[](http://www.google.co.za/url?url=http://www.borders.sars.gov.za/&rct=j&frm=1&q=&esrc=s&sa=U&ei=_kPWU-eeCqaS7Ab8oYH4BA&ved=0CBcQ9QEwAQ&sig2=5zB9THM_pwiJb8I9vIk4IA&usg=AFQjCNE9W9hZ4vE0HmToHo8s9HOW3Jfp)

**LIVELIHOODS,**

**FOOD AND NUTRITION SECURITY BASELINES: FIVE LIVELIHOOD ZONES MPUMALANGA PROVINCE**

**2017**

Report compiled by the:

South African Vulnerability Assessment Committee (SAVAC) Technical Resource Team

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## 

# EXECUTIVE SUMMARY

**Introduction**

Food security is a fundamental strategic imperative of the South African government as highlighted in many government policy documents. The right to have access to sufficient food by all citizens is enshrined in the South African Constitution. To translate the right into action, Government approved the National Policy on Food and Nutrition Security and the Implementation Plan is currently being developed. According to the Statistics South Africa’s General Household Survey (GHS) - 2015, the number of individuals with inadequate or severely inadequate access to food decreased from 14.1 million people in 2014 to 12.4 million people in 2015. Food security in South Africa has to be addressed within the context of issues such as the changing population growth patterns and macroeconomic issues.

**Background**

Availability of credible food insecurity and vulnerability information is crucial for planning, policy decision making and monitoring of food security programmes impact. The SAVAC exists to ensure that an accepted and common / integrated system to measure food insecurity and vulnerability is reached, with agreed upon key indicators for a more systematic and regular way of monitoring the situation. The SAVAC seeks to:

(a) Identify people who are food insecure and vulnerable to shocks and hazards; as well as finding where these people are located; and

1. Explore the reasons for their vulnerability.

The SAVAC is guided by a Five-year Strategic Plan that has prioritised baseline assessments to establish the status quo of livelihoods, food and nutrition security in the country. Limpopo province was the first province to form a Provincial Vulnerability Assessment Committee (PVAC) in 2014 and to work with the SAVAC on baseline assessments. This was followed by KwaZulu-Natal and Free State Provinces as the second and third provinces to form PVACs. Mpumalanga is, therefore, the fourth province to form SAVC.

**Methodological Framework**

In December 2014, the SAVAC endorsed a framework that combines Household Economy Approach (HEA) and a process of tracking key food and nutrition security indicators to comprehensively assess vulnerability, food and nutrition security status of South Africans. The baseline assessment therefore analysed ways in which people obtain access to resources for survival and wellbeing using rapid appraisal methods and semi-structured interviewing of focus groups. Data on key food and nutrition security indicators was also collected from a household sample drawn using a multi-stage stratified random sampling technique to collect quantitative information through a survey. Livelihood Zones (geographical areas in which people broadly share similar patterns of livelihoods) produced by the SAVAC in 2014 were used as the assessment’s sample frame.

**Objectives and approach of the assessment**

The baseline assessment was conducted to obtain a comprehensive understanding of livelihood systems in all the five (5) open access Livelihood Zones in Mpumalanga. The assessment was also aimed at exploring livelihood systems and determining the extent of food and nutrition insecurity in the areas. Only five open access Livelihood Zones were prioritised based on their coverage of local municipalities with high incidence of multidimensional poverty as identified by Statistics South Africa (Stats SA):

* Lowveld open access cattle and other income (abbreviation: ZALOC: 59101)
* Highveld boarder open access livestock (abbreviation: ZABOL: 59104)
* Lowveld open access mixed farming (abbreviation: ZALCM: 59201)
* Highveld open access mixed income (abbreviation: ZAHMI: 59205)
* Highveld open access intensive cropping (abbreviation: ZAHIC: 59303)

Livelihood Zones do not respect the administrative boundaries; they generally follow geographical patterns that determine choices of livelihood strategies. As such, these Livelihood Zones cut across different districts of the province.

**Results**

* ***Demographics***

Demographic information obtained from the assessment included age, gender, marital status, education levels and main economic activities. The average age of household heads / acting heads in the five Livelihood Zones was 54 years. Most household heads/ acting heads were female, with an average of 59% compared 41% of the male household heads/acting heads. The average household size was 5 and approximately 30% of the household heads / acting heads in the five Livelihood Zones never went to school. ZABOL had the highest percentage (41%) of household heads / acting heads with no schooling and ZALOC had the lowest (25%). With regard to main economic activity, a large number of household heads / acting heads were unemployed (seeking for work but have not found it yet – 41%) and inactive (fall outside the employment age brackets or not seeking for employment – 25%).

* ***Social security***

Majority of households (86%) in the five Livelihood Zones were at least a grant recipient. Child Support Grant (CSG) was found to be the most dominating grant type across the five Livelihood Zones as reported by 70% of the households followed by Old Age Grant (OAG) which was reported by 35% of the households. Comparison across Livelihood Zones showed that ZABOL had the highest percentage (96%) of households receiving CSG and ZALOC had the relatively lowest percentage (82%). However, ZALOC had the highest percentage (69%) of households receiving Old Age Grant (OAG), followed by and ZALCM (66%) and ZABOL and ZAHMI had the lowest percentage of households receiving the OAG (52% for each).

* ***Access to water and sanitation***

Majority of the households (95%) in the five Livelihood Zones had access to safe drinking water from uncontaminated sources. ZABOL has a higher percentage (22%) of households with no access to safe drinking water in comparison with other Livelihood Zones whilst ZAHIC had the least percentage (2%) of households with no access to safe drinking water. Majority of households in the five Livelihood Zones (54%) had no access to proper sanitation, while (46%) had access to proper sanitation. The Livelihood Zone with the highest percentage of households with access to proper sanitation is ZAHMI (69%) and ZALOC had the lowest percentage (36%) of households with proper sanitation.

* ***Agriculture***

Contrary to the national situation of a low percentage of households involved in agricultural activities, about 43% of households in the five Livelihood Zones were involved in agricultural activities. ZAHIC had more households involved in agricultural activities (42%), followed by ZABOL (38%), ZAHMI (29%), ZALCM (20%) and ZALOC had the least number of households involved in agricultural activities (14%). About 64.5% of household pin their hope on agriculture as their extra source of food, while 17.1 %, 11%, 4.5 % and 2.9 % respectively pin their hope on agriculture as their main source of food, extra source of income, leisure activity or hobby and main source of income/earning a living, respectively. Carrot production was the most popular agricultural activity across the five Livelihood Zones with about 28% of the households involved in grain or crop production reporting to be producing carrot of households. These were mainly found in ZAHMI (43%), followed by ZALCM (33%). These Livelihood Zones did not necessarily have the highest percentage of households involved in most agricultural activities. The second popular crop was onions, followed by spinach, which were produced by 18.5% and 14.8% of the crop-producing households, respectively. Space used by households in the five Livelihood Zones was mostly communal under customary rule with most households practicing agriculture in backyard gardens (71.7%) as extra source of food.

* ***Access to food***

The Household Food Insecurity Access Scale, which is aimed at determining households’ access to food, showed that the overall percentages of households across the five Livelihood Zones with inadequate and severely inadequate access to food are 39% and 4% respectively, while 16% of the households across the Livelihood Zones had an adequate access to food. About 41% of the households were found to be mildly food insecure. Food access problems were the most common in ZALCM with 44% of households had inadequate food access. Inadequate access to food was also observed in ZAHIC (43%), ZAHMI (40%), ZABOL (38%) and ZALOC (37%). Severely inadequate to food access were most in ZAHIC (6%), followed by ZALCM (4%), ZABOL (4%) and ZAHMI (3%).

* ***Food shortage and hunger***

January was reported as a month in which households in the five Livelihood Zones experience food shortage the most, followed by June and October. Results obtained using the Household Hunger Scale indicated that a large percentage of households (66%) in the five Livelihood Zones had little to no hunger levels of hunger, 21% of households experienced moderate hunger, severe hunger was experienced by 13% of households. ZALOC had the highest percentage of households with no to little hunger (63%), followed by ZALCM (69%) and ZAHIC (65%). Comparisons across the five Livelihood Zones indicate that ZABOL had the highest percentage (26%) of households with moderate hunger and severe hunger, followed by ZALCM and ZAHMI (22 % each). ZALOC had the least percentage of households with moderate hunger (19%) while ZALCM notably had the least number of households experiencing severe hunger.

* ***Dietary Diversity and Food Consumption Pattern***

A 24-hour recall of food consumption and Food Consumption Scores were used to measure dietary diversity. Results from a 24-hour recall of food consumption reported in Figure 16 indicate that the majority of households across the five Livelihood Zones consumed foods largely from at least more five food groups (Highest Dietary Diversity). About 99.7 % of households consumed highly diverse diets (more or equal to 6 food groups) whilst 0.2% of households consumed low diverse diets (less or equal to 3 food groups). Approximately 0.2% of the households consumed medium dietary diversity (4 – 5 food groups). Only four per cent of the households in ZABOL reported to have consumed three or less food groups – lowest dietary diversity. Consumption of cereals was highest across the four Livelihood Zones as 98.9% of the households reported to have consumed this food group the previous day. However, households also notably consumed dark green leafyvegetables (which contain vitamins, minerals and carotenoids and act as antioxidants in the body) andother vegetables (tomato, onion, green beans, gem squash, eggplant, including wild / indigenous vegetables) – 34.3% and 51% of households consumed dark leafy and other vegetables respectively. Consumption of meat was also good as 43% of the households reported to have consumed meat. Food Consumption Scores (FSC) confirms the pattern obtained through the Dietary Diversity Score, the majority of households (82%) were consuming adequately diversified diets and about 14% of households are at the borderline and could fall into unacceptable diversity of foods if no actions are taken to help them improve their diets. Results further indicate that 4% of the households who consumed an unacceptable diversity.

* ***Coping strategies***

Relying on less preferred and or inexpensive foods was the most commonly employed strategy across the five Livelihood Zones as this was practiced by 54.1% of the households. This was followed by limiting portion sizes at meal times, reducing number of meals in a day and purchasing food on credit as these were practiced by 31.4 %, .30.7% and 14.5% of households respectively. With regard to income shock coping strategies, most households reported that they rely on friends or relatives (21%). This was followed by borrowing money from relatives and reducing spending as these were practiced by 17.8% and 17.6% of the households.

* ***Poverty incidence***

About 74 percent of the households in the study area are poor. Poverty incidence differs among the five livelihood zones, with the highest poverty incidence in ZABOL livelihood zone (81%), followed by ZAHMI (78%), ZAHIC (77%), and ZALOC (75%) livelihood zones. The lowest poverty incidence is in ZALCM (61%).

* ***Malnutrition***

Malnutrition was measured in children under the age of 5 children. The prevalence of Global Acute Malnutrition (GAM) in the five Livelihood Zones was found to be 8.3%, and this was higher in boys (10.1%) when compared to (6.4%) in girls. Results showed that Global Acute Malnutrition (GAM) was more prevalent in ZAHMI (25.8%) and ZABOL (16.7%), while ZAHIC (4.7%) had the least number of children with incidences of GAM. In ZALCM, there were no under-five children with GAM. Acute malnutrition was found to be predominant in the 42-53 months old children in the five Livelihood Zones . There was a quite a significant percentage of children between 30-41 months who were severly acute malnourished in ZAHMI. Underfive children in ZABOL were the highest acutely severe malnourished as 20% of surveyed children were acutely severe malnourished. The prevalence for stunting in the five livelihood zones was 25.3%, slighly below the national stunting prevalence rate of 26.5% reported by SANHANES in 2012. Boys are also prone to stunting (26.7%) compared to girls,with (23.9%). Th results show that the percentage of children that were moderately and severly stunted is 15.7 % and 9.6 % respectively. The prevalence of severe stunting was predominant in children (19.3%) with ages of 18-29 months old, with less prevalence (3.7%) observed in ages of 54-59 months. Severe stunting was observed in all five livelihood zones except in ZABOL. ZAHMI had the highest prevalence of severe stunting across all age groups except for children within 30-41 and 54-59 months old followed by ZAHIC. Underweight was more prominent in boys compared to girls in the five livelihood zones, with a prevalence rate of 11.5%, compared to that of 4.5% in girls. Severe underweight in the under-five children was found in ZALOC and ZAHMI only. In ZALCM, about 8% of the under-five children within the age group of 30-41 months were also moderately underweight.

**Conclusions**

The pattern of low proportions of adult men as well as the unbalanced household heads gender (more females than males) due to male household heads migration leads to human capital shortages with impacts on agricultural production activities. Majority of households were involved in agricultural activities, contrary to the national situation. However, despite this positive aspect, purchases still made up the largest proportion of people’s sources of food; mostly for very poor and poor households and thus exposing them to market related shocks.

Majority of households produced food from small plots resulting to low production that are unable to sustain them with adequate food supply. Better off households with larger pieces of land sold most of their produce only for them to purchase food including staples (selling of un-milled own produced grain rather than own grain consumption was preferred and purchasing of mealie for consumption) further exposing even the better off households to market related shocks.

No relationship existed between household involvement in agriculture and access to food. This gives an indication that agriculture needs to be complemented with other livelihood strategies in order for it to play a significant role to improve household food security. The results also indicated a positive relationship existed between household involvement in agriculture and access to water, markets, age of household head or acting head, marital status, household size, household head or acting head education level and poverty. The results indicated a positive relationship existed between household involvement in agriculture and access to water, markets, age of household head, marital status, household size and household head education level.

Social grants were found to be providing a major socio-economic safety net with majority of households in the five Livelihood Zones, being recipients of Child Support Grant and Old Age Grants. However, results point out that even in areas with highest percentages of households receiving Old Age Grant, highest levels of hunger still exist, particularly in areas where livelihoods are less diverse, with little to no supplementation of grant income with own food production. While the majority of households were mainly producing grains, households generally consumed diets that are well diverse (from 4 – 6 food groups) with notably vegetables including dark green leafyvegetables.

While the majority of households in the five Livelihood Zones are mainly producing grains, households generally consumed diets that are well diverse (from 4 – 6 food groups) with notably vegetables including dark green leafyvegetables. The involvement of households in agricultural activities for household consumption in the five livelihood zones could be a reason to the diverse diets. However, a phenomenon of households with highest percentage of households involved in diverse agricultural activities but lowest food consumption score is observed in ZABOL. This could be because of more sales of agricultural produce compared to consumption of own their produce in these Livelihood Zones. Malutrition in children under the age of 5 was predominant in 42-53 months old children in the four Livelihood Zones and less experienced by children of age 0-6 months. Results also found no correlation between receipt of CSG and reduced malnutrition levels.

**Recommendations**

Revitalisation of rural economies is required to reverse the unavailability of young adult males for agricultural activities in households. This would allow for increased agricultural production, contribution of agriculture as a main source of food and income, it would also create additional new possibilities through increased work opportunities. While majority of households were involved in agricultural activities, to increase production, herds and crops would need more and better management. Such investment would need to be justified through better returns for example through support to dairy marketing and greater provision of services and infrastructure to encourage production. Crop farming yields could also be improved through greater service provision and assistance with planning food production to provide food year-round and market support.

A food system that encourages and enables households to process and consume what they produce locally is critical to reverse the existing phenomenon of raw commodity sale by households for them to purchase processed food at the large scale markets driven prices. Households need support in some months of the year (mainly January) to avoid negative consumption reduction practices and incidence of seasonal hunger. Interventions that seek to help households budget and save in anticipation of lumpy expenditures are crucial to ensure year-round food security.

Awareness rasing to enlighten households about the importance of dietary diversity for improved nutritional status is crucial. Implementation of nutrition sensitive food security programmes by all sectors should also be ensured. Promotion of projects and programmes that encourage good hygiene practices such as use of latrines and washing hands with soap after using the toilet is crucial. Breastfeeding promotion, growth monitoring for improved case detection in children who need care, appropriate referral and management of acute malnutrition, coupled with appropriate messages on complementary feeding are key interventions.

There is a need to scale-up multiple micronutrient supplementation during pregnancy, calcium supplementation to mothers at risk of low intake, promotion of maternal balanced nutrition, use of iodised salt, deworming, vitamin A and zinc supplementation for children under 5. Nutrition assessment of children under-five at all points of contact should be strengthened. Nutrition assessment during pregnancy and appropriate management of pregnant women who are underweight or with poor weight gain should be strengthened during basic antenatal care services. A possibility of imposing conditionality in CSG should be explored to ensure improved nutritional status for supported children.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| ***VARIABLE*** | ***ZALOC*** | ***ZABOL*** | ***ZALCM*** | ***ZAHMI*** | ***ZAHIC*** |
| ***Description*** | ***Lowveld open access cattle and other income*** | ***Highveld boarder open access livestock*** | ***Lowveld open access mixed farming*** | ***Highveld open access mixed income*** | ***Highveld open access intensive cropping*** |
| ***Districts covered*** | ***Ehlanzeni*** | ***Ehlanzeni***  ***Gert Sibande*** | ***Ehlanzeni*** | ***Nkangala*** | *Gert Sibande*  *Nkangala* |
| ***Selected sample*** | *251* | *71* | *138* | *107* | *114* |
| ***Female Headed households*** | *60* | *59* | *65* | *54* | *48* |
| ***Households HH Heads with No Education*** | *26* | *41* | *29* | *35* | *37* |
| ***Households receiving Old Age Grant*** | *31* | *48* | *34* | *48* | *36* |
| ***Households receiving Child Support Grant*** | *68* | *81* | *67* | *72* | *80* |
| ***Households with no Access to Safe Drinking Water*** | *6* | *22* | *3* | *5* | *2* |
| ***Households with no Access to Proper Sanitation*** | *64* | *41* | *52* | *31* | *49* |
| ***Households Involved in Agricultural Activities*** | *14* | *38* | *20* | *29* | *42* |
| ***Food secure households*** | *17* | *4* | *19* | *17* | *10* |
| ***Mildly food insecure households*** | *43* | *54* | *33* | *41* | *41* |
| ***Moderately food insecure households*** | *37* | *38* | *44* | *40* | *43* |
| ***Severely food insecure households*** | *4* | *4* | *4* | *3* | *6* |
| ***Households with No to Little Hunger*** | *70* | *63* | *69* | *64* | *65* |
| ***Households with Moderate Hunger*** | *19* | *26* | *22* | *22* | *15* |
| ***Households with Severe Hunger*** | *10* | *11* | *9* | *14* | *20* |
| ***Households with Acceptable Food Consumption Score*** | *84* | *67* | *84* | *91* | *85* |
| ***Households with Borderline Food Consumption Score*** | *12* | *22* | *13* | *9* | *11* |
| ***Households with Poor Consumption Scores*** | *4* | *11* | *3* | *0* | *3* |
| ***Non-poor households*** | *25* | *19* | *39* | *22* | *23* |
| ***Poor households*** | *75* | *81* | *61* | *78* | *77* |
| ***Global Acute Malnutrition*** | *7.2* | *16.7* | *0* | *25.8* | *4.7* |
| ***Stunting*** | *21.6* | *30.2* | *18.2* | *40.6* | *0* |
| ***Underweight*** | *7.1* | *0* | *2.2* | *21.2* | *2.3* |
| ***Households Involved in Agricultural Activities*** | *14* | *38* | *20* | *29* | *42* |
| ***Livestock*** | *14* | *38* | *20* | *29* | *42* |
| ***Poultry*** | *22* | *42* | *12* | *17* | *43* |
| ***Grains*** | *39* | *63* | *32* | *27* | *42* |
| ***Grazing*** | *2* | *0* | *0* | *2* | *0* |
| ***Fruits and vegetables*** | *37* | *33* | *42* | *38* | *53* |
| ***Industrial crops*** | *3* | *4* | *6* | *0* | *2* |

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**LIST OF ACRONYMS**

**CSI** Coping Strategy Index

**DAFF** Department of Agriculture, Forestry and Fisheries

**DDS** Dietary Diversity Score

**DOH**  Department of Health

**DSD** Department of Social Development

**FCS** Food Consumption Score

**FGDs**  Focus Group Discussions

**GAM** Global Acute Malnutrition

**GHS**  General Household Survey

**HDDS** Household Dietary Diversity Score

**HEA** Household Economy Approach

**HFIAS** Household Food Insecurity Access Scale

**HHS**  Household Hunger Scale

**IFSNP**  Integrated Food Security and Nutrition Programme

**MPVAC** Mpumalanga Vulnerability Assessment Committee

**NFERP** National Food Emergency Relief Programme

**NIDS** National Income Dynamic Survey

**NISIS** Nation Integrated Social Information System

**RDP** Reconstruction and Development Programme

**RVAA** Regional Vulnerability Assessment and Analysis

**SADC** Southern African Development Community

**SALDRU** Southern Africa Labour Development Research Unit

**SANHNES** South African National Health and Nutrition Examination Survey

**SAVAC** South Africa Vulnerability Assessment Committee

**Stats SA** Statistics South Africa

**TLU** Tropical Livestock Units

**WFP** World Food Programme

**WHO** World Health Organization

**ZALOC** Lowveld open access cattle and other income

**ZABOL** Highveld boarder open access livestock

**ZALCM** Lowveld open access mixed farming

**ZAHMI** Highveld open access mixed income

**ZAHIC** Highveld open access intensive cropping

# 1. INTRODUCTION

Food security is part of the section 27 constitutional rights in South Africa which states that every citizen has the right to access to sufficient food and water, and that the state must by legislation and other measures, within its available resources to progressive realization of the right to sufficient food (RSA, 1996). Although South Africa continues to meet its national food requirements through domestic production and imports, the country’s macro-economic indicators of income and food production obscure a bleak picture of uneven distribution and worst poverty. South Africa faces a wide spectrum of food security challenges including malnutrition which continues to affect the lives of millions of children. In response to these challenges, South Africa has progressively implemented a number of policies and programmes.

A step further towards advancement of the RSA food security agenda was approval of the National Policy on Food and Nutrition Security by Cabinet in 2013. Enactment of the policy is one of the indications that South Africa places an importance of ensuring not only food security but nutrition security also. The Policy emphasises on strengthening Information Management Systems for timeous accurate and relevant information which is pivotal to the policy goal of eradicating hunger, malnutrition and food insecurity. As such, DAFF with support from the SADC Regional Vulnerability Assessment Committee is leading a process of institutionalization of the SAVAC.

Existence of the SAVAC is aimed at ensuring existence of the multi-stakeholder forum for coordinating the development and maintenance of a well-coordinated information system for classifying, measuring and monitoring the pervasive household food insecurity and vulnerability levels in the country. The SAVAC has initiated a process of conducting baseline assessments to explore the status quo of livelihoods, food and nutrition security in localised geographical areas for informed planning and targeting of interventions. Limpopo province was the first province to indicate the willingness and readiness to conduct the baseline assessments.

# 2. METHODOLOGICAL FRAMEWORK

The SAVAC endorsed a methodological framework for measuring food insecurity and vulnerability in December 2014. Given the complexities faced by the SAVAC in developing a food insecurity information system, the SAVAC commissioned a core team of Specialists from various institutions to form a Technical Resource Team (TRT), deliberate and define a methodological framework that best suits the information needs for the country. The TRT proposed a framework that combines two approaches due to strengths and limitations for each approach; these include monitoring of a set of indicators over time and space to determine numbers of people that are food insecure, using various categorisations in a Food Security Continuum. The second approach is a livelihoods-based vulnerability assessment system similar to that used in many other SADC member states using the Household Economy Approach (HEA).

## Household Economy Approach

This approach provides with an understanding of how people make a living (livelihood systems), a forecast analysis for food security and livelihood outcomes in the context of dynamic environment and is necessary for planning and targeting of interventions. Data captured in this approach is based on the use of rapid appraisal methods and semi-structured interviews to determine wealth breakdown and livelihood in the four Livelihood Zones.

## Measurement of food and nutrition security indicators

The process of tracking indicators in the framework complements the HEA by drawing a household sample using a multi-stage stratified random sampling technique to collect quantitative information through a survey. Recognising that there is no perfect single measure that captures all aspects of food insecurity, the framework proposed the use of standard and acceptable food and nutrition measurement tools/indicators.

# 3. LITERATURE REVIEW

According to the Statistics South Africa’s General Household Survey (GHS) - 2015, the number of individuals with inadequate or severely inadequate access to food decreased from 14.1 million people in 2014 to 12.4 million people in 2015. Food security in South Africa has to be addressed within the context of issues such as the changing population growth patterns and macroeconomic issues. The RSA population increased from an estimated 50, 59 million people in 2010 to 54.96 million people in 2015 (Stats SA - Mid Year Population Estimates, 2015).

The unadjusted real Gross Domestic Product (GDP) at market price for the fourth quarter of 2015 increased by 0.6% quarter-on-quarter. During the same period, unemployment decreased by 1% from 25.5% to 24.5% from in the third quarter of 2015 (Quarterly Labour Force Survey, 2015).

Moreover, urbanization and declining agrarian activities in significant parts of the country, which got exacerbated by the drought situation experienced in the 2014/15 production season, have transformed the South African households into net consumers of purchased food. Less than a fifth of households (18, 3%) in South Africa were involved in agriculture in 2014 (GHS, 2014). These changes have an impact to poor consumers’ livelihood systems.

South Africa is one of the countries with high stunting prevalence rate. The prevalence rate of stunting has been reported to be 26.5 % in children 1-3 years of age in 2012 according to the South African National Health and Nutrition Examination Survey (SANHANES-1) report. This showed an increase by about 3.1% from 23.4% reported in the 2005 National Food Consumption Survey: Fortification Baseline Report.

# 4. OBJECTIVE OF THE BASELINE ASSESSMENT IN MPUMALANGA

The study was conducted to understand the livelihood systems in the five (5) selected Livelihood Zones and to determine the extent of food and nutrition insecurity in the areas. Specific objectives of the assessment were to:

* Collect food and nutrition security data for measuring a set of indicators towards exploring numbers of food insecure people using various categorisations.
* Establish an understanding of how people make a living – livelihood systems.
* Establish a baseline from which a forecast analysis for food security and livelihood outcomes in the context of dynamic environment can be conducted.
* Come up with recommendations for planning and targeting of interventions for food and nutrition security interventions.

# 5. APPROACH OF THE ASSESSMENT

The size and complexity of South Africa as a country requires the vulnerability assessment system that is decentralised to provincial level or establishment of Provincial Vulnerability Assessment Committees (PVACs). The fourth PVAC formed is the Mpumalanga VAC (MPVAC) that worked with the SAVAC in conducting the 2016 Provincial Baseline Assessment exercise.

Livelihood Zones that were developed by SAVAC in 2015 were used as a sample frame. The Baseline Assessments were carried out in the following nine livelihood zones:

* Lowveld open access cattle and other income (abbreviation: ZALOC: 59101)
* Highveld boarder open access livestock (abbreviation: ZABOL: 59104)
* Lowveld open access mixed farming (abbreviation: ZALCM: 59201)
* Highveld open access mixed income (abbreviation: ZAHMI: 59205)
* Highveld open access intensive cropping (abbreviation: ZAHIC: 59303)

Selection of the Livelihood Zones was based on their coverage of local municipalities with high incidence of multidimensional poverty as identified by Statistics South Africa (Stats SA). The selected Livelihood Zones cut across five 4 districts and 11 municipalities in the province. SAVAC and MPVAC with the support from SADC Regional Vulnerability Assessment and Analysis (RVAA) Committee received training of the field workers, about 17 practitioners (national, provincial and municipal) from various institutions and fields received training. The exercise was conducted between October, November and December 2016 including training, data collection, analysis and report writing. Villages were selected randomly in each Livelihood Zone to carry out the assessment as shown in table 1 below:

Table 1: Selected areas for the assessment

|  |  |  |
| --- | --- | --- |
| **District** | **Municipality** | **Selected village** |
| **59101: ZALOC** | | |
| Ehlanzeni | Bushbuckridge | Makhukule A SP |
|  |  | Thabakgolo SP |
|  |  | Kgapamadi SP |
|  | Mbombela | Khumbula SP |
|  |  | Msongwaba SP |
|  |  | Lundi SP |
|  |  | Jerusalem SP |
|  | Nkomazi | Kwazibukwane |
|  |  | NtundaSP |
|  | Umjindi | Bonanza Gold MineSP |
| **59104: ZABOL** | | |
| Ehlanzeni | Umjindi | Emjindini Trust |
| Gert Sibande | Albert Luthuli | Holeka |
|  |  | Embhuleni |
| **59201: ZALCM** | | |
| Ehlanzeni | Bushbuckridge | Tsakani SP |
|  |  | eMakhazeniB SP |
|  |  | Godide SP |
|  | Mbombela | Nsikazi SP |
|  | Nkomazi | Mananga SP |
|  | Thaba Chweu | Leroro SP |
| **59205: ZAHMI** | | |
| Nkangala | Dr JS Moroka | Madubaduba SP |
|  |  | Thabana SP |
|  | Thembisile | Kwaggafontein F |
|  |  | Zakheni |
| **59303: ZAHIC** | | |
| Gert Sibande | Mkhondo | KwaNgema SP |
|  | Pixley Ka Seme | Daggakraal SP |
| Nkangala | Dr JS Moroka | Lefiso SP |
|  | Thembisile | Bhundu SP |

# 6. SAMPLING PROCEDURE

The assessment made use of a stratified design with probability proportional to size sampling of households from livelihoods, districts, municipalities and enumeration areas to draw a representative sample of households. These districts, municipalities and enumeration areas were randomly sampled among four Livelihood Zones under consideration (Table 2) using data from the 2011 South African Population Census. A total of 2271 households was selected and from the nine Livelihood Zones as shown in Table 2.

Table 2: Selected sample by Livelihood Zone

|  |  |  |  |
| --- | --- | --- | --- |
| **District** | **Municipality** | **Sub-place** | **Sample** |
| **59101: ZALOC** | | |
| Ehlanzeni | Bushbuckridge | Makhukule A SP | 27 |
|  |  | Thabakgolo SP | 24 |
|  |  | Kgapamadi SP | 13 |
|  | Mbombela | Khumbula SP | 19 |
|  |  | Msongwaba SP | 48 |
|  |  | Lundi SP | 24 |
|  |  | Jerusalem SP | 24 |
|  | Nkomazi | Kwazibukwane | 24 |
|  |  | NtundaSP | 24 |
|  | Umjindi | Bonanza Gold MineSP | 24 |
| **59104: ZABOL** | | |  |
| Ehlanzeni | Umjindi | Emjindini Trust | 24 |
| Gert Sibande | Albert Luthuli | Holeka | 29 |
|  |  | Embhuleni | 18 |
| **59201: ZALCM** | | |  |
| Ehlanzeni | Bushbuckridge | Tsakani SP | 20 |
|  |  | eMakhazeniB SP | 30 |
|  |  | Godide SP | 20 |
|  | Mbombela | Nsikazi SP | 25 |
|  | Nkomazi | Mananga SP | 19 |
|  | Thaba Chweu | Leroro SP | 24 |
| **59205: ZAHMI** | | |  |
| Nkangala | Dr JS Moroka | Madubaduba SP | 25 |
|  |  | Thabana SP | 21 |
|  | Thembisile | Kwaggafontein F | 26 |
|  |  | Zakheni | 35 |
| **59303: ZAHIC** | | |  |
| Gert Sibande | Mkhondo | KwaNgema SP | 25 |
|  |  | Saul Mkhize | 24 |
|  | Pixley Ka Seme | Daggakraal SP | 30 |
| Nkangala | Dr JS Moroka | Lefiso SP | 15 |
|  | Thembisile | Bhundu SP | 20 |
| **TOTAL** | | | **681** |

# 7. RESULTS

This section presents a summary of main findings for the assessment. The first part of this section contains demographic information of the household heads or acting heads followed by household general characteristics. The remaining part of this section presents information relating to household food security, dietary diversity, hunger experiences, food consumption patterns and nutrition.

## Household demographics

Demographics of the household head / acting head may play a significant role in food and nutrition security status of the household. This is because some household demographics may contribute to household social and human capital. Demographic information included age, gender, marital status, education levels and main economic activities.

Results indicate that the age of the household heads / acting heads in the study area ranged from 15 to 106 with an average age of about 52 years. About 57% of the household heads / acting heads were female. Most female-headed households (65%) were in ZALCM followed by ZALOC (60%) as shown in Table 3.

Table 3: Age and gender of household heads/acting heads

|  |  |  |  |
| --- | --- | --- | --- |
| **Livelihood zone** | **Sex** | | **Average age** |
| **Male (%)** | **Female(%)** |
|
| ZALOC | 40 | 60 | 51.72 |
| ZABOL | 41 | 59 | 56.74 |
| ZALCM | 35 | 65 | 52.22 |
| ZAHMI | 46 | 54 | 53.31 |
| ZAHIC | 52 | 48 | 53.54 |
| Total | 51.2 | 53.5 | 53.51 |

The minimum household size was 1 and the maximum was 13, with a mean of 4.5. The educational levels of a community are thought to have important implication on accessibility to food. Educated households generally have higher coping ability to a variety of challenges, and are best positioned to finding employment. Moreover, several studies (Bogale et al. 2006) have shown the correlation between the level of education/literacy of mothers and child health and nutrition. Bogale (2010) also highlighted the significant relationship between education status and food security and vulnerability of households.

Table 4 shows that approximately 30% of the household heads/acting heads in the study area did attend school, whereas 22% of the household heads / acting heads had attained 11 to 12 grades. Regarding education levels by Livelihood Zones, results indicate that ZALOC had the lowest number (26%) of household heads/acting heads with no schooling, followed by ZALCM (29%). The highest number of household heads/acting heads with no schooling were found in ZABOL. About 5.6% of the sampled household heads / acting heads had a diploma or degree.

Table 4: Education levels of household heads / acting by Livelihood Zone

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **LZ number** | **Education level in Grades** | | | | | |
| **No schooling** | **1 to 4** | **5 to 7** | **8 to 10** | **11 to 12** | **Diploma / degree** |
| 59101: ZALOC | 26 | 13 | 15 | 18 | 22 | 6 |
| 59104: ZABOL | 41 | 15 | 11 | 7 | 22 | 4 |
| 59201: ZALCM | 29 | 9 | 13 | 16 | 27 | 6 |
| 59205: ZAHMI | 35 | 13 | 6 | 20 | 22 | 4 |
| 59303: ZAHIC | 37 | 21 | 6 | 17 | 14 | 6 |
| **Overall** | **30.1** | **13.3** | **11.8** | **17.3** | **21.9** | **5.6** |

With regard to main economic activity, a large number of household heads / acting heads (41%) were unemployed (seeking for work but have not found it yet) whereas 25.3 % were inactive (fall outside the employment age brackets or not seeking for employment), Figure 1. However, it should be noted that some of the inactive household heads could be within the old age bracket and therefore receive an old age pension from the government. About 11.5% of the household heads/acting heads were casual/temporal workers, while 7.4% was self-employed outside of agriculture. The results further show that only 1.8% of household heads were subsistence farmers and no household heads / acting heads indicated commercial farming as their main economic activity. Approximately 6.5 % of the household heads / acting head reported that they were formally employed in the private sector, whereas 3.3% of the household heads/acting heads were formally employed in the public sector.

Figure 1: The main economic activity status of the household heads/ acting heads in the five livelihood zones, 2016

## Access to social grants

About 86% of the households were at least a grant recipient. Seventy per cent of the households indicated that they had at least one individual receiving Child Support Grant, while thirty nine per cent were beneficiaries of the old age grant (Figure 2). This high number of individuals who are recipients of the Old Age Grant is in line with average age of household heads / acting heads which was reported to be 54 years, and this is within the qualifying age for females’ Old Age Grant. Disability grant was reported by 8% of the households.

Figure 2: Access to social grants in the five Livelihoods Zones

### 

### Access to social grants by Livelihood Zones

Further disaggregation of social grants results by livelihood zones showed that a majority of households had at least one individual receiving Child Support Grant in the five livelihood zones (Figure 3).

Figure 3: Access to social grants by Livelihood Zones

Child Support Grant (CSG) was found to be the most dominating grant type across the five Livelihood Zones, ZABOL had the highest percentage (81%) of households receiving this type of grant followed by ZAHIC (80%) and ZALCM had the lowest percentage of households receiving the CSG (67%). ZABOL and ZAHMI had the highest percentage of households receiving Old Age Grant (OAG), with each having 48% of the households receiving this grant. This was followed by ZAHIC with 36% of households receiving this type of grant. ZALOC had the lowest percentage of households receiving the OAG (31%). The third dominating grant type across the five livelihood zones was disability grant, most households receiving this grant were found mostly in ZAHIC (13%), followed by ZALOC, ZABOL and ZALCM, with each having seven per cent of the households receiving this type of a grant. There was no significant difference between percentages of households receiving grants across the five Livelihood Zones and across the grant types.

## Access to water and sanitation

Access to safe water and sanitation are important development goals and are among the most basic human necessities. A community that has safe drinking water, good sanitation and good hygiene is less likely to be affected by water-borne diseases such as diarrhea, dysentery, cholera, typhoid, worms and trachoma. The first part of this section presents results related to access to safe drinking water whereas the rest of the section contains issues relating to proper sanitation.

### Access to safe drinking water

Safe drinking water sources include water sources that by nature of their construction or through active intervention are protected from outside contamination particularly fecal matter. It comprises of piped water on premises such as piped water connection located inside the household dwelling, plot or yard. Other improved drinking water sources include public taps or stand pipes, water carrier / tanker or boreholes, protected dug wells, protected springs and rainwater collection. Figure 4 shows that most of the households in the five Livelihood Zones have piped water in yard (46%), while 18.9 % of the households fetch water from public/ communal tap. The results also show that some households obtain water from water carrier/tanker (11.5 %) and flowing river (1.5%).

Figure 4: Main source of drinking water

Figure 5 shows that the majority of households (94.7%) in the five Livelihood Zones have access to safe drinking water, while 5.3 % of households have no access to safe drinking water. ZABOL has a higher percentage (22%) of households with no access to safe drinking water in comparison with other Livelihood Zones. ZAHIC had the least percentage (2%) of households with no access to safe drinking water. Although over 90% of the households are found to be having safe drinking water, there is a need for government to expand programmes and projects that provide safe water such as tap water and boreholes in communities and effort to ensure that each and every South African has access to safe drinking water.

Figure 5: Percentage of households with access to safe drinking water

### Access to proper sanitation

Improved sanitation facilities are facilities that ensure hygienic separation of human excreta from human contact. They include flush or pour-flush toilet or latrine, piped sewer system, septic tank pit latrine, ventilated improved pit (VIP) latrine, pit latrine with slab and composting toilet. Figure 6 shows that the majority of households (45%) in the five Livelihood Zones are using pit latrine/toilet without ventilation, while 42% of the households are reported to be using pit latrine/toilet with ventilation and about two per cent of the households are without the toilet.

Figure 6: Percentage of types of toilet facility of households

The results below indicate that majority of the households (54%) do not have access to improved sanitation (Figure 7). With an exception of ZALOC and ZALCM, the majority of the households in the selected Livelihood Zones had access to proper sanitation (Figure 7). In ZABOL, ZAHMI and ZAHIC, 59%, 69% and 51% of households respectively were found to have proper sanitation, while in ZALCM, 48% of the households had proper sanitation. The results suggest that there is a need for government to promote projects and programmes that provide encourage good hygiene practices such as use of latrines and washing hands with soap after using the toilet.

Figure 7: Percentage of households with access to proper sanitation by livelihood Zones

**7.3.3 Diseases**

The study found out that about 23% of people have been diagnosed with hypertension, while 11% and 8% and 6% were respectively suffering from arthritis, HIV/AIDS. and Diabetes (Table 5). Most of these people who were at least diagnosed with a disease were in ZALCM (46%), followed by ZALOC (45%), ZAHIC (41%) and ZABOL and ZAHMI had about 37% and 35% of sick people, respectively.

Table 5: Percentage of household members with diagnosed diseases by Livelihood Zones

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **ZALOC** | **ZABOL** | **ZALCM** | **ZAHMI** | **ZAHIC** |
| % | % | % | % | % |
| At least diagnosed | 45 | 37 | 46 | 35 | 41 |
| asthma | 3 | 0 | 8 | 2 | 3 |
| diabetes | 6 | 4 | 3 | 12 | 7 |
| cancer | 0 | 0 | 0 | 0 | 0 |
| HIV | 12 | 0 | 13 | 5 | 9 |
| hyper tension | 26 | 26 | 18 | 21 | 23 |
| arthritis | 5 | 22 | 9 | 6 | 14 |
| stroke | 2 | 4 | 2 | 4 | 1 |
| heart | 1 | 4 | 1 | 4 | 1 |
| TB | 2 | 4 | 3 | 0 | 1 |
| Other | 3 | 11 | 3 | 2 | 8 |

## Engagement in agricultural activities

Contrary to the national situation of a low percentage of households involved in agricultural activities, about 43% of households in the five Livelihood Zones were involved in agricultural activities (Table 6). When disaggregated into different Livelihood Zones, it was found that ZAHIC and ZABOL had more households that were involved in agricultural activities (42 % and 38% respectively). These were followed by ZAHMI (29%). ZALOC had the least number of households involved in agricultural activities, with only 14 % of the households reporting to be involved in agricultural activities (Table 6).

Table 6: Percentage of households involved in agricultural activities by Livelihood Zone

|  |  |  |
| --- | --- | --- |
| **Livelihood zone** | **Household involved in agricultural production of any kind** | |
| **Involved in agriculture (%)** | **Not involved in agriculture (%)** |
| ZALOC | 14 | 86 |
| ZABOL | 38 | 63 |
| ZALCM | 20 | 80 |
| ZAHMI | 29 | 71 |
| ZAHIC | 42 | 58 |
| **Average** | **28** | **72** |

Grain and food crops (41%) were most the popular agricultural activity across the five Livelihood Zones, with 63 % and 42% of the households in ZABOL and ZAHIC, respectively (Table 7). Poultry farming was the second most popular agricultural activity, with 43% and 42% of the households in ZHIC and ZABOL reporting to be involved in poultry farming. Fruits and vegetables farming was one of the popular agricultural activities among the five sampled zones, with all livelihood zones having considerable percentages of households that are involved in this type of farming. Livestock production was also the popular agricultural activity across the livelihood zones, with ZAHIC accounting for 42% of the households involved in this type of agricultural production. ZABOL and ZAHMI also had a higher percentage of households involved in livestock production, with 38% and 42% of the households involved in this type of production, respectively. No households reported to be involved in game farming and forestry among the sampled households.

Table 7: Types of agricultural activities practised by households by Livelihood Zones

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Agricultural activities | **ZALOC** | **ZABOL** | **ZALCM** | **ZAHMI** | **ZAHIC** |
| livestock production | 14 | 38 | 20 | 29 | 42 |
| poultry production | 22 | 42 | 12 | 17 | 43 |
| grains and food crops | 39 | 63 | 32 | 27 | 42 |
| industrial crops | 3 | 4 | 6 | 0 | 2 |
| fruit and vegetable production | 37 | 33 | 42 | 38 | 53 |
| foddler, grazing / pasture or grass for animals | 2 | 0 | 0 | 2 | 0 |
| fish farming / aquaculture | 0 | 0 | 0 | 0 | 0 |
| forestry | 0 | 0 | 2 | 0 | 0 |
| game farming | 0 | 0 | 0 | 0 | 0 |
| other | 0 | 0 | 0 | 0 | 0 |

***Note:*** *some households are involved in more than type of agricultural activity*

### Reasons for Involvement in Agriculture

About 64.5% of the households in the five Livelihood Zones engaged in agricultural activities as an extra source of food for the household as shown in Table 8. This was followed by only 17.1% of households who regarded their engagement in agriculture as a main source of food. While 11 % and 4.5% of households indicated that they were engaged in agricultural activities as an extra source of income and as a leisure activity, respectively. Even with regard to individual Livelihood Zones, the main reason for being involved in agriculture was reported to be extra source of food for the household, followed by main source of food for the household. These results show that a number of households are producing on a small scale basis mainly for household consumption rather than trading.

Table 8: Reasons for engaging in agricultural activities by Livelihood Zones

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Livelihood zone** | Main source of food | Main source of income / earning a living | Extra source of income | Extra source of food for the household | As a leisure activity or hobby |
|  | % | % | % | % | % |
| ZALOC | 19 | 2 | 6 | 68 | 4 |
| ZABOL | 52 | 5 | 0 | 43 | 6 |
| ZALCM | 11 | 2 | 16 | 64 | 7 |
| ZAHMI | 12 | 6 | 24 | 53 | 6 |
| ZAHIC | 6 | 2 | 13 | 75 | 4 |
| Total | 17.1 | 2.9 | 11 | 64.5 | 4.5 |

### Types of crops grown

Figure 8 shows that the types of crops grown or produced by households in the five Livelihood Zones in the 2015/2016 production season included: maize, groundnuts, beans, carrot, leaf vegetables, sweet potatoes, Irish potatoes, spinach, tomatoes, cabbage, onions and cassava. Of these types of crops, maize, which is a staple food for majority of South Africans, was one of the least produced crops across all five Livelihoods Zones, with 5.6 % of the households reporting to be producing maize. Carrot was the most produced crop across the five Livelihood Zones, with 28% of the households reporting to be involved in carrot production. This was followed by onions and spinach, which were respectively produced by 19% and 15% of the crop-producing households. Eleven per cent and nine per cent of the households produced leaf vegetables and tomatoes, respectively. Cabbage, sweet potato, groundnuts, cassava and beans were each produced by two per cent of the crop-producing households while Irish potatoes were produced by only 3.7% of the crop-producing households.

Figure 8: Percentage of households producing each crop

A larger percentage of households that grew carrot were from ZAHMI, contributing about 43%, followed by households from ZALCM and ZALOC as they grown by 33% and 26% of the households. Only households from ZALOC indicated that they grow beans and cassava, whilst households from ZALCM and ZAHIC (Table 9) respectively grew groundnuts and sweet potatoes. Just like carrot, households from all Livelihood Zones indicated that they grow leaf vegetables, with large percentage of households coming from ZALCM. About 57% of the households from ZALCM indicated that they grow onions.

**Table 9: Percentage of households producing each crop type by Livelihood Zone**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Type of crop | ZALOC | ZABOL | ZALCM | ZAHMI | ZAHIC |
| maize | 7 | 0 | 0 | 0 | 11 |
| rice | 0 | 0 | 0 | 0 | 0 |
| sorghum | 0 | 0 | 0 | 0 | 0 |
| millet | 0 | 0 | 0 | 0 | 0 |
| wheat | 0 | 0 | 0 | 0 | 0 |
| ground nuts | 0 | 0 | 17 | 0 | 0 |
| beans | 4 | 0 | 0 | 0 | 0 |
| soya beans | 0 | 0 | 0 | 0 | 0 |
| cassava | 4 | 0 | 0 | 0 | 0 |
| sweet potatoes | 0 | 0 | 0 | 0 | 11 |
| irish potatoes | 0 | 20 | 0 | 0 | 11 |
| sesame | 0 | 0 | 0 | 0 | 0 |
| pigeon peas | 0 | 0 | 0 | 0 | 0 |
| tomatoes | 11 | 0 | 0 | 0 | 22 |
| pepper | 0 | 0 | 0 | 0 | 0 |
| onions | 15 | 0 | 17 | 57 | 11 |
| leaf vegetables | 7 | 20 | 33 | 0 | 11 |
| water melons | 0 | 0 | 0 | 0 | 0 |
| sugarcane | 0 | 0 | 0 | 0 | 0 |
| spinach | 26 | 20 | 0 | 0 | 0 |
| cabbage | 0 | 20 | 0 | 0 | 0 |
| butternut | 0 | 0 | 0 | 0 | 0 |
| taro (amadumbe) | 0 | 0 | 0 | 0 | 0 |
| Carrot | 26 | 20 | 33 | 43 | 22 |
| Beet root | 0 | 0 | 0 | 0 | 0 |
| other | 0 | 0 | 0 | 0 | 0 |

### Type of space used for crop production

Space used by households in the five Livelihood Zones was mostly owned communal land under customary rule. About 72% of households indicated that they practice agriculture in a backyard gardens (Table 10). This was followed by the 13.9% of households who produced in a farm land which is communal or private. Only 5.9% and 2.3% of the households reported that they used communal gardening and school gardening space for their crop production, respectively. Table 10 presents the types of agricultural spaces used by households in the nine Livelihood Zones.

Table 10: Types of agricultural space used by households engaged

in agricultural activities

|  |  |
| --- | --- |
| **Production space** | **Percent** |
| Farm land (communal or private) | 13.9 |
| Backyard garden | 71.7 |
| School garden | 2.3 |
| Communal garden | 5.9 |
| Verges of roads and unused public land | 1.8 |

### Land tenure system

When households were asked about the basis to which they have access to land, about 61% of the households indicated that they owned the land, followed by 30% of the households that reported that the land they are using belongs to the tribal authority (Figure 9). Only four per cent of the households indicated that they were using rented land.

Figure 9: The basis for households’ access to land

The majority of households who indicated that they own the land they have access were in ZAHMI (88%), followed by ZAHIC (67%) and ZABOL (60%), as shown in Table 11 below. The lowest number of households who indicated they owned the land were from ZALCM. With regard to having access to tribal land, the majority of households who indicated that they are having access to tribal land were from ZALCM, whilst the lowest number of households was from ZAHMI. In most Livelihood Zones, households do not rent for the land they have access to, but about seven per cent and five per cent of the households in ZAHIC and ZALOC indicated that they have access to rented land, respectively.

Table 11: The basis for the households’ access to land by Livelihood Zone

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Zone** | **Owns the land** | **Rents the land** | **Share cropping** | **Tribal authority** | **State land** | **other** | **Do not know** |
| ZALOC | 59 | 5 | 0 | 30 | 2 | 3 | 1 |
| ZABOL | 60 | 0 | 0 | 40 | 0 | 0 | 0 |
| ZALCM | 46 | 2 | 0 | 43 | 0 | 9 | 0 |
| ZAHMI | 88 | 0 | 0 | 8 | 0 | 4 | 0 |
| ZAHIC | 67 | 7 | 0 | 24 | 0 | 2 | 0 |

### Livestock or Animal ownership

Generally, households in the five Livelihood Zones kept cattle, poultry, goats and pigs. Results in Figure 10 indicate that more (16.6%) households owned or kept poultry, followed by cattle (8.4%) and goats (4.9%). There are some households who owned pigs (2.8%) and very few owned donkey in the province.

Figure 10: Percentage of households owning each livestock / animal type

The findings of this survey showed that most households practiced poultry farming across the five Livelihood Zones. Households in ZABOL owned more cattle than households from other Livelihood Zones as cattle was owned by 33% of the households, followed by households in ZAHIC and ZAHMI as they owned 22% and 12% of the cattle, respectively. Households in ZAKHC owned a higher percentage of goats (Figure 11). Very few households owned pigs across the Livelihood Zones.

Figure 11: Percentage of households owning each livestock / animal type by Livelihood Zone

### Relationship between agricultural involvement and socioeconomic factors

Positive relationships were found between demographic variables such as age of household heads / acting head, access to water source, household size, markets, education level of household head / acting head and involvement in agricultural production as shown in Table 12. Households with more household members tend to participate in agricultural production compared to households with fewer household members. This might indicate that the burden of caring for more members propels households to produce their own food. As age and education level increased for the household head/acting head, chances of the household to participate in agriculture also increased, this is in line with the findings from focus group discussions that established that young people in the study area are not keen to participate in agricultural activities as compared to adults. The interesting observation is that households which are involved in agriculture have a high chance of being food insecure and poor in the livelihood zone. This implies that agricultural production alone is not enough to propel households out of poverty and food insecurity. Hence it needs to be complemented with other livelihood strategies.

**Table 12: Relationship between household agricultural involvement and socioeconomic factors**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Variable** | | **Agriculture involvement** | | **Statistic** | |
| **Categorical variables** | | **Involved** | **Not Involved** | **X2 value** | **Significance** |
| Gender of household head | Male | 109 | 134 | 0.611 | 0.435 |
| Female | 144 | 202 |
| Marital Status of Household head | Married | 77 | 59 | 13.679 | 0.000\*\*\* |
| Not married | 175 | 277 |
| Access to water | Water-access | 96 | 5 | 9.613 | 0.000\*\*\* |
| No access | 75 | 18 |
| Access to market | Market access | 20 | 47 | 22.910 | 0.000\*\*\* |
| No access | 11 | 158 |
| Household Food Insecurity Access Score | Food Secure | 31 | 56 | 5.396 | 0.145 |
| Mildly Food Insecure | 109 | 119 |
| Moderately Food Insecure | 95 | 121 |
| Severely Food Insecure | 6 | 14 |
| Education level | <10th grade | 59 | 168 | 3.137 | 0.077\* |
| >10th grade | 11 | 59 |
| **Continuous variable** | |  |  | **T-test** | **Significance** |
| Age of household head | |  |  | 3.725 | 0.000\*\*\* |
| Household Size | |  |  | 4.294 | 0.000\*\*\* |

Note: \*\*\*, \*\*, \*significant at 1%, 5% and 10% level respectively

## Food shortage and Hunger

January was reported as a month in which households in the five Livelihood Zones experienced food shortage the most, followed by June and October. According to the seasonal calendars obtained from the focus group discussions, June is the winter month in which very little is available in gardens and plots in the nine Livelihood Zones. About 64% of the households experienced food shortages in the month of January 47 % and 46% of households respectively experienced food shortage in June and October, while 41% of households experienced food shortage July, August and September of the previous year. The least number of households experiencing hunger were found in December. Figure 12 shows the percentage of households that experienced hunger over different months of the year.

Figure 12: Months of hunger experiences by households

While many households experienced food shortages in different months of the year, on average, about 28 % of the households indicated that they did not experience hunger in any of the 12 months of the year as shown in Figure 13. About 22% of the households indicated that they experienced food shortage for one month of the year while 12% and nine per cent of the households indicated that their food shortage experiences were felt for two and three months of the year respectively. A notable, concerning 18% of households reported experiencing food shortage for 12 months of the year.

Figure 13: Percentage of households experiencing food shortages for a number of calendar months

With regard to specific Livelihood Zones, the most (45%) number of households that reported to have experienced no hunger in any month of the previous calendar year were in ZAHMI, while ZAHIC was found to have the least (17%) number of households who reported that they experienced no hunger in any of the months of the previous year (Table 13). About 24% and 22% of the households in ZAHMI and ZALOC reported that they experienced hunger for one out of the 12 months of the previous calendar year. About 25% and 23% of the households in ZAHIC and ZALCM respectively experienced hunger for three out 12 months of the previous year. This is a concern as some of these households could actually be classified as starving and therefore requires urgent attention from the government and other relevant stakeholders. Overall, this month of hunger data is crucial as it does not only tell the policy makers and Programme implementers about the months in which households experience hunger but it demonstrates the magnitude of the problem in different months and gives some direction regarding the months in which households need more assistance.

Table 13: Percentage of households experiencing food shortage for a number of calendar months by livelihood zones

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Month | ZALOC | ZABOL | ZALCM | ZAHMI | ZAHIC |
| 0 | 26 | 26 | 28 | 45 | 17 |
| month | 22 | 19 | 23 | 24 | 18 |
| 2 months | 11 | 33 | 13 | 6 | 16 |
| 3 months | 10 | 7 | 3 | 7 | 14 |
| 4 months | 4 | 0 | 1 | 5 | 3 |
| 5 months | 3 | 0 | 4 | 0 | 1 |
| 6 months | 2 | 0 | 0 | 1 | 3 |
| 7 months | 1 | 0 | 1 | 0 | 2 |
| 8 months | 0 | 0 | 1 | 0 | 0 |
| 9 months | 1 | 0 | 1 | 0 | 0 |
| 10 months | 3 | 4 | 2 | 0 | 0 |
| 11 months | 2 | 0 | 0 | 0 | 0 |
| 12 months | 15 | 11 | 23 | 13 | 25 |

This is a concern as some of these households could actually be classified as starving and therefore requires urgent attention from the government and other relevant stakeholders. Overall, this month of hunger data is crucial as it does not only tell the policy makers and Programme implementers about the months in which households experience hunger but it demonstrates the magnitude of the problem in different months and gives some direction regarding the months in which households need more assistance.

**7.5**.**1 Household access to food**

The Household Food Insecurity Access Scale, which is aimed at determining households’ access to food, showed that the overall percentages of households across the five livelihood zones with inadequate and severely inadequate access to food are 39 % and four per cent respectively, while 16% of the households across the livelihood zones had an adequate access to food. About 41% of the households were found to be mildly food insecure (Figure 14). Figure 14 shows that food access problems were the most common in ZALCM as 44% of the households had inadequate food access. Inadequate access to food was also observed in ZAHIC (43%), ZAHMI (40%), ZABOL (38%) and ZALOC (37%). Severely inadequate to food access were most in ZAHIC (6%), followed by ZALCM (4%), ZABOL (4%), ZALOC (4%) and ZAHMI (3%).

Figure 14: Percentage of households experiencing food adequacy or inadequacy by livelihood

* + 1. **Household hunger experiences**

About 66 % of the households across the five livelihood zones are experiencing little to no hunger as shown in the Figure 15 below. The total percentage of the households experiencing moderate and severe hunger is 21 % and 13 % respectively. The majority of the households (20%) experiencing severe hunger were in ZAHIC, followed by ZAHMI. There is no notable correlation found to be existing in the household involvement in agricultural activities and hunger experiences in some Livelihood Zones.

Figure 15: Household experiences of hunger by Livelihood Zones

### Food Consumption Scores

Food Consumption Scores (FSC) were calculated for the households using the WFP methodology to further understand the levels of dietary diversity in the nine Livelihood Zones. This FCS differs from Dietary Diversity in that it represents a weighted dietary diversity score. Categories of FCS show that the majority of households (43%) were consuming adequately diversified diets and about 37% of households are at the borderline and could fall into unacceptable diversity of foods if no actions are taken to help them improve their diets. Results further indicate that 20% of the households who consumed an unacceptable diversity.

Figure 17 illustrates the pattern obtained through the Dietary Diversity Score, majority of households in ZAHMI (91%) were consuming an acceptable diversity of foods followed by ZAHIC (85%), ZALOC (84%), ZALCM (84%) and ZABOL (67%). About 22% of the households were on the borderline in terms of their consumption patterns. Very low percentages of households consumed poor diets.

Figure 17: Food Consumption Score by Livelihood Zones

## Coping strategies

Coping strategies play a major role in household livelihoods as they enable households to bounce back in times of scarcity or shocks.

### Food consumption coping strategies

Households were asked about the strategies they applied when faced with food shortages and how often in the past week a particular strategy had been used or practiced. The Coping Strategies Index scores were widely distributed. Relying on less preferred and or inexpensive foods was the most commonly employed strategy across the five Livelihood Zones as this was practiced by 54.1% of the households.

This was followed by limiting portion sizes at meal times, reducing number of meals in a day and purchasing food on credit as these were practiced by 31.4 %, .30.7% and 14.5% of households respectively. Relying on less preferred foods and or inexpensive foods was as found to be the most commonly employed strategy in all zones. The strategy was largely practiced at ZABOL and ZAHIC, with 65% of the households in each zone practicing the strategy (Table 15).

Table 15: Proportion of sample households employing coping strategies by livelihood zones

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Coping strategy | ZALOC | ZABOL | ZALCM | ZAHMI | ZAHIC |
| household relied on less preferred and less expensive foods | 53 | 65 | 51 | 47 | 65 |
| household borrowed food or relied on help from a friend or relative | 26 | 27 | 33 | 29 | 33 |
| household purchased food on credit | 13 | 30 | 9 | 13 | 23 |
| household gathered wild food | 12 | 19 | 15 | 7 | 20 |
| household consumed seed stock | 0 | 4 | 0 | 1 | 1 |
| household sent members to eat elsewhere | 6 | 4 | 12 | 4 | 13 |
| household sent members to eat elsewhere | 6 | 8 | 3 | 5 | 7 |
| household limited portion size | 31 | 58 | 33 | 22 | 33 |
| household restrict consumption of adults to feed small children | 14 | 35 | 14 | 6 | 16 |
| household feed working members at expense of non-working members | 3 | 19 | 2 | 0 | 2 |
| household reduce number of meals eaten per day | 29 | 50 | 31 | 27 | 33 |
| household skip entire days without eating | 6 | 12 | 10 | 9 | 18 |

### Income shock copying strategies

Receiving help from friends or relatives (21%) was the most the most employed income coping strategy across the five Livelihood Zones, followed by borrowing money from relatives and reducing spending as they were practiced by 17.8% and 17.6% of the households respectively (Figure 18). A number of households also reported that they reduce their consumption of food to cope with income shocks. Very few percentages of the households (1.3%) indicated that they sell their livestock if they experience financial constraints. Reducing or stopping debt payment was practiced by about 1.4% of the households, indicating some households do default of their debt payment.

Figure 18: Income shock coping strategies employed by sample households

Some of the coping strategies used in the five Livelihood Zones would compromise diet adequacy and quality. Borrowing food from neighbors may cause conflict among community members and coping strategies like feeding working members at the expense of non-working members undermine household unity and stability (Ngidi and Hendriks, 2014). However, generally the coping strategies applied were not erosive.

# 7.8 Poverty situation

The assessment also used household expenditure per capita per day for Stats SA to determine poor and non-poor households in five livelihood zones of Mpumalanga. Using Stats SA poverty[[1]](#footnote-1) measure of R431 per capita per month for 2006 and adjusted for inflation to reflect R879.00 per capita per month. The extent of poverty across five livelihood zones of Mpumalanga province using incidence of poverty (head count ratio) is presented in Figure 19. The results indicate that 74 percent of the households in the study area are poor. Poverty incidence differs among the five livelihood zones, with the highest poverty incidence in ZABOL livelihood zone (81%), followed by ZAHMI (78%), ZAHIC (77%), and ZALOC (75%) livelihood zones. The lowest poverty incidence is in ZALCM (61%).

Figure 19: Incidence of poverty by livelihood zones

## Anthropometric indicators

This section highlights main nutrition findings for children from the age 6 to 59 months. The first part of the section presents global acute malnutrition, stunting and underweight of children under the age of five. The demographics of the children included in the study demonstrate that there were slightly more boys than girls, contributing 52.2% compared 47.8% of the girls.

Table 16: Distribution of children under 5 by age and gender

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Variable** | **Boys** | | **Girls** | | **Total** | |
| **Count** | **%** | **Count** | **%** | **Count** | **%** |
|  | 119 | 52.2 | 109 | 47.8 | 228 | 100.0 |
| **Age (Months)** | | | | | | |
| 6-17 | 21 | 52.5 | 19 | 47.5 | 40 | 17.5 |
| 18-29 | 27 | 45.8 | 32 | 54.2 | 59 | 25.9 |
| 30-41 | 32 | 65.3 | 17 | 34.7 | 49 | 21.5 |
| 42-53 | 30 | 57.7 | 22 | 42.3 | 52 | 22.8 |
| 54-59 | 9 | 32.1 | 19 | 67.9 | 28 | 12.3 |

1. **Acute malnutrition**

Global acute malnutrition is one of the important indicators in assessment of children health and nutrition status. It highlights both forms of moderate and severe acute malnutrition among children under the age of five. The prevalence of Global acute malnutrition still remains a public health problem which results in substantial increase mortality and disease burden worldwide. The Lancet series, 2013 reported that malnutrition account for 45% of all death of children under the age of five. This estimate translates to 3.1 million deaths in 2011. It is further reported that includes intrauterine fetal growth restriction, stunting, wasting, and micronutrient deficiency, especially vitamin A and Zinc. This occurs along poor infant feeding practices which are indicated by suboptimum breastfeeding.

The prevalence of Global Acute Malnutrition (GAM) in the five Livelihood Zones was found to be 8.3%. This was higher in boys (10.1%) when compared to 6.4% in girls. Girls seem to be more prone to acute malnutrition in the early age compared to boys as shown in Table 16. Both the prevalence of moderate and severe acute malnutrition was found to be higher in boys than in girls (Table 17).

Table 17: Prevalence of acute malnutrition based on weight-for-height z-scores

by sex

|  |  |  |  |
| --- | --- | --- | --- |
| **Indicator** | All  n = 229 | Boys  n = 119 | Girls  n = 110 |
| Prevalence of global malnutrition  (<-2 z-score and/or oedema) | (19) 8.3 %  (5.4 - 12.6 95% C.I.) | (12) 10.1 %  (5.9 - 16.8 95% C.I.) | (7) 6.4 %  (3.1 - 12.6 95% C.I.) |
| Prevalence of moderate malnutrition  (<-2 z-score and >=-3 z-score, no oedema) | (9) 3.9 %  (2.1 - 7.3 95% C.I.) | (5) 4.2 %  (1.8 - 9.5 95% C.I.) | (4) 3.6 %  (1.4 - 9.0 95% C.I.) |
| Prevalence of severe malnutrition  (<-3 z-score and/or oedema) | (10) 4.4 %  (2.4 - 7.9 95% C.I.) | (7) 5.9 %  (2.9 - 11.6 95% C.I.) | (3) 2.7 %  (0.9 - 7.7 95% C.I.) |

Results showed that Global Acute Malnutrition (GAM) was more prevalent in ZAHMI (25.8%) and ZABOL (16.7%), as indicated in Figure 20, while ZAHIC (4.7%) had the least number of children with incidences of GAM. In ZALCM, there were no under-five children with GAM.

Figure 20: Prevalence of GAM, underweight and stunting in under-five children by Livelihood Zones

Acute malutrition was found to be predominant in the 42-53 months old children in the five Livelihood Zones . There was a quite a significant percentage of children between 30-41 months who were severly acute malnourished in ZAHMI. Underfive children in ZABOL were the highest actely severe malnourished as 20% of surveyed children were acutely severe malnourished. Further, ZAHMI and ZABOL had each 16.7% of children between 18-29 months old who were severely acute malnourished. Fugure 21 also show that ZALOC was the only zone with children between ages of 54-59 months who had severe acute malnutririon.

Figure 21: Percentage of children with severe acute malnutrition by age and Livelihood Zones

Moderate acute malutrition was found to be predominant in ZAHMI (33.3%) between the ages of 18-29 and 30-41 months old children. There was quite a significant percentage of children between the ages of 6-17 months old who were moderately acutely malnourished in ZAHIC as shown in Figure 22. No under-five children in the ages of 54-59 months old had moderate acute malnutrion in the five livelihood zones. This could suggest that the surveyed children were not affected or that as children get access to crechee and pre-school, their situation gets better.

Figure 22: Percentage of children with moderate acute malnutrition by Livelihood Zones

### Prevalence of Stunting

The prevalence for stunting in the five livelihood zones was 25.3%, slighly below the national stunting prevalence rate of 26.5% reported by SANHANES in 2012. Boys are also prone to stunting (26.7%) compared to girls,with (23.9%). Th results show that the percentage of children that were moderately and severly stunted is 15.7 % and 9.6 % respectively.

Table 18: Prevalence of stunting the in five livelihood zones

|  |  |  |  |
| --- | --- | --- | --- |
| **Variable** | **All** n = 229 | **Boys** n **=** 120 | **Girls** n **=** 109 |
| **Prevalence of stunting (<-2 z-score)** | (58) 25.3 % (20.1 - 31.3 95% C.I.) | (32) 26.7 % (19.6 - 35.2 95% C.I.) | (26) 23.9 % (16.8 - 32.7 95% C.I.) |
| **Prevalence of moderate stunting (<-2 z-score and >=-3 z-score)** | (36) 15.7 % (11.6 - 21.0 95% C.I.) | (20) 16.7 % (11.1 - 24.3 95% C.I.) | (16) 14.7 % (9.2 - 22.5 95% C.I.) |
| **Prevalence of severe stunting (<-3 z-score)** | (22) 9.6 % (6.4 - 14.1 95% C.I.) | (12) 10.0 % (5.8 - 16.7 95% C.I.) | (10) 9.2 % (5.1 - 16.1 95% C.I.) |

The prevalence of severe stunting was predominant in children (19.3%) with ages of 18-29 months old, with less prevalence (3.7%) observed in ages of 54-59 months (Table 19). The results also show that moderate stunting rate was high across the age groups of 42-53 months (19.2%), 30-41 months (16.3%) and 18-29 months (15.8%). The children in the ages of 54-59months old were found to have less moderate stunting prevalence (11.1%).

Table 19: Prevalence of stunting based on height-for- age z scores in the livelihood zones

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  |  | **Severe stunting (<-3 z-score)** | | **Moderate stunting (>= -3 and <-2 z-score )** | | **Normal (> = -2 z score)** | |
| **Age (mo)** | **Total no.** | **No.** | **%** | **No.** | **%** | **No.** | **%** |
| **6-17** | 37 | 5 | 13.5 | 5 | 13.5 | 27 | 73.0 |
| **18-29** | 57 | 11 | 19.3 | 9 | 15.8 | 37 | 64.9 |
| **30-41** | 49 | 2 | 4.1 | 8 | 16.3 | 39 | 79.6 |
| **42-53** | 52 | 3 | 5.8 | 10 | 19.2 | 39 | 75.0 |
| **54-59** | 27 | 1 | 3.7 | 3 | 11.1 | 23 | 85.2 |
| **Total** | 222 | 22 | 9.9 | 35 | 15.8 | 165 | 74.3 |

Severe stunting was observed in all five livelihood zones except in ZABOL (Figure 23). ZAHMI had the highest prevalence of severe stunting across all age groups except for children within 30-41 and 54-59 months old followed by ZAHIC. The high severe stunting prevalence was observed mostly in children between ages of 18-29 months old in ZAHMI (33.3%), ZAHIC (25%) and ZALOC (23.1%). Only 11.1% of children within the age of 54-59 months old were severely stunted and were found in ZAHIC.

Figure 23: Percentage of severely stunted children under the age of five by Livelihood Zones

Similarly, moderate stunting was observed in all five livelihood zones except in ZABOL. The results also show that children between the ages of 18-29 months old in the five livelihood zones were moderately stunted with the exception for those in ZABOL. It is noted that children of all age groups were moderately stunted in ZAHIC, especially, within the age groups of 6-17 months and 30-41 months where 20% and 15% of the surveyed under five children were found to be moderately stunted.

Figure 24: Percentage of children under the age of five who are moderately stunted by livelihood zones

1. **Prevalence of underweight**

Underweight was more prominent in boys compared to girls in the five livelihood zones as shown in Table 20, with a prevalence rate of 11.5%, compared to that of 4.5% in girls. The prevalence of moderate and severe underweight was similar for boys (5.7%), while for girls it was 2.7 % as shown in Table 20. Overall, the prevalence of underweight was 8.2% and the prevalence of moderate underweight was 4.3%, while the prevalence of severe under was found to be 3.9%.

Table 20: Prevalence of underweight in children under the age of five in the five livelihood zones

|  |  |  |  |
| --- | --- | --- | --- |
|  | **All** n = 233 | **Boys** n **=** 122 | **Girls** n **=** 111 |
| **Prevalence of underweight (<-2 z-score)** | (19) 8.2 % (5.3 - 12.4 95% C.I.) | (14) 11.5 % (7.0 - 18.3 95% C.I.) | (5) 4.5 % (1.9 - 10.1 95% C.I.) |
| **Prevalence of moderate underweight (<-2 z-score and >=-3 z-score)** | (10) 4.3 % (2.3 - 7.7 95% C.I.) | (7) 5.7 % (2.8 - 11.4 95% C.I.) | (3) 2.7 % (0.9 - 7.6 95% C.I.) |
| **Prevalence of severe underweight (<-3 z-score)** | (9) 3.9 % (2.0 - 7.2 95% C.I.) | (7) 5.7 % (2.8 - 11.4 95% C.I.) | (2) 1.8 % (0.5 - 6.3 95% C.I.) |

Figure 25 shows that the severe underweight in the under-five children was found in ZALOC and ZAHMI only. It was also observed that ZAHMI had the higher number of children who are severely underweight at the age group 18-29 months (16.7%), 30-41 months (14.3%) and 42-53 months old (12.5%). While ZALOC had slightly lower rate of severe underweight compared to ZAHMI, the severe underweight in this Livelihood Zone was observed in all age groups (Figure 25).

Figure 25: Percentage of children who are severely underweight by Livelihood Zones

The results indicate that ZAHMI is leading in terms of the number of under five children with moderate acute malnutrition compared to other livelihood zones, with the highest number (28.6%) found at the age of 30-41 months old, Figure 26. About 17% and 13% of the under-five children of ages 18-29 and 42-53 months in ZAHMI were also moderately underweight, respectively. Further, 10% of the under-five children aged 54-59 months surveyed in ZAHIC were found to be moderately underweight whilst approximately 8% of the under-five children of the same age group in ZALOC were moderately underweight. In ZALCM, about 8% of the under-five children within the age group of 30-41 months were also moderately underweight.

Figure 26: Percentage of moderate underweight children under the age of five by Livelihood Zones

# 8. CONCLUSIONS

The low proportions of adult men in the five Livelihood Zones as well as the unbalanced household or acting head’s gender (more females than males) could be a result of male household heads or acting heads migration to urban, industrial and mining areas where they supply labour. The persistence of this pattern leads to human capital shortages and has impacts on productivity even though the level of unemployment is still high in the nine Livelihood Zones.

Contrary to the national and provincial situation of low percentages (18.3% and 22.4% respectively) of households involved in agricultural activities, the majority (43%) of households in the five Livelihood Zones were involved in agricultural activities. The figure contains a variation in the extent to which households practice agriculture across the five Livelihood Zones. About sixty-five per cent of households engaged in agriculture, do so to produce extra food for the household. Purchases are the main source of food even in five surveyed Livelihood Zones. No relationship existed between household involvement in agriculture and access to food. This gives an indication that agriculture needs to be complemented with other livelihood strategies in order for it to play a significant role to improve household food security. The results indicated a positive relationship existed between household involvement in agriculture and access to water, markets, age of household head, marital status, household size and household head education level.

Food and nutrition security remains a challenge within the livelihood zone and requires intervention to address the situation. As already mentioned, food and cash income from livestock products is low for the numbers of animals present. To increase production, herds would need more and better management, an investment that would need to be justified through better returns. These returns could be increased by, for example, support to dairy marketing and greater provision of services and infrastructure to encourage production. Crop farming yields could also be improved through greater service provision and market support, though crops are constrained by environmental factors. This increased productivity will unlikely benefit all but a few households directly, but will create additional new possibilities through increased work opportunities. For many 'poor' and 'very poor' households, grants will remain the main source of income for some time to come. Since households are dependent on markets for most of their food, households are most vulnerable to market-related shocks. These 'market shocks' may consist of: escalating food prices, eroded grants which might not be adjusted to match consumer inflation) and job losses. Inaccessibility to markets exposes the ‘poor’ and ‘middle’ groups to exploitation. Better off wealth groups are able to sell their produce at better prices than the rest of the wealth groups.

Drought and livestock theft may have an impact, as it will reduce crop and livestock production and affect this source of food and income. However, unless food prices also rise simultaneously, households will manage crop losses by prioritising more cash to food purchases. Some of the main challenges in the zone are livestock theft, unfenced velds, crops and livestock diseases. Additional response strategies households may engage in under stress are: switching expenditure, selling off assets, firewood, casual labour and handcrafts

Social grants were found to be providing a major socio-economic safety net with majority of households in the five Livelihood Zones, being recipients of Child Support Grant and Old Age Grants. However, results point out that even in areas with highest percentages of households receiving Old Age Grant, highest levels of hunger still exist, particularly in areas where livelihoods are less diverse, with little to no supplementation of grant income with own food production. This phenomenon is mostly evident in ZABOL with highest percentages of households receiving OAG and highest percentage of households with severe food insecurity.

While the majority of households in the five Livelihood Zones are mainly producing grains, households generally consumed diets that are well diverse (from 4 – 6 food groups) with notably vegetables including dark green leafyvegetables. The involvement of households in agricultural activities for household consumption in the five livelihood zones could be a reason to the diverse diets. However, a phenomenon of households with highest percentage of households involved in diverse agricultural activities but lowest food consumption score is observed in ZABOL. This could be because of more sales of agricultural produce compared to consumption of own their produce in these Livelihood Zones. Malutrition in children under the age of 5 was predominant in 42-53 months old children in the four Livelihood Zones and less experienced by children of age 0-6 months. Results also found no correlation between receipt of CSG and reduced malnutrition levels.

# 9. RECOMENDATIONS

Revitalization of rural economies is required to reverse the unavailability of young adult males for agricultural activities in households. This would allow for increased agricultural production, contribution of agriculture as a main source of food and income, it would also create additional new possibilities through increased work opportunities.

While households were involved in agricultural activities, to increase production, herds and crops would need more and better management. Such investment would need to be justified through better returns for example through support to dairy marketing and greater provision of services and infrastructure to encourage production. Crop farming yields could also be improved through greater service provision and assistance with planning food production to provide food year-round and market support.

Households need support in some months of the year (mainly January and June) to avoid negative consumption reduction practices and incidence of seasonal hunger. Interventions that seek to help households budget and save in anticipation of lumpy expenditures are crucial to ensure year-round food security.

Enlightenment about macro nutrition is crucial, food security programmes that are formulated should focus on the production and consumption of foods aimed at improving the identified deficient micro-nutrient at the household level. Interventions on food preparation, meal planning and nutrition advice to support home production of fresh produce is required for improved dietary diversity in the households.

Promotion of projects and programmes that encourage good hygiene practices such as use of latrines and washing hands with soap after using the toilet is crucial. Breastfeeding promotion, strengthening of prevention, growth monitoring and promotion to improve case detection in children who need care, appropriate referral and management of acute malnutrition, coupled with appropriate messages on complementary feeding are key interventions. There is a need to scale-up multiple micronutrient supplementation during pregnancy, calcium supplementation to mothers at risk of low intake, promotion of maternal balanced nutrition, use of iodised salt, deworming, vitamin A and zinc supplementation for children under 5.

These interventions, together with full scale implementation of other nutrition sensitive Programme and approaches such as agriculture and food security, social safety network, early childhood nutrition, women empowerment, child protection water, sanitation and hygiene, and other health and family planning services, in an enabling environment will greatly reduce morbidity and mortality in childhood, incidence of obesity and non-communicable diseases, while on the other hand contributing to the improvement of cognitive, motor socio-emotional development, school performance and learning capacity, adult stature and work capacity and productivity.

Nutrition assessment of children under-five at all points of contact should be strengthened. More focus should be given to the first 1000 days of a child’s life. Nutrition assessment during pregnancy and appropriate management of pregnant women who are underweight or with poor weight gain should be strengthened during basic antenatal care services.

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1. Based on the studies in South Africa, a figure of R879.00 per person per month is used as poverty line (R431 recommended by Stats SA per person per month in 2006, adjusted to present period of data collection using Consumer Price Index, CPI) ([Stats SA, 2007](#_ENREF_83)). This value is estimated to satisfy a daily energy requirement of 2200 kcal per capita recommended by the South African Medical Research Council for a healthy and active life. All households with consumption expenditure per capita below poverty line were assigned a categorical variable 1 (Ci\* < R879.00 poor household) and those above the poverty line (Ci\* > R879.00) were categorized as non-poor households (0). [↑](#footnote-ref-1)