on quantitative data (quantitative method produces numerical data). In relating to the relevancy of the study, the methodological approach employed was based on specific activities which were part of the women's food security project.

3.2 Study area

Ntsako village is situated within the Mohlaba area which falls under the Greater Tzaneen Municipality in Mopani District, Limpopo Province. The Limpopo Department of Agriculture afforded Ntsako and Jopi communities an opportunity to start agricultural food security projects. The study was conducted at Ntsako and Jopi villages situated in the Greater Tzaneen Municipality, Mopani District.

3.3 Research Methodology

According to Babbie & Mouton (2000: 647) research methodology involves methods and techniques that are employed in the process of implementing research design or research plan as well as underlying principles and assumptions that underpin their use. The researcher used the quantitative method because it permits for statistically reliable information obtained from numerical measurement to be supported and enriched by information about the research participants' explanation.

Quantitative methods rely on studying phenomena through the use of numerical means. It refers to the specification of the most adequate operations to be performed in order to test specific hypothesis under given conditions. It focuses on the end product, formulates a research problem as a point of departure and focuses on the logic of the research (Newman, 2003: 140).

3.4 Research design

Babbie & Mouton (2001: 74) define research design as a plan or blue print of how a researcher intends conducting the research. In this study, the researcher used non-experimental descriptive design.

3.4.1 Population

All 15 women in Ntsako village and the 20 women in Jopi village involved in food security projects are target population.

3.4.2 Sampling

Babbie & Mouton (2001: 164) note that sampling is the process of selecting observations. Sampling methods are used in research when one is unable to investigate the total population which is involved in the information that the researcher needs to obtain. In the present study there was no sample selection because all 35 women in the population were included in the study.

3.4.3 Data collection

According to Donald and McBurney (2005:7) a detailed description of the data gathering procedures is needed for the planned investigation. The most difficult and time consuming phase of the process is the data collection. The collection of data in this research included both primary and secondary data sources, in which various tools and approaches were used, as discussed below:

(a) Primary data collection methods

In order to compile evidence for an assessment, research requires data. Such data, especially primary data from the cases being studied, provide first-hand information for an assessment. In the case of this study, the researcher conducted several visits to the beneficiaries of Ntsako and Jopi women food security projects. The following method was used to collect primary data:

(i) Questionnaires

Kothari (2004: 100) define a questionnaire as a written strategy to elicit information which can be generalized over a large population. The use of questionnaires in this research was necessary for documenting responses since it formed a part of quantitative data. The main tool for data collection was the questionnaire. A questionnaire was used to collect data from the project members, especially on their qualitative on the impact of the food security projects on rural women. Questions were, therefore, composed of personal data, familial information, work, qualification, their perception towards food security projects and the impact of women food security projects on household food security. Close-ended questions and some open-ended questions were used in the questionnaire.

(ii) Secondary data sources used

According to the Kothari (2004: 111) secondary data refers to the data which have already been collected and analysed by someone else through various sources. Secondary data gathered from previous research on the subject being studied helped the researcher to understand the research area better, thus assisting the researcher in shaping the research approach, as well as the gaps that were needed to be filled in by the research. In this research information was gathered by reviewing government reports, news items and research findings from previous studies in the area of food security. More secondary data

were obtained from the Internet, especially from the websites of various institutions, such as FAO.

3.4.4 Data analysis, Interpretation and Presentation

The data that were collected from thirty-five respondents were presented in the form of tables to give a clear picture of the research outcomes. The data were processed using Statistical Package for Social Science (SPSS) software. Statistical analyses were performed on the before and after data and gross margin analysis were performed from the production and marketing data.

3.5 Validity and Reliability

According to Babbie (2004:143) validity refers to the extent to which an empirical measure accurately reflects the concept it is intended to measure. Babbie and Mouton (2001:119) contends that reliability is a matter of whether a particular technique applied repeatedly to the same object would yield the same results each time. The researcher used a pilot test on both Jopi and Ntsako women food security project to ensure that the study is valid and reliable. Necessary modifications were made following the pilot test before the questionnaires were presented to the full sample.

3.6 Ethical considerations

According to Newman (2003: 140), before an individual becomes a subject of research he or she shall be notified of the aims, methods, anticipated benefits and potential hazards of the research. All participants were properly briefed about the aims of the study as well as their rights to participate. Ethical considerations in research always evolve and change. It is therefore important that the researcher keeps up to date with the latest thinking about research ethics and the researcher also has the responsibility to make sure that every study meets the highest ethical standard. The present

researcher observed the necessary ethical issues that needed to be followed or adhered to.

The researcher adhered to the following ethical standards:

Informed consent: Participants were informed what the research is about, how it

would affect them, the risks and benefits of participating and the fact that they have the right to decline to participate if they chose to do so.

Confidentiality: Information provided by participants, particularly sensitive and personal information was protected and not made available to persons in the public domain. Thus, data from participants were kept under secure conditions.

Discontinue: Participants were given every assurance that they were free to discontinue their participation at any time without being required to offer any explanation. A participant's decision was respected.

3.7. Conclusion

It is important to highlight that the focus of this chapter is on research design, methodology, population, sampling and data collection procedure. The questionnaire and secondary sources were used to collect data from two cases that were studied at Ntsako and Jopi projects at the Greater Tzaneen Municipality in the Limpopo Province. Issues of validity and reliability have also been highlighted. Content analysis was done to come with relations on the findings.

CHAPTER 4

4. ANALYSIS, PRESENTATION AND INTERPRETATION OF DATA

4.1 Introduction

The chapter presents the findings of the study and provides some interpretation and discussion. The data were collected from thirty-five respondents who were subjected to individual interviews and answering of the questionnaires at Ntsako and Jopi projects. Identifying characteristics that were obtained from the respondents were: gender, age, economic status and level of education.

4.2 Household Structure

4.2.1 Household size

The average family size was 6 with a standard deviation of 2. Table 1 shows the distribution of household size by category. Nineteen percent of the sample households comprise 1- 4 people per household, 14 percent of households fall between 9- and 11 people per household and the majority with 66 percent are in the range of 5- 8 people per household.

Table 1: Distribution of respondents according to Household size (n=35)

Number per Household	%
1 – 4	19
5 – 8	66
9 – 11	14
Total	100

This distribution has implications for food security. It shows that many of the families are in the range where food demand would be high.

4.2.1.1 Gender

The total number of individuals from the 35 households was 211, of which 97 or 46 percent were males and 114 or 54 percent were female. Generally women appeared to be better versed in household matters than their male counterparts. This was attributed to the fact that women were usually responsible for the day-to-day running of the household. Rural women make a tremendous contribution to food and agricultural production (Simon, 2003: 63).

4.2.1.2 Age

Table 2, shows that 17 percent of all household members were between 1 and 10 years with 6 percent being females. The majority of the household members, 24 percent were between 11 and 20 years; 13 percent were females, 19 percent were between 21 and 30 years with 10 percent females, 10 percent were 31- 40 years with 6 percent females; 7 percent were between 41 and 50 years with 2 percent females. Only 6 percent females recorded were 51 to 60 years and 18 percent were above 61 years with 12 percent females. This has implications on the food security impact of such projects. For instance, in this distribution, 41 percent are below 20. The impact of such food security projects might be higher on young people.

Table 2: Age of the household members (n=211)

Gender	Age of household member in years (%)							Total
	1-10	11-20	21-30	31-40	41-50	51-60	61 and above	
Male	11	11	9	4	4	0	6	45
Female	6	13	10	6	2	6	12	55
Total	17	24	19	10	6	6	18	100

4.2.1.3 Education

Table 3 shows that 16 percent of household members had no formal education with 8 percent females, 80 percent received primary and secondary (Grade 1-12) education with 44 percent females whilst only 4 percent received tertiary education with 2 percent females. Hemson (2002: 34) notes that, increasing women's education is a key ingredient for women's empowerment which invariably would affect household food security.

Table 3: Level of education of the household members (n=211)

Level of Education achieved	Gender of Household (%)		Total
	Male	Female	
No formal education	8	8	16
Grade 1- 12	36	44	80
Tertiary	2	2	4
Total	46	54	100

4.2.1.4 Employment

Table 4 shows that 6 percent of the household members were in crèche, 33 percent were students, 22 percent were unemployed, 16 percent were farmers, 15 percent were employed and 8 percent of household members were pensioners. In order for poverty reduction to be achieved and food insecurity to be reduced, one of the major factors that need to be considered is the promotion of both formal and non-formal employment.

Table 4: Employment status (N=211)

Nature of employment	Male (%)	Female (%)	Total
Crèche	4	1	5
Students	17	16	33
Unemployed	11	11	22
Farmers	1	16	17
Employed (Formal & Informal)	8	8	15
Pensioners	6	2	8
Total	47	53	100

4.2.1.5 Designation of Household members

Table 5 shows that 16 percent of household members were household heads, 6 percent were wives, 38 percent were children, 38 percent were grandchildren, 1 percent were mothers and 1 percent were sisters to the respondents.

Table 5: Designation of household members (n=211)

Designation	Percentage
Household head	16
Wife	6
Child	38
Grandchild	38
Mother	1
Sister	1
Total	100

This distribution has implications on household food security because it indicates that the household heads make decisions for many individuals. That 38 percent are children and 38 percent are grandchildren might indicate a lack of upward mobility in employment with parents depending on their own parents for support. The extent of this aspect is an area of further study.

4.3 Perception about Household Economic Status

Table 6 shows the households' perceptions about their economic status.

About 11 percent of the households perceived the household as very poor, 46 percent as poor, 40 percent perceived their economic status as medium and only 3 percent perceived themselves as rich. Using one-way analysis of variance we tested whether there was a relationship between perceived economic status and the amount received from the project as food. Given the significant level of 0.388 we conclude that there is no such relationship.

Table 6: Perceived Economic Status (n=35)

Economic status	Percentage
Very poor	11
Poor	46
Medium	40
Rich	3
Total	100

4.4 Distribution of Respondents according to literacy level

4.4.1 Ability to read

Sixty-three percent of the respondents reported that they were unable to read and 69 percent reported that they could not write. This has implications on the food security impact of such projects. It is possible that the literate can be better trained on how to take advantage of the nutritional impact of the projects. Hence, the recommendations made earlier regarding both formal and informal education.

4.5 Distribution of respondents according to farming experience

Table 7 shows that 46 percent of the respondents had 9 to 20 years farming experience, 37 were between 21 and 30 years and 17 percent had between 31 and 40 years farming experience. It is possible that the more experience of farming the project participants have, the more likely the projects are to succeed.

Table 7: Farming experience (n=35)

Farming experience (Years)	Percentage
9 – 20	46
21 – 30	37
31 – 40	17
Total	100

4.6 Project participation

Table 8 shows that 20 percent of respondents started participating in the project in the year 2001, 48 percent in 2002, 26 percent in 2003, 3 percent in 2005 and 3 percent in 2006. The highest number of respondents started participation in the project in the year 2002 when the project was established. This shows that the membership model used in the projects is not closed. The impact of this membership model on the performance of the project warrants investigation. It is possible that members who join later may not be completely aware of the objectives of the project.

Table 8: Participation in the project (n=35)

Year	Percentage
2001	20
2002	48
2003	26
2005	3
2006	3
Total	100

4.7 Project objectives

The respondents were asked what the project wanted to achieve. Twenty-six percent said the objective was to improve food security, 14 percent said it was job creation, 46 percent said poverty alleviation and 14 percent said to empower women. Although some of the objectives are related and although the project could have multiple objectives, the fact that the women reported different objectives could be related to the observations made about the time when members joined the project.

4.8 Perceptions on the contribution of the food security project

4.8.1 Livelihood and food security perceptions

Table 9 shows the results for the agreement/disagreement with statements on livelihoods and food security. The statements in the table appear as they were asked to the respondents in the questionnaire. In response to the statement that the project improved the food security of the family, 94 percent agreed, with 63 percent strongly agreeing. This shows strong food security impact which such projects are perceived to and are capable of producing. On the assumption that even food security projects may have other livelihood impact, the women were asked whether the project assisted them in purchasing household items such as a television, a stove and a refrigerator.

Table9: Level of agreement with statements on livelihood and food security (n=35)

Statement	Level of agreement				
	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
The project improved the food security of my family	63	31	3	3	0
The project assisted me to purchase a television set	11	3	3	17	66
The project assisted me to purchase a stove	11	3	0	20	66
The project assisted me to purchase a refrigerator	6	17	0	0	77
The project has affected the livelihood of my family positively	57	37	6	0	0

Eighty-three percent disagreed that the project assisted them to purchase a television. However, 14 percent agreed, with 11 percent strongly agreeing. The response pattern

was similar for the stove. Eighty-six percent disagreed that the project assisted them in purchasing a stove, but 14 percent agreed with 11 percent strongly agreeing. Regarding assistance with purchasing a refrigerator, 77 percent strongly disagreed and 23 percent agreed, with only 6 percent strongly agreeing. This result implies that although the projects impacted on food security as implied above, they do not have the scale to impact asset ownership. Thus, it is possible to use these projects to target specific objectives.

Women were asked about whether the project has had a positive impact on the livelihood of the family, 6 percent were neutral, 94 percent agreed, with 57 percent strongly agreeing. These results suggest that, even though such projects are meant to have impact on food security, they are capable of producing other livelihood impacts. However, exactly how the project impact livelihoods, and possible quantification of such, is an area of further research. Livelihoods impacts need to be quantified. These projects also have multiplier effects which need to be and can be estimated.

4.8.2 Support for and community perceptions of the project

Table 10 summarizes the results about whether the project received enough funding from the Department of Agriculture, all the women strongly agreed.

Table10: Level of agreement with statements on support for and community perception (n=35)

Statement	Level of agreement (%)				
	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
The project received sufficient financial support from the Department of Agriculture for establishment	100	0	0	0	0
This was the right project for the community	86	14	0	0	0
The community supported the project	49	51	0	0	0
The community shows appreciation towards the project	60	40	0	0	0
The extension officers supported the project with training	100	0	0	0	0
I would recommend a similar project for another community	77	23	0	0	0

All the women also thought the project was the right project for the community with 86 percent strongly agreeing. All the women agreed that the project was supported by the community with 49 percent strongly agreeing. All the women agreed that the community showed appreciation of the project. Perhaps the researcher should have followed up on this statement to probe more about the nature of appreciation.

All the women strongly agreed that the project was supported by the extension worker and that they were offered training. Again, it is essential to follow up and find out what kind of training. Asked if they would recommend the project to another community all the women agreed with 77 percent strongly agreeing. These results suggest that the

projects are highly appreciated and supported by the community as they appear to directly address the needs of the community.

4.9 Attributes of the benefits of the food security project

4.9.1 Food security attributes before and after joining the project

Table 11 shows the results for the attributes on food security project before and after joining the project. The statements in the table appear as they were asked to the respondents in the questionnaire.

Table 11: The food security attributes level before and after project membership

Attribute	BEFORE						AFTER					Sig
	1	2	3	4	5		1	2	3	4	5	
Access to cereals for consumption	11	6	26	37	20		60	29	6	3	3	0.041
Access to vegetables for consumption	0	11	17	34	37		94	6	0	0	0	0.132
Income	3	6	34	17	40		6	34	26	9	26	0.070
Ability to cope with food security shocks	3	3	29	51	14		77	20	0	3	0	0.286

Key: 1=very good, 2=good, 3=Neutral, 4=poor, 5=very poor

4.9.1.1 Access to cereals for consumption

Table 11 shows the attributes on food security project before and after joining the project. Women were asked about their access to cereals for consumption before and

after joining the project. In response to the statement for the access to cereals consumption before joining the project, only 17 percent of women responded that it was good with 57 percent poor and 26 percent neutral. Eighty-nine percent of women rated good with 60 percent very good to access for consumption after joining the project, and 6 percent poor. A two-sample T-test was performed to determine whether there was a significant difference on access to cereal consumption before and after project membership. The p-value= 0.041, showing that there is a significant difference between the distributions of the women's responses before and after joining the project.

4.9.1.2 Access to vegetables for consumption

In response to the vegetables consumption before the project membership, 11 percent of women said it was good with 71 percent poor. All the women said it was good, with 94 percent responding very good access to vegetables consumption after the project membership. A t-test p-value of 0.132 shows there is not a significant relationship between access to vegetables for consumption before and after project membership.

4.9.1.3 Income

The results of the survey shows 9 percent of women responded that their incomes were good before project membership, 57 percent reported poor incomes before project membership. After project membership, 40 percent of the women reported good incomes, 35 percent poor and 26 percent neutral. The p-value is 0.070, suggesting a weak relationship between the project and the women's perceptions of their household incomes. These results suggest that, even though such projects are not meant to have direct impact on household income, they can produce income impacts and therefore other livelihood impacts.

4.9.1.4 Ability to cope with food security shocks

Before project membership only 9 percent of women were good at coping with food security shocks, 29 percent neutral and 65 percent were poor at coping with food security shocks. After project membership almost 97 percent of women were good at

copied with food security shocks, with 77 percent very good and 3 percent neutral. However, p-value of 0.286 indicates that there is no significant difference in the distribution of the women's responses before and after membership. We therefore conclude that the women's ability to cope with food security shocks was not affected by the project.

4.9.2 Contribution for personal attributes before and after the food security project membership

We asked the women how the food security project contributed towards their personal attributes before and after the project membership. The statements in the table are as they were asked to the respondents in the questionnaire.

Table 12: The personal attributes level before and after project membership

Attribute	BEFORE						AFTER					Sig
	1	2	3	4	5		1	2	3	4	5	
Marketing skills	3	11	11	26	49		83	14	3	0	0	0.001
Self-confidence	3	3	40	46	9		77	23	0	0	0	0.216
Respect in the community	0	26	49	23	3		86	11	3	0	0	0.975
Respect in the household	9	54	29	9	0		74	23	3	0	0	0.130
Social network	3	9	3	6	80		6	9	6	6	74	0.001
Access to social clubs	0	9	23	40	29		74	14	6	3	3	0.054

Key: 1=very good, 2=good, 3=Neutral, 4=poor, 5=very poor

4.9.2.1 Marketing skills

Table 12 shows that 14 percent of women reported that their marketing skills were good before joining the project, 75 percent poor and 11 percent neutral. After joining the project 97 percent of the women reported that their marketing skills were good with 83 percent very good and only 3 percent neutral. The p-value is 0,001 showing that the project had a significant impact on the way the women perceived their marketing skills. This response suggests that the women perceived the project as having improved their marketing skills.

4.9.2.2 Self-confidence

Women were asked about their self-confidence attributes before their engagement with the project, and we found that only 6 percent reported good self-confidence, 55 percent poor and 49 percent neutral. After joining the project, all women rated 100 percent good with 77 percent very good on their level of self-confidence. However, the p-value is 0.216, showing that there is no difference in the distribution of the responses before and after project membership so we conclude that there is no relationship.

4.9.2.3 Respect in the community

The results shows that 26 percent of women rated good on respect in the community before the joining the project, 49 percent neutral and 26 percent poor. Ninety seven percent reported good with 86 percent very good and 3 percent neutral was achieved by women on the level of respect in the community after project participation. However, the p-value is showing that we fail to reject the null hypothesis that there is no difference in the distributions before and after project membership. We therefore conclude that the project did not affect the women's perceptions of their respect in the community before and after project membership.

4.9.2.4 Respect in the household

The results show that 63 percent of the women perceived the respect they received in the household as good, 29 percent neutral and 9 percent poor before project membership. The distribution was ninety-seven percent good and 3 percent neutral

after they were engaged in the project. The p-value of 0.130 shows that there is no significance in the distribution before and after the project membership. We therefore conclude that there is no difference in the way the women perceive the respect they get from the family as a result of project membership.

4.9.2.5 Social network

Table 12 shows that before project membership, 12 percent of the women perceived that their social networks were good, 3 percent neutral and 86 percent poor. After women's engagement to the project 15 percent reported their social networks as good, 6 percent neutral and 80 percent poor. The paired observations t-test p-value of 0.001 ($p < 0.05$), shows that there is a significant difference between the distributions before and after project membership. This relationship warrants further investigation.

4.9.2.6 Access to social clubs

The results shows that women's perception of their participation in social clubs before joining the project was reported as good by 9 percent 23 percent neutral and 69 percent poor. After the involvement in the women's project, their participation on social clubs was reported as 88 percent as good, 6 percent neutral and 9 percent poor. The paired observation t-test p-value is 0.054, showing a weak difference in the distribution. We therefore conclude that there is a weak but insignificant difference in the in these distribution. Thus we conclude that the project had little impact in the way the women perceived their participation in social clubs.

4.9.3 Attributes to access for health and school before and after project establishment

Women were asked on how the food security project contributed towards their access to health facilities and ability to send children to school before and after the project.

Table 13: Attributes on access to health and school facilities

	BEFORE						AFTER					Sig
Attribute	1	2	3	4	5		1	2	3	4	5	
Ability to access health facilities	0	17	34	9	40		17	20	26	11	26	0.001
Ability to send children to school	3	11	43	14	29		6	29	34	9	23	0.001

Key: 1=very good, 2=good, 3=Neutral, 4=poor, 5=very poor

4.9.3.1 Ability to access health facilities

Women were asked on their experience to access health facilities before they joined the project. The results from table 13 below shows that 17 percent of women rated their access to health facilities as good, and 34 percent neutral and 49 percent poor. After women’s engagement with the project, 37 percent rated their access to health facilities as good, 26 percent neutral and 37 percent poor. The p-value is 0.001 ($p < 0.05$), so we reject the null hypothesis that there is no difference in the distribution of the responses. We conclude that there is an improvement on the access to health facilities after the women joined the project. This result warrants further investigation.

4.9.3.2 Ability to send children to school

Women were asked about their ability to send children to school before they joined the project. The results from table 13 shows that 14 percent perceived their ability to send children to school as good, 43 percent neutral and 43 percent poor. After they were involved in the project, 35 percent reported good, 34 percent neutral and 32 percent poor. The p-value is 0.001 ($p < 0.05$), so we reject the null hypothesis that there is a no

different on the ability to send children to school before and after project intervention. We conclude that the projects had an impact in the ability of the women to send children to school.

4.9.4 Food received by women

4.9.4.1 Value of food received from food security project

Women were asked the value of food received (Rands) from the food security project for the period of September 2012 to August 2013 on both projects (Ntsako and Jopi).

Table 14: Total value given as food

Total amount given as food (Rands)	Percentage
R280 – R1000	34
R1060 – R1310	43
R1330 – R1668	23
Total	100

Table 14 shows that 34 percent of women received an amount of R280 to R1 000 each given as food on both projects, 43 percent received R1 060 to R1 310 and 23 percent received R1 330 to R1 668 each given as food on both projects. These results show that the project has an impact on the livelihood of the women, because all women benefited with food received from the food security projects.

4.9.4.2 Food type received

Table 15 describes the type of food received from the project by the women for the period of September 2012 to August 2013. Twenty six percent of women received green beans, 22 percent received okra and the lowest number reported was 2 percent that

received onions. This result shows that participation of women in the projects assisted in accessing different types of foods to the households.

Table 15: Food type received from food security project

Food type	Percent
Beetroot	13
Cabbage	4
Chillies	5
Green beans	26
Green pepper	5
Okra	22
Onions	2
Spinach	13
Tomatoes	10
Total	100

4.9.5 Income from food security projects

Tables 16 and 17 provide the gross margins for Jopi and Ntsako food security projects. These are necessary in order to provide two analytical perspectives:

❖ **What is the potential of the projects in contributing towards household income?**

As the women food security projects grow and take on an increasing number of activities, it runs the risk of focusing on day-to-day management issues and losing sight of long range objectives. Sound management that is transparent and accountable is the backbone of sustainability in a project. The study established that less conflict among members and successful resolution of differences by the Project Management Team is a building block towards sustainability as it was illustrated at Jopi and Ntsako projects.

❖ **Are the projects financially sustainable?**

Financial viability is maintained if a project is able to break even in its cash flow management but most importantly, have audit opinion of its financial management. All the two projects have each appointed a bookkeeper to look into the financial administration of their projects. Accounting principles were used to show the importance of the concept of generating a surplus to achieve financial sustainability in the women food security projects. However, a lot of effort and teamwork is required to reach this goal, since it has to do with generating an income surplus.

Ntsako and Jopi women food security projects are financially sustainable, according to the crop budgets by seasons on tables 15 and 16 because of income diversification from crop commodities. Ntsako and Jopi projects obtain revenues in response to a demand, in order to sustain productive processes at a steady or growing rate to produce results and obtain a surplus.

Table 16: Jopi Food Security Project: Crop budgets by season.

Attribute and unit	Season						
	Summer			Winter			
	Maize	Green beans	Chillies	Green beans	Okra	Tomatoes	Onion
Area (ha)	2	2	1	2	1	1	1
Output (t)	8.00	30.00	3.00	30.00	8.25	50.46	30.30
Consumed (%)							
Yield (t/ha)	4.00	15.00	3.00	15.00	8.25	50.40	30.30
Price (R/t)	6500.00	9500.00	8333.33	13750.00	13330.00	4640.00	6250.00
Gross value of output (R)	52000.00	294120.00	27500.00	412500.00	109972.50	234143.68	189375.00
INPUTS							
SEED (R)	200.00	800.00	130.00	800.00	250.00	140.00	80.00
LAN							
Rate (kg/ha)	100	100	50	100	100	350	200
Price	4.92	4.92	4.92	4.92	4.92	4.92	4.92
Amount (R)	984.00	984.00	492.00	984.00	492	1722.00	984.00
MAP							
Rate (kg/ha)	37.5				50		50
Price	5.11				5.54		5.54
Amount (R)	388.00				277.00		277.00
KCL							
Rate (kg/ha)		50		50			
Price		5.40		5.40			
Amount (R)		540.00		540.00			
Lime							
Rate (kg/ha)					80		
Price					4.00		
Amount (R)					320.00		
Mancozeb							
Rate (kg/ha)						100	100
Price						5.96	5.96
Amount (R)						596.00	596.00
AZOXYSTROBIN							
Rate (l/ha)		400					
Price/l		6.50					
Amount (R)		5200.00					
Captab							
Rate (l/ha)		75					
Price/l		4.13					
Amount (R)		620.00					
Alpha Cypermetion							
Rate (l/ha)			180	80		80	80
Price/l			5.31	5.44		11.5	11.5
Amount (R)			956.00	870.00		920.00	920.00
Copper oxychloride							
Rate (kg/ha)			150		150		
Price			16.00		16.66		
Amount (R)			2400.00		2400.00		
Acetorcklor							
Rate (kg/ha)	35						
Price	5.13						
Amount (R)	359.00						
EPTC							
Rate (kg/ha)		90		90			
Price		15.44		15.44			
Amount (R)		2780.00		2780.00			
Trifluralin							
Rate (l/ha)						40	
Price/l						12.25	
Amount (R)						490.55	
Oxyfluorfen							
Rate (/ha)							130
Price							4.77
Amount (R)							620.00
Variable costs							
Gross margin (R)	44 254.00	288 060.00	24 478.00	406 526.00	106 553.50	229 955.68	185 898.00
	Total Summer = 356792.00			Total Winter=928933.18			
	Grand Total=1285725.18						
Per capita gross margin (R) (20 farmers)	64286.26						

Table 17: Ntsako Food Security Project: Crop budgets by season.

Attribute and unit	Season					
	Summer			Winter		
	Maize	Green beans	Butternut	Green beans	Okra	Cabbage
Area (ha)	3	1	1	2	1	1
Output (t)	10.00	30.42	30.00	35	7.45	40.00
Consumed (%)						
Yield (t/ha)	3.33	30.42	30	17.50	7.45	40.00
Price (R/t)	5000.00	7708.33	2166.67	13750.00	10002.86	1916.50
Gross value of output (R)	50000.00	234487.50	65000	481250.00	74521.29	76660.00
INPUTS						
SEED (R)	280.00	600.00	100.00	800.00	300.00	150.00
LAN						
Rate (kg/ha)	67	150	150	100	150	150
Price	4.92	4.92	4.92	4.92	4.87	4.92
Amount (R)	984.00	738.00	738.00	984.00	730.00	1230.00
1.0.1						
Rate (kg/ha)			50		50	
Price			5.96		5.96	
Amount (R)			298		298.00	
KCL						
Rate (kg/ha)	17					250
Price	5.4					5.4
Amount (R)	270.00					1350.00
Deltameton						
Rate (kg/ha)	27					
Price	8.25					
Amount (R)	660.00					
Cypermetion						
Rate (kg/ha)			70			70
Price			11.2			12.57
Amount (R)			784.00			880.00
Thiocarb						
Rate (kg/ha)	10					
Price	11.53					
Amount (R)	3460.00					
Copper oxychloride						
Rate (kg/ha)		150		175	125	
Price		16		10.8	15.2	
Amount (R)		2400.00		2700.00	1900.00	
Benomyl						
Rate (kg/ha)			130			
Price			7.85			
Amount (R)			1020.00			
Bendioxide						
Rate (kg/ha)		200		150		
Price		15.7		13.0		
Amount (R)		3140.00		3900.00		
Paraquatop						
Rate (kg/ha)						180
Price						2.24
Amount (R)						440.00
Artrazine						
Rate (kg/ha)	4.0					
Price	9.65					
Amount (R)	386.00					
Floxyfop-R-Methyllester						
Rate (kg/ha)			280			
Price			6.04			
Amount (R)			1690.00			
Gross margin (R)	43960.00	227609.50	60370.00	472866.00	71293.29	72090.00
	Total Summer = 331939.50			Total Winter=616249.29		
	Grand Total=948188.79					
Per capita gross margin (R) (15 farmers)	63212.59					

With a per capita gross margin of more than R60 000, we conclude that the income contribution of these projects can be significant and that they show good signs of financial viability. This is consistent with the result from table 11. However, this is based on one year production data. This analysis is therefore only indicative. An area of further study is to establish this performance over say a five-year period.

4.9.6 Alternative sources of Income

Women were asked about the other sources of income besides the food security projects, and how much they got from each source.

Table 18: Alternative sources of income

Total amount from alternative source	Jopi	Ntsako	Total
0	1	0	1
3720	6	3	9
7440	2	0	2
10800	1	0	1
16200	5	7	12
19920	3	4	7
23640	2	1	3
Total	20	15	35

Table 18 shows that almost all the women in Jopi and Ntsako projects were receiving alternative income from alternative sources other than the food security project. For example, as pensioners (old age grant) and government child grant. Alternative source of income can affect food security. The extent to which these projects also contribute to income is an area of further study.

4.10 Conclusion

From the results it can be concluded that women's food security projects play a significant role in enhancing food security of the households in communal areas. The income from the projects is also significant. The analysis from this study shows that green beans contribute a higher income than other crops. The high income in green beans is a result of this crop being grown more than once per year and can be harvested several times, making it possible to get a continuous flow of income. The long term contribution to both food security and income and viability are aspects that require further investigation.

CHAPTER 5

5. SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

The aim of this chapter is to provide summary of the research findings, conclusion and recommendations.

5.2 Conclusion

The objective of the study was to assess the impact of women's food security projects on household food security. The attributes and dynamics of women food security projects need to be understood by all households involved in the projects to advance such projects as a possible option to address food insecurity and low incomes as well as unemployment prevalent in the study area. Understanding the nature of women food security projects can assist to popularize the projects among households not currently participating in the sector which can be significant for the growth and development of the projects.

Descriptive and quantitative methods were used to analyze and present the research findings. The study was based in Jopi and Ntsako villages in Limpopo Province, which is a rural settlement with poor living conditions. The area is characterized by widespread food insecurity, which makes it difficult for most households to make a living under such conditions. The study area is occupied by households with low income, while employment and other opportunities are limited.

It is an area that characterizes most rural settlements and reflects conditions faced by many other South Africans living in rural areas. These households experience difficulties in accessing food. These rural households have to depend on incomes from other sources to meet their daily household food requirements.

Women food security projects are viewed as an easy food coping strategy option for most low income families in Jopi and Ntsako villages, in order to cover their food needs deficit and diversify their livelihood options under conditions of persistent economic uncertainty and threats such as unemployment and declining purchasing power. Women's food security projects have often been viewed as a relevant strategy in response to improving their household food situation. The results show that the coping strategies for the women did not change before and after the project. The reason for this could be that the projects need more time in order for them to have impact on longer term variables like coping strategies.

A women's food security project has an important role to play in most households' food security in Jopi and Ntsako villages. As evidenced by the results, women's food security project provides a source of food which can be easily replicated in most rural areas. They affect the household by providing food for household consumption through increased household food supply, which would otherwise be unaffordable to many households and by saving and utilizing the income generated from their farming activity to supplement other household needs including food.

The results show those women's food security projects can help relieve food poverty and hunger conditions for most households through farm produce channelled to markets which could be affordable to most households in Jopi and Ntsako villages. The projects also provide employment to women, thus reducing persistent unemployment common in most poor areas. Evidence gathered through the present study demonstrated that women's food security projects have a positive impact on the development of women. Based on a few but critical impact indicators, the study showed that:

- (i) Women food security projects improved income earned by project members as these members did not have a single income before. They were able to earn something since the inception of the projects. The results show that the women who perceived their income as good increased from 9 percent to 40 percent before and after the project respectively.

- (ii) There was evidence that some of the women purchased household assets such as furniture and household equipment using income from the project.
- (iii) There is evidence that women's food security project impact networking. The impact of this on development needs further study.
- (iv) Women's food security projects improved the access to cereals for consumption. The women who perceived their access to cereals as good increased from 17 percent to 89 percent comparing before and after the project respectively.
- (v) Women's food security project growth cannot be achieved without access to farmer support services. With adequate access to farmer support services such farm skills development; women food security farmers can significantly increase their agricultural productivity and production. Sixty-three percent of the respondents reported that they were unable to read and 69 percent reported that they could not write. This has implications on the food security and impact the ability of the up-scaling of such projects since this requires the understanding of extension messages which sometimes are written.

We reach this conclusion based on the observations that there was evidence that some of the women purchased household assets such as furniture and household equipment using income from the project. Asked about whether the project has had a positive impact on the livelihood of the family, 6 percent were neutral, 94 percent agreed with 57 percent strongly agreeing. Even though such projects are meant to have impact on food security, they are capable of producing other livelihood impacts. The projects also have multiplier effects.

5.3 RECOMMENDATIONS

Recommendations on the impact of women's food security project at the household level in rural areas are discussed below. Some of the initiatives aimed at promoting women's food security projects could be put in place. The recommendations from this study are:

There is a need to provide women household farmers with agricultural development support skills, which would enhance and raise their women food security project productivity. High level of productivity would provide these farmers with extra incomes, which will ultimately improve their food purchasing power.

- On the issue of income, there is a need to add more commodities for production, in order to generate sufficient income and to sustain the project. Such projects like nurseries are and could be easy additions to such projects.
- The women indicated that women food security projects improved their access to cereals for consumption. They also got vegetables from the projects however, it is still possible for the women to be given more vegetables as food for their consumption from such projects if some of the above recommendations are implemented, which helps improve the nutritional or dietary requirements of their households.

5.4 Areas of further research

The following are suggested areas of study that raised interest during the process of conducting this research:

- The impact of the membership model on the performance of the project.
- Investigating best practices that can be employed by agricultural extension officers to boost production of women's food security projects.
- Lack of upward mobility in employment with parents depending on their own parents for support.
- The significant difference for social network attribute between the distribution before and after project membership warrants further investigation.

- The results on the ability to access health facilities warrant further investigation.
- The extent to which these projects contribute to income.
- How the project impact livelihoods and possible quantification of such.
- The recruitment of youth in the projects.

Exploring these issues would help in understanding the social and economic dynamics that play out in rural areas, thus bringing positive change and transformation which would readily benefit community members.

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APPENDIX A

QUESTIONNAIRE:

THE IMPACT OF WOMEN FOOD SECURITY PROJECTS: A CASE OF NTSAKO ANDJOPI VILLAGES IN GREATER TZANEEN MUNICIPALITY, LIMPOPO PROVINCE

Identifiers:

Name of household head: -----

Name of village: -----

Name of project:-----

Name of interviewer:-----

Interview date : /_/_/_/_/_/_/_/_/_/_/ (ddmmyyyy)

Instructions:

The purpose of this questionnaire is to find out the impact that women food security projects have on beneficiaries at Ntsako and Jopi Villages. The information received from this questionnaire will be treated with confidentiality.

The information in this research study will be held confidentially and you are asked to answer all the questions as honestly as possible.

SECTION A: DEMOGRAPHIC INFORMATION

1. Household structure

1.1. How many are you in your household? _____

1.2. What is the composition of your household?

Name of household member	Gender of household member	Age of household member (years)	Years of Education of household member or level achieved	Occupation of household member	Designation of household member e.g. Household head, Wife, child, etc

2. What is the economic status of your household?

Very Poor	1
Poor	2
Medium	3
Rich	4
Very rich	5

3. Can you read and or write?

	Yes	No
(a) Read	1	0
(b) Write	1	0

4. Please indicate your language abilities

Attribute	1	2	3	4
Tsonga				
English				
Afrikaans				
Sotho				
Other				

Key: 1= Good, 2=Fair, 3= Poor, 4=None

5. What is your farming experience in years? _____

SECTION B: PROJECT INFORMATION

6. When was the project established? _____

7. When did you start participating in the project? _____

8. What does the project want to achieve?

9. Perceptions of the contribution of the food security project.

How far do you agree or disagree with the following statements.

Statement	Level of agreement					
	Strongly agree	Agree	Neutral	Disagree	Strongly disagree	
The project improved food security of my family						
This was the right project for the community						
The project received sufficient financial support from the Department of Agriculture for establishment						
The community supported the project						
I would recommend a similar project for another community						
The community shows appreciation towards the project						

The project has affected the livelihood of my family positively						
The project assisted me to purchase a television set						
The project assisted me to purchase a stove						
The project assisted me to purchase a refrigerator						
The extension officers supported the project with training						

10. How do you rate the following attributes before and after the food security project?

Attribute	Before project						After project				
	1	2	3	4	5		1	2	3	4	5
Access to cereals for consumption											
Access to vegetables for consumption											
Income											
Marketing skills											
Self-confidence											
Respect in the community											
Respect in the household											
Social network											

Ability to cope with food security shocks											
Access to social clubs											
Ability to access health facilities											
Ability to send children to school											

Key: 1=very good, 2=good 3=Neutral 4=poor 5=very poor

11. How much income did you get from the food security project for the period of September 2012 to August 2013?

12. How much food did you get from the food security project for the period of September 2012 to August 2013?

13. Please describe the food you got (type and amount) for the period.of September 2012 to August 2013from the food security project:

Food type	Amount (include units)

14. Besides the food security project, what are your other sources of income and how much did you get from each source last year?

Source	Amount per year

THANK YOU FOR PARTICIPATING IN THIS STUDY.

APPENDIX B

QUESTIONNAIRES: PRODUCTION INFORMATION

THE IMPACT OF WOMEN FOOD SECURITY PROJECTS: A CASE OF NTSAKO AND JOPI VILLAGES IN GREATER TZANEEN MUNICIPALITY, LIMPOPO PROVINCE

Instructions:

The purpose of this questionnaire is to find out the impact that women’s food security projects have on beneficiaries at resident in Ntsako and Jopi villages. The information received from this questionnaire will be treated with confidentiality.

Respondent Name:

Project Name:

Name of interviewer:

Date:

The information in this research study will be held confidentially and you are asked to answer all the questions as honestly as possible.

PRODUCTION INFORMATION

This section of the questionnaire collects information on production and marketing for the project

1. Production data for the summer crop: Output and Inputs used on group plots and crops for the period September 2012 to August 2013.

Plot number	Crop	Area	Seeds planted (kg)	Type of fertilizer	Quantity of fertilizers applied (kg)	Type of insecticide	Quantity of insecticides applied per ml or kg	Type of herbicide used	Quantity of herbicides applied per ml or kg	Total Output (Ton)

2. Marketing of group summer crops.

Type of Crop	Quantity sold		Price		Market				
	Amount	Unit	Amount	Unit	Name	Type of Market	Distance (Km)	Access 1=Easy 0=Difficult	

3. Production data for the winter crop: Output and Inputs used on group plots and crops for the period September 2012 to August 2013.

Plot number	Crop	Area	Seeds planted (kg)	Type of fertilizer	Quantity of fertilizers applied (kg)	Type of insecticide	Quantity of insecticides applied per ml or kg	Type of herbicide used	Quantity of herbicides applied per ml or kg	Total Output Output(Ton)

4. Marketing of group winter crops.

Type of Crop	Quantity sold		Price		Market				
	Amount	Unit	Amount	Unit	Name	Type of Market	Distance (Km)	Access 1=Easy 0=Difficult	

5. How was the income from the project proceeds distributed among the members?

THANK YOU FOR PARTICIPATING IN THIS STUDY.