A Critical Analysis of Food Security Situation Amidst Epoch of Drought & Flooding in Zambia

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Abstract

Zambia is experiencing a serious humanitarian crisis resulting from climate change making weather patterns more extreme, with more frequent droughts, floods, and heat waves. These disaster risks are affecting Zambia's poorest communities especially in rural areas who rely on rainfed agriculture. Such extreme weather events are impacting productivity of the agriculture sector which is driving deterioration in food and nutrition security with increasing severity and prevalence of food insecurity. Currently, the country is facing prolonged dry spell and drought caused by El Niño affecting 84 out of the 116 districts of Zambia. The drought has affected agri-food systems sectors including crops, livestock, education and water and sanitation labour (Drought Response Situation Report, 2024). The Government of the Republic of Zambia's crop assessment data has estimated over one million hectares of crop land affected ranging from outright crop failure and significant drop in yields. The impact of the El Nino induced drought is highlighted as the worst that the country has experienced with the month of February being the driest and hottest month on record since 1981. This study was critically conducted and employed a mixed method of quantitative and qualitative data collection techniques. Combining quantitative and qualitative techniques ("mixed method") allowed for a comprehensive understanding of the impact of the drought on household food security and livelihoods and other sectors. The research design consisted of four main components: household surveys, focus group discussions, market assessments, and key informant interviews.

Key words: *Agricultural production, food security, Income Generating Activity, Drought & Flooding.*

Background and Introduction

With a total surface area of 752,614 km2 (75,261,400 hectares), land makes up 99 percent of the country, while water makes up the remaining 1 percent. According to Zambia Development Agency, the country has great potential for agriculture transformation and growth given the rich arable land base that totals 42 million hectares which is about 56 percent of land area of which less than 14 percent is cultivated and only 5.7 percent (155,912 hectares) is irrigated[1]. The country still faces numerous challenges, including high levels of poverty and unemployment, particularly among the youth, a significant reliance on copper, financial difficulties, natural disasters, and climate change[5]. Zambia' agri-food systems has continued to experience low agricultural productivity particularly of nutrient-dense foods, high costs of healthy diets, a degraded natural environment limiting nature-friendly food production initiatives, insufficient market access, and inadequate financial support for agricultural activities, particularly among small scale farmers.

The rapidly increasing population impede the capacity of current production to meet the nutritional needs of the population with an estimated 2.03 million people (23 percent) identified at risk of food insecurity between April 2023 and March 2024. Zambia's population is increasing by 3 percent annually and has grown by 34% in the past decade. The economy is facing significant challenges due to these population movements, which is impeding Zambia's goal of becoming a middle-income country by 2030. In 2022, the World Bank re-classified Zambia to low-income status from lower middle income, for the 2023 financial year because of the deterioration of Gross National Income per capita estimates recorded in 2021 as it faces debt and increasing debt servicing obligations. The Country remains one of the world's poorest countries with close to 64 percent of Zambians living under USD2 a day with over 40 percent of them considered to live in extreme poverty (under USD1.25 a day). Poverty rates are indicated to be higher among households headed by women (56.7 percent) than those headed by men (53.8 percent) and in rural areas (76.6 percent of households) than in urban ones (23.4 percent).

Furthermore, according to the highlights of the 2022 Poverty Assessment in Zambia, the level of poverty remains higher in rural areas with the poverty rate increasing to 78.8 percent in 2022 compared to 76.6 percent in 2015. Child poverty rates in Zambia show that 65 per cent of children experience monetary poverty, while 70.6 per cent are deprived in two or more dimensions of wellbeing simultaneously (Zamstats, 2023).

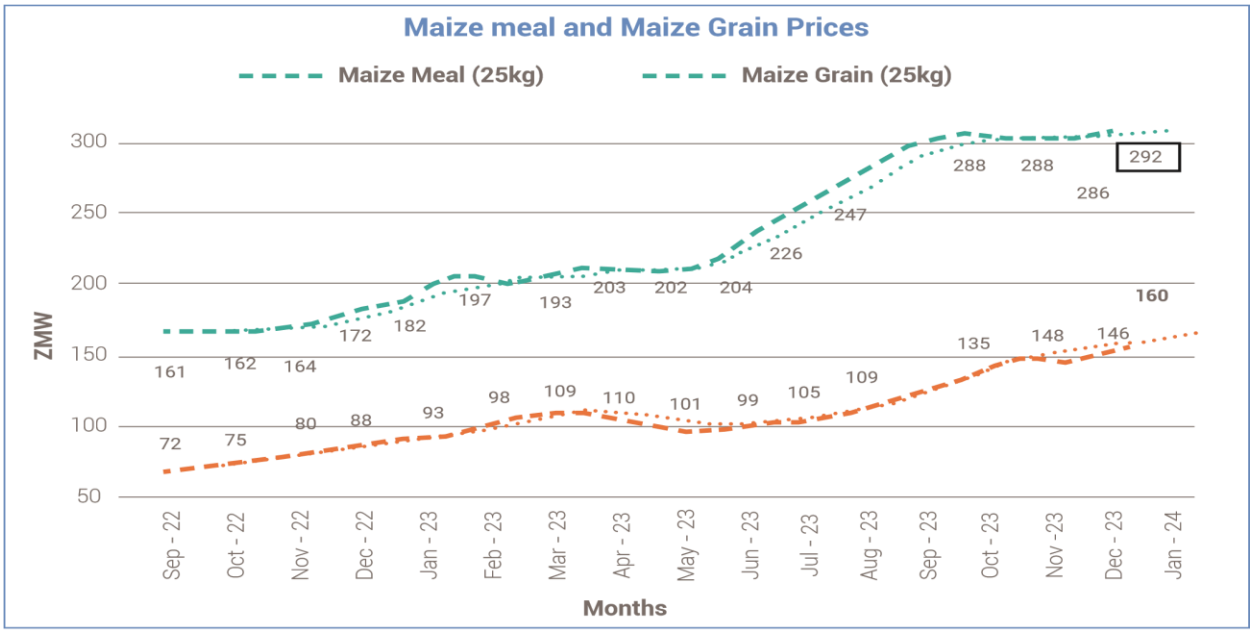
Zambia has one of the highest rates of undernourishment in the world, with 51 percent of the population unable to fulfil their daily energy needs. While the mortality rate decreased from 70 to 45 fatalities per 1,000 live births, the frequency of underweight children stayed at 15 percent for those under five (rates can reach as high as 26 percent for infants between 18 and 23 months). These statistics highlight the prevalence of hunger and malnutrition in Zambia. The Zambian economy has been facing significant macroeconomic challenges as reflected in low growth, high fiscal deficits, rising inflation and debt service obligations as well as low international reserves. The country will continue facing the impact of the COVID-19 shock for some years to come as the recovery of the economy is slower than expected. The economy registered a declined growth

[1] Zambia Development Agency and AFDB [5] 2021 labour force survey report

between 2017 and 2023, with an average growth of about 1.4 per cent, largely due to unfavorable weather conditions that affected the agriculture sector which is one of the main contributors to its growth.

The country's annual inflation rate increased from 12.9 percent to 13.2 percent in January for the seventh consecutive month since July 2023, while the year on year inflation was at 13.2 percent in February 2024, higher than in February 2023 (9.6 percent). The rising inflation has mainly been driven by the rise in the food inflation which reached its peak (14.2 percent) in December 2023. The Zambian Kwacha continues to depreciate against the foreign currencies, the exchange rate of 1 USD increased from ZMW 22.7 at the end of February 2024 to ZMW 25.7 in March 2024, In February, the Central Bank decided to strengthen its tight policies to support the development of the Zambian Kwacha deposits and reduce the risk perception of the country which resulted in some exchange gains in quarter 1 of the year. During the year, food inflation has been on the rise, consistent with this, the price of maize grain has been rising since July 2023 and was about 72 percent higher in 2024 when compared to around the same time the previous year. A similar trend is observed for the price of Maize meal which is 69.7 percent higher in comparison to a similar period last year (See below figure 1).

The production of maize for grain was projected at 3,261,686 metric tonnes (Mt) in the 2022/2023 agricultural season representing a 22.91 percent increase from 2,653,805 Mt produced in the



Source: Zamstats

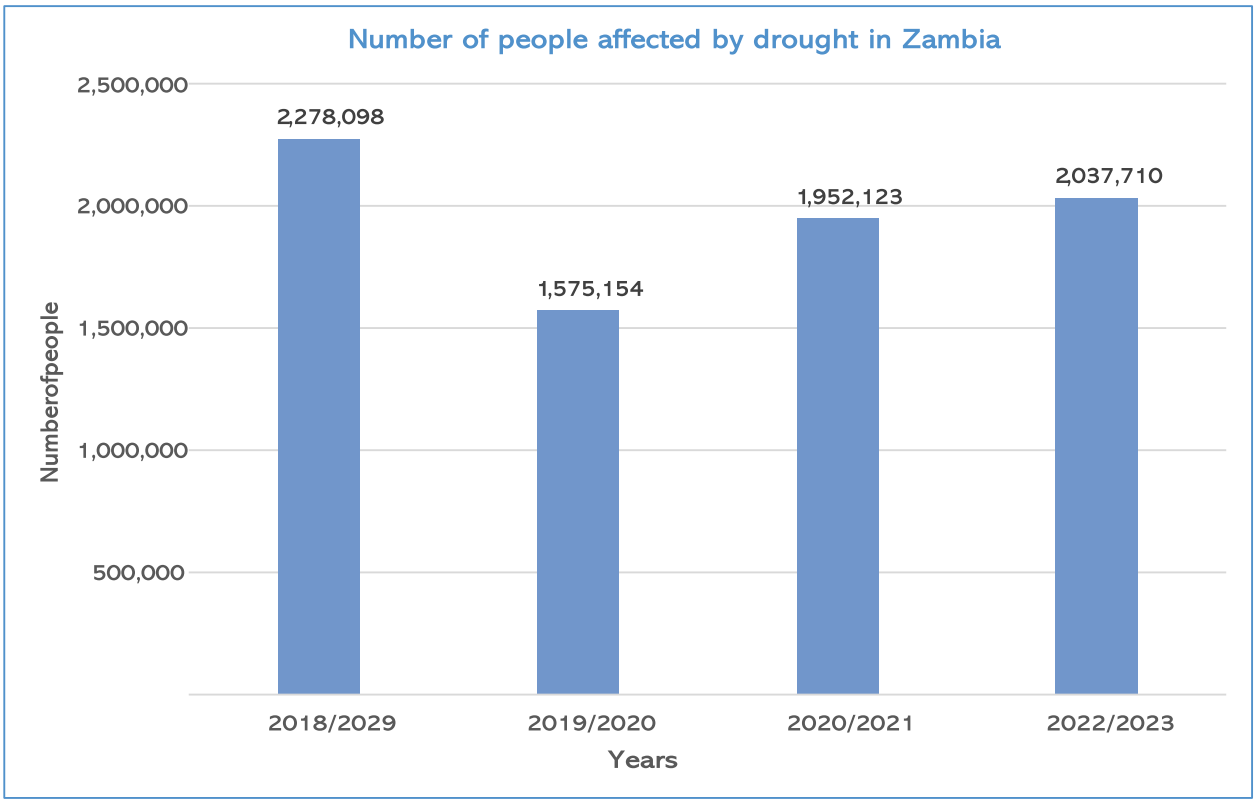
2021/2022 agricultural season. Nonetheless, output remains low when compared to the five-year average. Following the 2023 national vulnerability assessment, the cereal adequacy ratio was computed based on this security. The continued heavy rains and flooding affected an estimated 373, 000 persons in 41 districts across 10 provinces with the Southern, Western and Lusaka provinces being severely affected. This negatively indicating most parts of the country will only have cereal lasting them one month into the lean season in the 2023/2024 season. This was evident

for Western, parts of Southern and Eastern Provinces and a significant portion of the Northern Province. Based on the 2023 Zambia vulnerability assessment, over 2 million people were projected to be food insecure spanning the period between October, 2023 to March, 2024 and this is deemed to have impacted on food production, making it among the worst when compared to the 20-year average. (Crop Forecast Survey 2019 -2023).

Due to climate change, Zambia has been experiencing more variable precipitation and temperatures. Infrastructural damage to bridges and crossing points affected access to health centers, schools, and food distribution points. Weather patterns are characterized by events such as heavy rains, floods, droughts, and prolonged dry spells which are becoming more intense and frequent. In the year 2022, Zambia experienced extreme weather events, resulting in flooding which was experienced in some parts of the country that negatively affected the crop production as well as food security. Zambia has seen several notable drought years in recent memory. Particularly during the 1980s and up until the mid-1990s, Zambia suffered from severe drought conditions (1982, 1984, 1987, 1991–92, 1994– 95), which had a substantial effect on the nation's agricultural, economy, and population (Figure 4). Prolonged dry periods and below-average rainfall over the decade resulted in lower crop yields, food shortages, and livestock losses. The years 2002-03, 2005, 2015 and 2019 all saw below normal rainfall (ZMD, 2023).

Notably, the 2015 drought in Zambia was a significant climatic event that had a severe impact on the country's agriculture, economy, and food security. The drought was primarily caused by the El Niño weather phenomenon, which disrupted normal rainfall Crop failures resulted in decreased food production, leading to food shortages and increased prices. This directly affected over 2 million people leading to food and water shortages.

Figure 2: Historical trends of food insecure



Source: VAC 2019- 2023.

In the period from 2010 to 2019, Zambia suffered from drought for a total of seven years. The only years without drought were 2010, 2011, and 2014. The most severe droughts occurred in 2016 and 2019, affecting seven of the country's ten provinces, namely Eastern, Central, Lusaka, Muchinga, North-western, Southern, and Western. The other five drought years had moderate impacts in these same provinces. The most recent drought, in the 2018/2019 season, affected an estimated population of over 2.3 million people in the country.

Through the weather forecast provided in 2023 by the Department of Meteorological in Zambia (DMZ), the 2023/2024 rainfall season pattern was projected to be largely influenced by the El Nino and the Indian Ocean Dipole (IOD), which suppressed rainfall over the southern half of the country and enhanced rainfall amounts over the North-Eastern portions of Zambia respectively. Additionally, several hectares of farming land and crops were damaged. As a result of the El Nino phenomena, the current 2023/2024 rain season had variable performance across the country. There have been notable areas of much drier than average conditions affecting most parts of the country, these conditions intensified during November, December and January which were one of the driest on record for the past 43 years. These dry conditions are expected to significantly impact on crop production in affected regions with cereal production forecasted to decline by nearly 50 percent.

Objectives of the Study

The overall objective of this research was to establish the humanitarian needs of the drought affected populations and identify appropriate response. The specific objectives were as follows:

1) Assess changes in household food access and coping mechanisms.
2) Evaluate alterations in household food access, consumption patterns and sources of cash to meet basic needs.
3) Identify coping mechanisms employed to address the specific effects of drought conditions.
4) Determine household food gaps and coping strategies.
5) Quantify household food gaps and analyze the nature of food based coping mechanisms utilized.
6) Estimate Affected Population and Geographic Coverage.
7) Determine the number of individuals and geographical areas impacted by the drought.
8) Identify Response Interventions for Food Security.
9) Recommend response interventions necessary to mitigate potential food insecurity during the 2023/2024 season.
10) Profile population groups requiring agriculture and livelihood support assistance and specify the type of assistance needed.
11) Traditional food-insecure hotspots experienced low rains in the 2023/24 season.

Research Methodology

The study employed a mixed method of quantitative and qualitative data collection techniques. Combining quantitative and qualitative techniques ("mixed method") allowed for a comprehensive understanding of the impact of the drought on household food security and livelihoods and other sectors. The research design consisted of four main components: household surveys, focus group discussions, market assessments, and key informant interviews.

Sample design and sampling process

The study was conducted in 27 districts out of the 84 districts affected by the drought situation in Zambia. The 27 districts were purposively selected for the assessment based on the following four-step criteria.

1. Districts with IPC 3+ population and from provinces with reported prolonged dry spells in the 2023/24 season.
2. Districts with IPC 3 districts with high populations affected and experienced prolonged dry spells or flooding in the 2023/24 season.
3. Districts with reported prolonged dry spells as Zambia Meteological Department reports.

Overall, 4,277 households were interviewed across the 27 districts. In each district, three to five wards were purposively selected based on the perceived impact of the drought, as guided by the

District Disaster Management Committees. A minimum of 30 Household questionnaires were administered per ward, resulting in an average of 150 Households per district.

A two-stage sampling approach was used to identify the wards and the households to be interviewed. First, the wards were ranked in consultation with the District Disaster Management Committee based on the severity of the impact of drought. Thereafter, the top five most affected wards in the district were sampled for assessment providing a picture of the most affected areas. At the ward level, a simple systematic random sampling technique (random walk) was used for household selection. A skip pattern was established by dividing the total number of households in the ward by the total number of households to be interviewed. Once the skip pattern was established each enumerator was required to identify a unique landmark that acted as the starting point. The enumerator was thereafter required to face toward the North and interview the first household on the right. For the second and subsequent households, the enumerator skipped several households based on the established skip pattern. At the household level, the enumerator interviewed the head of the household and in their absence, the spouse of the head.

Furthermore, two focus group discussions were held in each ward with 8 to 10 participants. The facilitator engaged the village headmen to generate a list of 20 men and 20 women, from which the 10 participants were selected randomly. The market assessments were administered to traders within the local markets where the affected population buys their food commodities. Furthermore, key informant interviews were also conducted in the 27 districts with each FGD, efforts were made to ensure the participation of different members of the community including youths, adults, elderly and people living with disabilities. Separate FGDs were held with men and women per ward. A total of 127 FGDs were held across the 27 districts of Zambia.

Additionally, in each district, an average of five market assessments were conducted in each of the sampled wards. At district-level staff, the key informants were drawn from the District Disaster Management Committee including the District Disaster Management Officer and staff from the Ministry of Agriculture, Ministry of Fisheries and Livestock, Ministry of Education, and Ministry of Community Development and Social Services.

Data Collection Process

Data was collected digitally using tablets and phones by trained Government and NGO staff. Prior to the data collection, national-level training was conducted targeting the team leaders for each district.

Data Analysis

The quantitative data was analyzed using Statistical Package for Social Sciences (SPSS) while the qualitative data was analyzed using NVivo. Before the analysis, an analysis plan was developed which was then reviewed and adopted by the researcher and a consolidated team leadership. The team leaders participated in drafting the research report whose findings are presented in this report.

Limitations of the Study

Sample size: Due to the limited time and resources for the study, the assessment employed for a minimal representative sample size per district. The quality of the training for the data collection team: Virtual training for the team leaders was conducted as opposed to face-to-face training. This was due to time and resource constraints. The main limitation of this mode of there are possibilities of interruptions due to poor internet connectivity especially with the teams joining from the rural areas and low levels of engagements in the districts. Mitigation strategies included multiple sessions with team leaders and the provision of materials for district-level training.

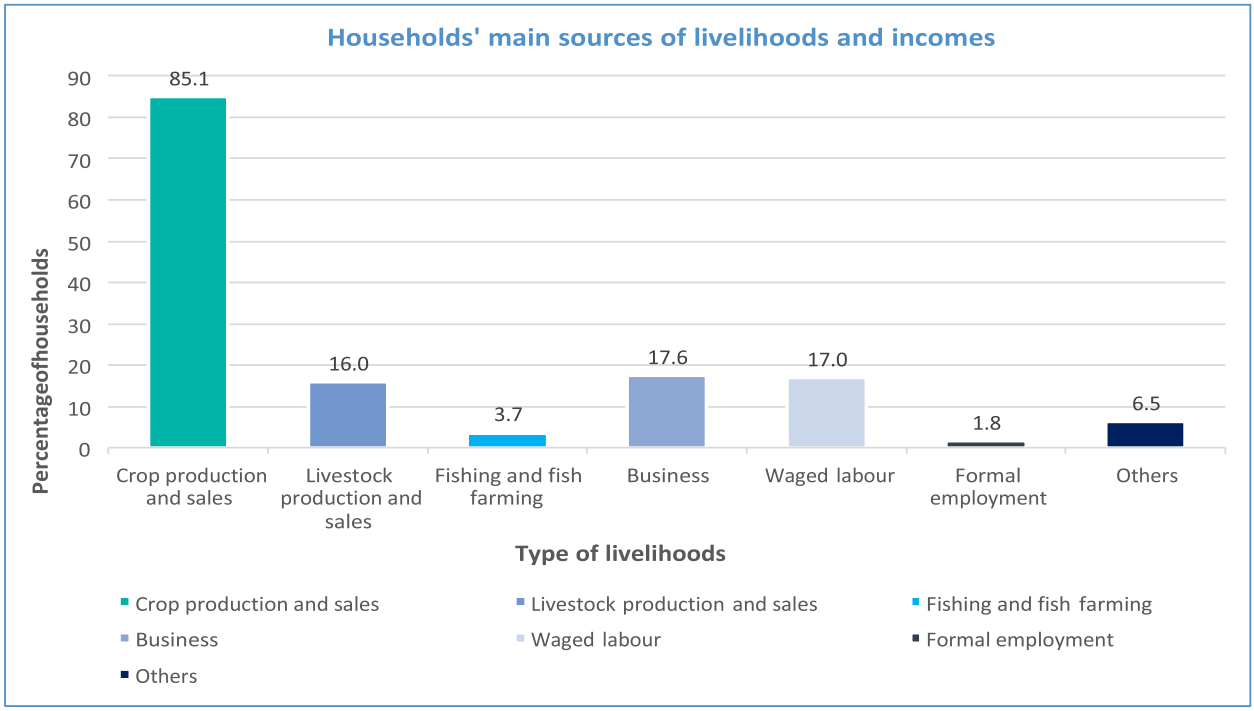
Data limitations: In some of the visited districts, the key informant interviews did not have complete data on some of the components such as the number of people affected by the drought situation, the severity of the drought on crop production, and average food stocks available within the households. For those districts where this data was availed, it was mostly based on estimation. To overcome this challenge, this information was triangulated with other sources such as household surveys and focus group discussions.

Study Findings

Demographics

Overall, there were more female respondents (58 percent) compared to male respondents (42 percent). Kaoma District had the highest number of female respondents at 72 percent, with Shang'ombo District following closely at 69 percent. In contrast, Kalomo District had the lowest female participation at 38 percent. On the other hand, most surveyed households are headed by men (65 percent) compared to 35 percent by women. The average household size across the 27 districts was seven (7), with a range of five (5) in Vubwi District to nine (9) in Kazungula District. The average age of the household head was 47, with the highest average recorded in Mumbwa (51 years) and the lowest in Shang'ombo (40 years). Furthermore, 3.7 percent of household heads had disabilities, with Sikongo being the highest (8.1 percent) and Nyimba, Lumezi, and Siavonga the lowest (1.5 percent each).

Fig. 3. Households' Main Livelihoods and Income Source



Agriculture is the main source of livelihoods and incomes for most of the surveyed households across the 27 districts. This includes 85.1 percent who rely on crop production and crop sales, 16 percent who rely on livestock production, and sale of livestock and livestock products as well as 3.7 percent who rely on fishing and fish farming. Additionally, 17.6 percent rely on small businesses and 17 percent engage in informal agricultural waged labour whereas only 1.8 percent rely on formal employment to earn an income to meet their food and other essential households needs. These livelihoods and income sources are heavily susceptible to climate change and thus the current drought has likely had an impact on the overall household's ability to meet their household needs as will be discussed in other sections in this report. Similar trends were observed across the 27 districts where agriculture forms the backbone of the rural livelihood and economy. Livestock production was more prevalent in Southern province with a provincial average of 31.1 percent.

Participants of FGDs emphasized that the households grappling with reduced agricultural productivity due to prolonged dry spells have been compelled to explore alternative income sources to diversify their earnings. Among these options, casual work stands out as a common choice, where individuals take up temporary jobs in various sectors such as construction, domestic work, or farm labor when opportunities arise. In addition to casual work, households have turned to traditional crafts such as basket weaving and carpentry. These skills, often passed down cultural preservation but as viable Income Generating Activity (IGA). Basket weaving, in particular, has seen a resurgence as both a source of income and a way to showcase cultural heritage. Petty trade has also emerged as a prevalent alternative income source. This involves small-scale trading of various goods, often in local markets or from homebased businesses. From selling basic groceries

like maize flour to more specialized items such as; timber, mpasa, and tuselo, households are tapping into retail opportunities within their communities. The sale of timber and other locally sourced goods has become another avenue for income generation. Furthermore, the results revealed that at least 12.1 percent of the households reported to have savings with an average of ZMW 635 per household. In addition, 14.2 percent reported to have received remittances at least within three months before the data collection. The level of debt was high with 43.2 percent of the households reporting to have debt at an average of ZMW 1750 debt need however to ensure timber harvesting is more regulated as it could exacerbate the impact of climate change in the future. With the increase in demand, some opportunities manifest, for instance products like mpasa (dried fish) and tuselo (traditional snacks) were reported to be in high demand, especially within local markets. By capitalizing on these resources, households are diversifying their income streams beyond traditional agricultural practices. It is important to note however that only marginal proportion of the households are pursuing such opportunities due to limited capital. per household. Among the surveyed households, 35.3 percent are beneficiaries of the social cash transfer. When asked whether the households had received any assistance in response to the drought situation, 4.6 percent of the surveyed households reported having received food assistance to support them meet their food needs.

Table 1: Household's access to external support

Province	District	Savings	Remittances	Debt	SCT	Food Assistance
Central	Chibombo	10.9	13.3	46.1	20.6	6.7
	Kapiri-Mposhi	25.9	13.0	37.0	40.7	3.1
	Mumbwa	16.0	16.0	40.1	32.7	3.1
Eastern	Chadiza	7.3	11.9	36.4	37.1	13.2
	Lumezi	11.4	14.3	45.7	19.3	13.6
	Nyimba	21.0	9.6	40.8	51.6	8.3
	Petauke	9.1	3.8	35.5	24.5	1.5
	Vubwi	10.4	26.6	39.6	39.6	8.4
Lusaka	Rufunsa	8.4	10.4	35.7	27.9	2.6
Southern	Choma	2.8	15.8	28.8	33.9	1.1
	Gwembe	7.6	15.9	55.4	35.0	9.6
	Kalomo	4.3	5.0	19.9	19.3	1.9
	Kazungula	6.7	11.3	28.0	21.3	4.0

Source: field data

Agricultural Production

This section analyses agricultural productivity based on household crop production projections and the longevity of available food stocks across the surveyed districts. These findings provide valuable insights into the current state of agriculture in each district, including forecasts of crop yields and the sustainability of food stocks over time. By examining these factors, the analysis identifies potential risks and vulnerabilities in the agricultural sector, which is crucial for strengthening food security and ensuring long-term agricultural sustainability in the examined regions.

Cultivated Crops 2023/2024 Season

In Zambia, crop production and cultivation vary significantly between districts, reflecting the diverse agricultural landscape of the country. According to the survey results, maize emerged as the most dominant crop grown across the surveyed districts, with an overall cultivation rate of 99 percent. This reinforces maize's status as a staple crop vital for food security and economic stability in these districts. Its widespread cultivation underscores its importance in sustaining local livelihoods and meeting dietary needs. Rice cultivation, on the other hand, stood at a modest 8 percent, primarily concentrated in districts of the Western Province. This regional preference for rice farming is influenced by factors such as climate suitability and cultural traditions. Despite its lower cultivation rate compared to maize, rice remains important for communities in these areas, serving as an alternative staple and contributing to dietary diversity.

Additionally, soybeans were cultivated moderately, at 17 percent, across the assessed districts. Vubwi district stood out with the highest proportion of households engaged in soybean farming, reaching an impressive 88 percent cultivation rate. This increase in soybean cultivation in Vubwi suggests favorable conditions and market opportunities in the district, driving local farmers to capitalize on this crop. Such localized successes highlight the adaptability and economic potential of soybeans in specific districts. Other crops like mixed beans, cowpeas, millet, sorghum, cassava, and sweet potatoes maintained moderate cultivation rates ranging from 9 percent to 15 percent. These crops play important roles in diversifying agricultural outputs and enhancing food security. Their cultivation rates reflect their suitability for local conditions and their importance in meeting nutritional needs and income generation for farming households. Despite being grown in some districts, Irish potatoes were the least cultivated crop, accounting for only 0.4 percent of the total cultivation area. According to responses from the surveyed households, their low cultivation rate can be attributed to limited interest and challenges associated with Irish potato farming in those districts. While Irish potatoes may hold potential for certain areas, their low cultivation rate highlights the need for further investigation into the factors hindering their adoption, to ensure equitable agricultural development across all crops.

Expected Agricultural Production

Despite maize being the predominant staple crop cultivated across the surveyed districts, the anticipated harvests are notably low and to a larger extent most of the surveyed households reported total crop failure. Similarly, the analysis of anticipated harvests for other crops including rice, soya beans, mixed beans, cowpeas, sorghum, millet, and tubers was significantly low across the 27 districts. It was evident that the prevailing drought conditions have impacted expected yields highlighting the susceptibility of rain fed agriculture to adverse of their crops and led to devastating impact on their main source of food and livelihoods. They reported that other early maturing staple

foods such as pumpkins and fresh maize typically consumed during such periods, are no longer part of the diet due to the drought. On the other hand, key informants reported that over 945,000 hectares of crop land has been affected in the 27 districts due to weather conditions and contributing to deteriorating food security situation. Participants of the FGDs across the different districts revealed that the drought situation had caused havoc on agriculture resulting in permanent wilting of their crops.

Livestock Production & Ownership

Livestock production and ownership across districts is pivotal for a comprehensive drought assessment. Analyzing livestock ownership patterns alongside key indicators reveals communities' resilience and vulnerability to environmental stress. These findings inform targeted interventions to mitigate drought's adverse effects on rural livelihoods and economies, guiding informed decision-making processes. A thorough understanding of livestock ownership dynamics enhances our ability to address the multifaceted challenges posed by drought effectively. Additionally, besides providing an essential source of protein, livestock was noted to the second main source of livelihood for the surveyed households and an important source of income. The sustainable sale of livestock and livestock products during impact of the drought on livestock is therefore necessary in assessing the overall household's food security. Overall, most households owned poultry with an average of seven per household followed by cattle then goats with an average if four and three respectively. Ownership of oxen was low with an average of only one per household.

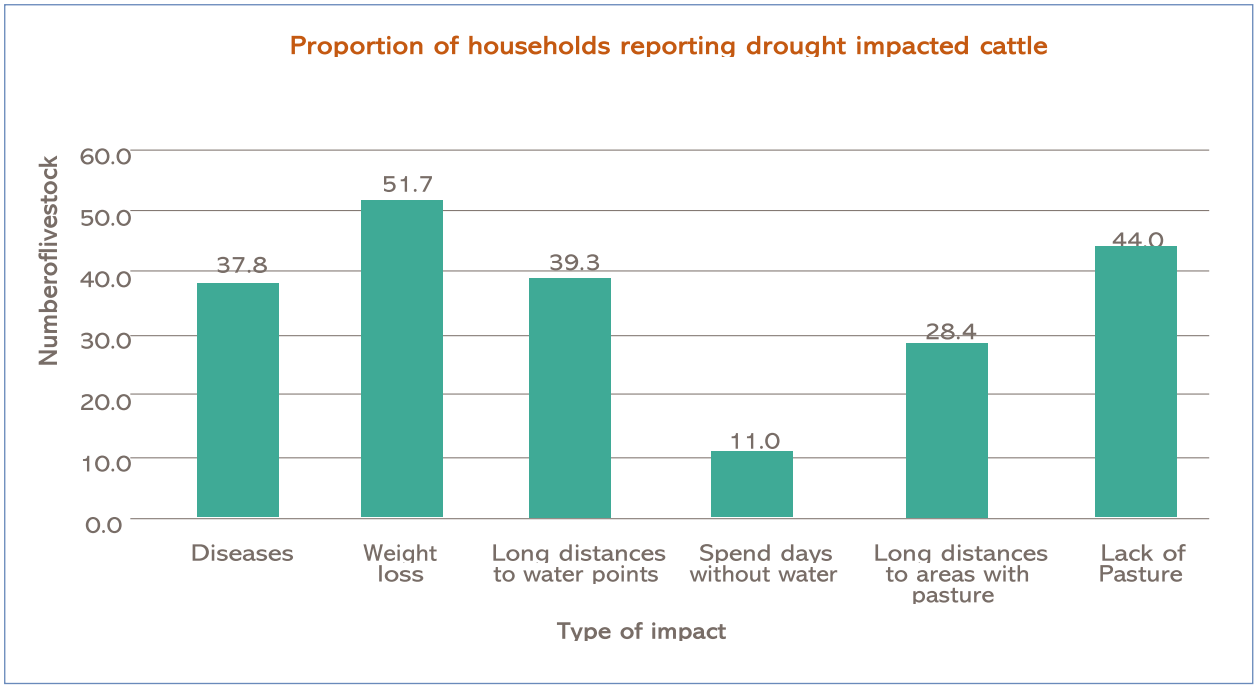
Additionally, ownership of the different types of livestock differed by province with surveyed households from Southern Province owning more cattle and goats as compared to other surveyed households in the 27 districts. Kalabo District stands out with the highest cattle ownership with 13 on average, notably high among male heads of household, showcasing a strong presence of livestock. Conversely, districts like Limulunga, Kaoma, and Rufunsa exhibit minimal or no cattle ownership, suggesting regional disparities.

These variations may stem from diverse factors such as geography, agriculture, and economic conditions. Additionally, Kalomo district leads in goat ownership, with 11 on overage and high among males, while Choma and Kazungula also show significant ownership. Conversely, districts like Limulunga and Kaoma report minimal ownership. Poultry ownership is prevalent across all surveyed districts, with Kazungula District emerging as the topmost in terms of poultry ownership. The district's high poultry ownership reflects its importance in local economies, serving as a significant source of nutrition and income. Such robust poultry ownership underscores the security and economic resilience.

Further the results of the assessment indicate that there is a significant increase in water scarcity for livestock and fisheries. The insufficient lack of water has resulted in insufficient pasture available for livestock grazing. In addition, livestock, especially cattle, have been hit hard with increased diseases due to poor pastures and inadequate water sources. This has forced animals to travel long distances in search of quality water and grazing land. Though goats, sheep and poultry have not been significantly affected yet, the FGD participants reported that if the situation continues to deteriorate, the impact will be widespread.

Even so, the situation has also significantly reduced fish production, particularly in areas where plains are no longer flooded. Livestock losses due to waterborne diseases and low milk production from cows due to inadequate pasture have further compounded the challenges in the agricultural sector. In dried swampy areas, the FGD participants reported that most livestock keepers have resorted to digging shallow wells to obtain water for their livestock. This situation is however expected to deteriorate in the coming months unless immediate to short-term solutions including drilling of boreholes are pursued. To support the household, meet their food needs, households with livestock have resorted to selling but they have reported a significant reduction in the price of livestock in the local market.

Fig. 4: Livestock affected by the drought



Source: Food Security situation Study Report, 2024

Food Security: This section presents the findings on the household food security situation. The section will primarily focus on food access and availability, dietary diversity as well as coping mechanisms adopted by household facing food deficits. The section will also discuss the level of severity of the food security situation and the characteristics of vulnerable food insecure households as well as the cost of the food basket adopting the minimum expenditure basket approach.

Food consumption score

The household Food Consumption Score (FCS) is used as a proxy for household food security. It is a measure of dietary diversity, food frequency and the relative nutritional importance of the food consumed. FCS is calculated using a weighted frequency of consumption of different food groups consumed by a household in 7 days. Based on the results of FCS calculation, population is split in

three categories: **poor (FCS<21), borderline (21<FCS<35) and acceptable (FCS>35)** food consumption. A high FCS increases the probability that a household's nutrient intake is adequate.

Table 2: Food Consumption Score Categories

Poor food consumption	Households that are not consuming staples and vegetables every day and never or very seldom consume protein-rich food.
Borderline food consumption	Households that are consuming staples and vegetables every day, accompanied by oil and pulses a few times a week.
Acceptable food consumption	Households that are consuming staples and vegetables every day, frequently accompanied by oil and pulses, and occasionally.

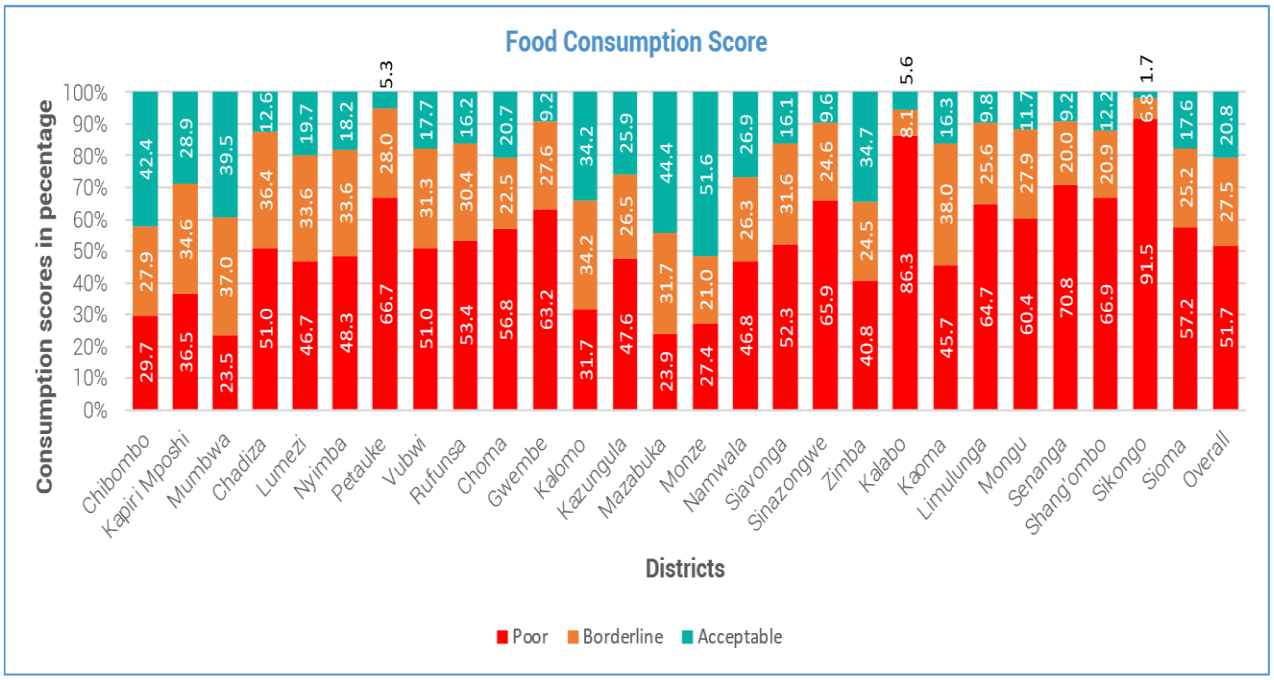
Source: Field data.

Overall, the results demonstrate that most households are struggling to meet their household food needs as demonstrated by the low intake of diverse and nutritious foods. Slightly above half (51.7 percent) of the households had poor food consumption indicating that they are majorly consuming foods that comprise of staples and vegetables while significantly missing any animal and plant protein. On the other hand, 27.5 percent had borderline consumption score indicating that they consume staples and vegetables daily and occasionally accompanied by plant protein mostly pulses. Lastly, the remaining 20.8 percent were found to have acceptable food consumption and were eating more diverse and nutritious foods much more regularly. For most households, the main source for staples was obtained from their own production. Furthermore, a substantial number of households reported that they obtain the food they consume from purchases while quite a marginal proportion reported they receive food assistance and gifts to supplement their household food requirements.

Overall, there are more households headed by women with poor food consumption score at 61.6 percent compared to 46.7 percent of those headed by men. Correspondingly, there are fewer households headed by women (13.4 percent) that had an acceptable consumption compared to those headed by men (24.6 percent). This indicator reveals a strain for the households in accessing food. This result demonstrates the negative impact of the drought situation in the overall food security situation. The FGD participants across the 27 districts were quick to note that the food situation had reached critical levels, with decreased food production from failed crops and prolonged droughts. The market reflects this scarcity, with high prices driven by the increased demand for food commodities. Items that were once readily available are now scarce and expensive, making it difficult for households to afford basic necessities. Many must travel long distances to reach markets, often finding limited availability even when they arrive. Staple foods such as pumpkins and fresh maize, typically consumed during certain seasons (i.e., December to February), are no longer part of the diet due to the prolonged dry spells. They reported that the overall food insecurity has forced households to make difficult choices, including prioritizing food over other essential needs and engaging in desperate measures to survive.

District-level analysis reveal that surveyed districts in Western province had more household with poor consumption score followed by those in Eastern province, then Southern province and lastly Central province. Sikongo had the highest proportion of households with poor food consumption at 91.5 percent followed by Kalabo at 86.3 percent and Senanga with 70.8 percent. On the other hand, slightly above half of the surveyed households in Monze had acceptable food consumption followed by Mazabuka at 44.4 percent and Chibombo at 42.4 percent (see below figure 5).

Household food stock levels



Source: Food Security Cluster Rapid Assessment, 2024

Analyzing the duration of household maize stocks reveals alarming disparities and urgent food insecurity across districts. Kazungula, Shang'ombo, Sikongo, and Sioma require immediate food assistance as 100 percent of their households have maize stocks lasting less than a month. Namwala, Sinazongwe, and Choma also face significant challenges, with 83 percent, 57 percent, and 56 percent of households in the same situation. In contrast, Rufunsa and Kapiri Mposhi demonstrate more resilience, with none of their households expecting maize stock depletion within a month.

Overall, the findings underscored the critical need for comprehensive and targeted interventions to address food insecurity disparities across districts. Efforts should focus on providing immediate relief to the most vulnerable areas while implementing long term strategies to enhance resilience and promote sustainable food security for all households.

Consumption-based Coping Strategies

The Consumption-based Coping Strategy Index (CSI) is used to assess the level of stress faced by a household due to food shortages. It is measured by combining the frequency and severity of the reduced strategies that households engaged in to cope with lack of food or money to buy food. A

higher household reported having faced difficulties in meeting their household needs at least a month preceding the data collection. In Gwembe district, almost all (97.5 percent) of the households are faced food deficits and had little to no money to buy food. This was followed by Limulunga (97.1 percent) while the lowest was in Kazungula which was 80.7 percent which is quite a significant proportion of the score indicates that more frequent and/or extreme coping mechanisms were adopted. It is calculated using the five standard strategies using a 7-day recall period.

1. Rely on less preferred and less expensive food.
2. Borrow food or rely on help from relative(s) or friend(s).
3. Limit portion size at meals.
4. Restrict consumption by adults to allow small children to eat.
5. Reduce number of meals eaten in a day.

As a result of the drought, there are more households facing significant food shortages. Additionally, these households who heavily rely on crop sales have limited resources to meet their food needs through purchases as their main livelihoods is stressed. Overall, 91.1 percent of the surveyed households. Similarly, as with the food consumption score results, the analysis shows that there are more households headed by women reported experiencing challenges meeting their daily food needs compared to those headed by men. Due to the increasing food deficits at households, these households adopted different coping strategies to manage the reduced food stocks and maintain continued access to foods despite the challenges. Some of the strategies adopted include consuming less preferred and less expensive foods such as reported by 79.5 percent of the surveyed households, 75.7 percent relied on borrowing foods from friends and relatives, 79.6 percent reduced food portions consumed at mealtimes, and 77.2 percent reduced consumption by adults for children to consume.

Across all the 27 districts, the surveyed households reported to have reduced the number of meals eaten a day to an average of two meals. Further to supplement the little to no food available at the households, participants of the FGD reported some households have resorted to consuming vegetables and wild fruits such as baobab. They also mentioned that other households contribute their resources to purchase food which is then shared among the contributing families while others have adopted barter system where they exchange meat for mealie meal with neighbors. Others are also obtaining maize on credit from neighbors. It is also worthwhile to note that across all the food-based consumption strategies women-headed households showed more severity in adopting consumption-based coping strategies compared to male-headed households. When the consumption based coping strategy index is computed, the results show that a high index of 18.3 which signifies that most of the households are adopting severe coping strategies at a more frequent rate. Lumezi and Kazungula reported the lowest index. Consumption based coping strategy index household livelihood and economic security are determined by income, expenditures, and assets. Understanding the behaviors households engage in to adapt to recent crises (such as selling productive assets) provides insights into the difficulty of their situation, and how likely they will be to meet challenges in the future.

Results show that 42.5 percent adopted emergency coping strategies, 22.9 percent adopted stress coping strategies at 13.3 and 14.7 respectively while Monze, Shangombo and Senanga and

recorded the highest index of 22.3, 20.9 and 20.4. These results corroborate the result on the households that reported experiencing challenges in meeting their household food needs.

Livelihood-based coping strategies

The Livelihood Coping Strategies for Food Security (LCS-FS) is an indicator used to measure the extent of livelihood coping mechanisms that households needed to utilize as a response to a lack of food or money to purchase food during the 30 days before the survey. The LCS-FS is based on the adoption of livelihood coping strategies which include four stress strategies, three crisis strategies, and three emergency strategies. The livelihoods-based Coping Strategy Index (LCSI) is used to better understand longer-term household coping capacities. In broad terms, 15.3 percent of the targeted households adopted crisis coping strategies while 19.3 percent did not adopt any coping mechanisms. The trend in results shows the current crisis has the potential of reducing households recovery capacity and adoption of sustainable coping mechanisms. At the district level, the results show that Gwembe (71.3 percent) and Vubwi (66.1 percent) had a high proportion of households adopting emergency strategies an indication of relative worse vulnerability in comparison to other districts.

The livelihood coping strategies adopted includes selling livestock which was more prevalent in Southern districts where there is a high tendency of keeping livestock. The selling of productive assets and livestock has become a best choice, offering immediate access to much needed cash or bartered goods. By selling a portion of their non-breeding herds or flocks, households alleviate financial pressures and procure essential supplies such as food at the same time reducing the risk of having a total loss of animals due to hunger and diseases. Results also show that the main reason for households engaging in livelihood coping mechanisms was to access food as reported by 97.5 of the respondents. Though not prevalent, FGD participants reported that some household members are migrating to urban areas in search for job opportunities while others reported that some vices such as increase in cases of theft and survival sex especially among female youths.

Notwithstanding, the rise in such vices is compounded by high poverty levels, leading to greater vulnerability. Gender-Based Violence (GBV) has also seen an uptick, with reports of men resorting to violence against their spouses due to the inability to provide food for the family. Divorce rates have increased as families struggle to cope with the impacts of food insecurity, and there have been tragic cases of men taking their lives due to the pressure of providing for their families Furthermore, both FGD and KII feared that the risk of early marriages and school dropout might rise if the food security situation continues to worsen. For men and youth, it was highlighted that the cases of illegal mining might increase while women and girls will likely engage in selling firewood to meet household needs.

Minimum Expenditure Basket (MEB)

Minimum Expenditure Basket (MEB) sets the monetary threshold of the household´s essential food and non-food needs. By focusing on households that demonstrate better food consumption and coping capacity (or resilience), a potential food MEB and potential MEB have been established as the average costs required to meet food and overall basic needs. Both food MEB and overall MEB are thresholds that help better understand a household's economic capacity. By looking at the expenditure of the households that have achieved acceptable food consumption and have not adopted high-risk coping strategies, we gain the best available estimate of the minimum

expenditure required for food and overall needs. Based on the analysis of the MEB, the below values were computed. Food MEB- ZMW 244.9 (D 9.8). Overall MEB- ZMW 360.9 (USD 4.4). These two MEB values set the monetary threshold to evaluate a household's economic capacity. If a household's per capita expenditure is below the food MEB, this is a sign of high economic vulnerability. Similarly, if a household's per capita expenditure is above the overall MEB, it shows a satisfactory level of economic capacity because the household is spending sufficiently to satisfy the essential needs of a household.

As water scarcity intensifies and agricultural yields decline, households are facing increased expenses for purchasing food and essential items, leading to financial strain. In districts heavily reliant on agriculture, such as those in the Southern, Eastern, Central and Western provinces, the prolonged dry spell-induced crop failures have resulted in reduced incomes for farmers, exacerbating poverty levels and food insecurity. Results show that overall, only 29.4 percent of the households can meet their food needs while the majority (70.6 percent) are not able to. District-level analysis reveals that Shangombo has the highest number of households unable to meet their food needs at 97.5 percent followed by Petauke at 90.9 percent, then Kalomo (84.5 percent), Choma (84.2 percent), Sioma (82.5 percent) and Gwembe (80.3 percent). Kapiri and Monze had the lowest number of households unable to meet their food needs at 43.8 percent and 59.9 percent respectively. It still quite significant. The results show a slight difference between the number of households headed by women (90.9 percent) to those headed by men (88.2 percent) who are unable to meet their food needs.

On the other hand, household livelihoods depend on agriculture, such as small-scale farming and agro based businesses, which have suffered severe setbacks, forcing many to seek alternative sources of income or migrate to urban areas in search of employment. Additionally, the rising cost of food and essential items has strained household budgets, particularly for vulnerable groups such as women, children, and the elderly hence 85 percent of the surveyed households across the 27 districts do not have sufficient resources to meet their overall basic needs (food and non-food). Only 15 percent of the surveyed households can be considered economically independent, and able to meet their overall basic needs by themselves. This finding calls for the need for external assistance to save lives and protect livelihoods.

The results show a high economic vulnerability among households to be able to meet their overall household needs in addition to food corroborating the results for the capacity to meet food needs. Results show that Shangombo (98.1 percent) has the highest proportion of households unable to meet their overall needs followed by Petauke (97 percent) and then Choma (94.9 percent) while Kapiri had the least number of households that are able to meet its overall needs (Food Security Cluster Rapid Assessment, 2024).

The MEB can also be used to guide in the determination of the transfer value in the event of cash-based transfer interventions that seek to support households meet their food needs. It is worth noting that the results of the food MEB align to the cost of the recommended food basket with a marginal difference between these two values of ZMW 3.4.

The table below provides the cost of food basket per person per month based on the recommended food basket as per SPHERE standards that can provide a person 2100 kilo calories a day (see below Table 3 & 4).

Source: Zamstats, 2024.

Item	Ration	Price ZMW(US$)
Maize meal	12kg/Person/Month	140.2 (5.6)
Pulses	1.8kg/Person/Month	36 (1.44)
Corns soya blend	1.8kg/Person/Month	36 (1.44)
Vegetable oil	0.7litres/month	28.1(1.9)
Iodized salt	0.15kg/person/month	1.2 (.01)
Total		241.5 (9.7)

Source: Zamstats, 2024.

Food Security Status

To determine the level of household food security status the Consolidated Approach for Reporting Indicators of food security (CARI) approach was adopted. This approach supports the reporting and combination of different food security indicators to classify households into four descriptive groups: food secure, marginally food secure moderately food insecure and severely food insecure. CARI combines several food security indicators including food consumption, livelihood coping strategies and economic capacity to generate a summary indicator called the Food Security Index.

	Food Secure	Marginally Food Secure	Moderately Food Insecure	Severely Food Insecure
Food Security Index	Able to meet essential food and non-food needs without engaging in atypical coping strategies	Has minimally adequate food consumption without engaging in irreversible coping strategies; unable to afford some essential non-food expenditures	Has significant food consumption gaps, OR marginally able to meet minimum food needs only with irreversible coping strategies	Has extreme food consumption gaps, OR has extreme loss of livelihood assets will lead to food consumption gaps, or worse
Food Consumption	Acceptable	Acceptable	Borderline	Poor
Economic Vulnerability	Above overall MEB	Above food MEB	Below overall MEB	Below food MEB
Livelihood Coping Strategies	None	Stress Strategies (e.g., sell of non-productive assets)	Crisis Strategies (e.g., sell of productive assets)	Emergency Strategies (e.g., ell of major productive assets such as land)
	Food Secure		**Food Insecure**	

It is evident that the impact of the drought has contributed to deteriorating food security situation for rural households as evident by the consumption gaps, the adoption of different livelihood and consumption based coping strategies as well as the high proportion of households who are economically vulnerable and not able to meet their food and non-food needs. This is coming at a time when 2 million people who are partly located in the surveyed districts were projected to be severely food insecure during this lean period. The drought situation has meant an extension of the lean season, and the impact is expected to be severe in the coming months. The results show that 82.5 percent of the households to be food insecure according to the CARI scale, of these, 20 percent are severely food insecure meaning that they are facing extreme food consumption gaps or extreme loss of livelihood assets. The remining 62.5 percent are moderately food insecure i.e., experience some food consumption gaps and inability to meet food needs without applying crisis coping strategies. When the results are projected and generalized for the 27 surveyed districts, over 2.7 million (82.5 percent) are food insecure and need food assistance with 2.1 million people classified as moderately food insecure whole 0.6 million as severely food insecure.

Table 5: Household food security levels. Source- Food Security Situation Study, 2024.

	Food Secure	Marginally Food Secure	Moderately Food Insecure	Severely Food Insecure

Food Consumption	20.8%	20.8%	27.5%	51.7
Economic Vulnerability	15%	29.4%	70.6%	85%
Livelihood Coping Strategies	19.3	22.9%	15.3	42.5%
FSI	2.2%	15.3%	62.5%	20.0%

Source: Field data.

District level disaggregation reveal worrying trends in most districts. Shangombo district had the highest number of severely food insecure people at 49 percent followed by Gwembe at 39.5 percent and Sikongo at 35.5 percent. In terms of the overall food insecure households; combining both moderate food insecure and severely food insecure households, the results reveal that Sikongo, Gwembe, Petauke, Sinazongwe, Kalabo and Shangombo Districts had more than 90 percent of the surveyed households being food insecure. Comparisons between households headed by men and those headed by women demonstrate a higher level of food insecurity among households headed by women (86.9 percent), compared to those headed by men (80.2 percent). Furthermore, there are more households headed by women (23.5 percent) who are severely food insecure compared to those headed by men (18.2) women who are food secure (13.1 percent) compared to those headed by men (19.8 percent). This comparison has consistently revealed that households headed by women are more vulnerable as compared to those headed by men which should guide the community level targeting process.

Further evidence of the susceptibility of most rural livelihoods and economies to climate change is evident when the results of food security status is plotted against the household livelihood activities. Results show that households that rely on fishing and crop production are the worst affected by the drought situation and percent). Correspondingly, there are fewer households headed by 82.5 percent, respectively while those who rely on employment had the lowest number of food insecure people slightly above half (52.6 percent).

When the overall results of the food security index are generalized to the population of the 27 surveyed districts, the results indicate that 2.3 million people are moderately food insecure, and 0.6 million people are severely food insecure thus facing significant food gaps or losses of assets. In total, 2.9 million people are food insecure in the 27 surveyed districts. It is important to note that there are methodological assumptions that have been made to derive this figure; first, the sampled 27 districts were purposively selected based on the perceived high impact of the drought. Additionally, the sampled wards in each district were also purposively selected as among the worst affected. To complement the results of the rapid assessment, the World Food Programme conducted hotspot analysis using a Composite Drought Index and the recently available food security data from the 2023 Zambia Vulnerability Assessment report. The results of the hotspot analysis reveal that 6.05 million people 79 districts are affected by the drought situation.

Markets

Market dependency among the survey households is extensive, with about 81 per cent purchasing their food in the market with cash. The share is expected to increase further because of households depleting their food stock from their production. Most households use the market within their locality to source small essential items, a small share leaves their locality to purchase elsewhere in neighboring villages. This is partly due to badly maintained roads connecting their villages to other main markets, pushing up costs of transportation of both, people, and goods. The main active actors within these markets were predominantly local traders, merchants, and consumers. In most of the districts, the main market serving the entire household consists of both permanent and semi-permanent stalls and provides a range of food such as cassava and maize meal, tomatoes, onions, fish, cooking oil and fresh vegetables and non-food commodities. Price forecasts for the beginning of 2024, however, are not so favorable as food stocks decrease the year-on year inflation rate of 12.7 per cent recorded in January 2024 is expected to rise further. The limited livelihood activities have extremely reduced the purchasing power of the households, and this is further complicated by the hike in food prices. In the absence of sustained food assistance, this increases the risk of food.

Commodity availability in the local market

The assessment results indicate availability of different food commodities in the local markets to be highly concerning. Particularly, the availability of staple food commodities such as maize grain and maize flour (mealie meal). Overall. Only 11.4 percent, 31.1 percent and 32.9 percent of the interviewed traders reported that maize grain, mealie meal and beans to available in the market, respectively. Furthermore, the availability of green leafy vegetables was reported by only 9.6 percent of the traders. On the other hand, commodities such as cooking oil, salt and sugar were readily available.

District level results revealed that in some districts main food commodities are not readily available as can be shown in the table below. This information is critical as it supports decisions over the most appropriate response options. To obtain some of these commodities, FGD participants reported that they must walk long distances to main markets where the probability of finding these commodities is high. There are however some instances where they reported that despite walking long distances and incurring transport cost to reach these markets, they at times do not find these commodities or would have to queue long hours to access these commodities at exaggerated prices.

Price compared to normal

In line with the above analysis, the results of the key interviews indicate that the prices of most compared to the normal of the food commodities have significantly increased.

Availability compared to normal

Similarly, the key informants revealed that the availability of most of the food commodities in the local markets is questionable. Of the 27 assessed districts, only 4 districts indicated that maize is readily available. either be rarely available or not available at all. This result in the local market, 5 districts indicated breakfast and roller is also readily available. The rest of the districts indicated either maize grain and breakfast and roller mealie meal to average commodity prices.

Other sectors impacted by the drought

WASH.

Main source of water for domestic use

This section of the report presents the findings on main water sources for domestic and livestock and changes to the main water sources which could be because of the drought. Hand pump boreholes is the main sources of drinking water for most of the surveyed households across the 27 districts. This was reported by 64 percent of the households. Amongst the participating districts, Vubwi recorded the highest number of households with access to hand pumps at 91 percent and the lowest was Kapiri Mposhi at 27 percent. The second main water source was unprotected wells which had an overall accessibility rate of 14. Percent. The rest of the other water sources recorded the lowest percentages ranging from 0.4 percent to below 9 percent.

before the start of the drought while 31.1 percent reported that they changed their main that water source due to water scarcity occasioned by the drought. The widespread drying up of water points caused by the prolonged dry spells has left communities grappling with a dire shortage of clean water points as many hand pump boreholes have dried up and are urgently in need of servicing. Households are now forced to travel long distances, sometimes up to 1 hour and 30 minutes on foot or using ox carts to fetch clean water or draw water from shallow wells that are exposed to snakes and frog carcasses. The drawing of water from unsafe water points by households has seen some increased water-borne diseases, such as diarrhea and cholera among the households. In terms of cost for accessing water, the results show that there has not been a significant change in the cost of water when compared to December 2023 which was during the rainy season.

Main sources of water for livestock

On the other hand, the surface water from dams, lakes, rivers, and other water reservoirs was reported as the main source of water for livestock. Overall surface water provides an essential source of water for 46.5 percent of the households for their livestock. This was followed by hand pump boreholes and unprotected wells. The chart below shows the summary of the main sources of drinking water for the 27 districts that participated in this survey. Slightly below half of the surveyed households (40.9) reported that they changed their main source of water for livestock when compared to before the drought i.e., at least 3 months before the data collection. Furthermore, the results indicate human-animal conflicts have intensified, with elephants and hippos encroaching on farmlands and attacking crops. Crocodile attacks near rivers have hindered agricultural activities.

The desperation caused by hunger has resulted in increased thefts, particularly of livestock Overall, 22 percent of the surveyed households reported that there have been increased incidences of wild animals accessing water points that are used by humans for their livestock. This was high in Sioma (66.7 percent), Lumezi (57.1 percent), Vubwi (47.7 percent, Sinazongwe (42.7 percent) and Kazungula (31.3 percent) among other districts that border protected areas such as national parks and game reserves. Within these districts and a few others, they reported an increase in human-wildlife conflict because of competing for the same water source. There are also reported cases where households who keep livestock have had to dig shallow wells along dried riverbanks to access water for their livestock.

Availability and cost of WASH items

Regarding the availability of basic WASH items, the results show that multipurpose bar soap (77.7 percent) and laundry soap 47.6 percent) are more readily available in the local markets as compared to ORS (15 percent) and bottled water (47 percent). The average price for multipurpose bar soap was ZMW 26 while that of laundry soap was ZMW 37. The price for ORS that could make 200ml when mixed with water was ZMW 7 which was similar to the price of 500ml bottled water.

Education.

Learner performance and achievement of learning outcomes is highly associated with regular attendance of lessons by both the teachers and learners. This study also investigated whether children of school-going age regularly attended school at least 14 days prior to the assessment. Overall 18 percent of the surveyed households reported that school-aged children did not attend school. Of these, 44 percent reported that younger school going children were unable to walk long distances to schools due to body weakness as a result of hunger. Others reported that these children missed school to support their households to meet their household needs through supporting in engaging in livelihood activities (12 percent), casual labour (12 school-aged children) were withdrawn from school by parents to participate in income-generating activities such as begging and casual work. Overall, low school attendance has led to increased dropout rates, particularly among learners who cannot concentrate on empty stomachs. Poor performance among learners has also been observed, directly linked to the effects of hunger. Furthermore, the lack of water in schools, caused by the drying up of boreholes and shallow wells, has added to the challenges faced by the learners. The chart below depicts the proportions of reasons why school children did not attend, but helped in harvesting wild foods and fruits.

Nutrition; **Livelihood and Recovery Options**

In terms of health and nutrition, the participants of FGDs reported that health outcomes had started to deteriorate significantly, particularly among vulnerable populations. They reported that malnutrition among children is on the rise, with reports of underweight children and high rates of diarrhea cases and flu. They highlighted those pregnant women are at risk of giving birth to low-weight babies due to reduced food intake and malnutrition. They also reported to have observed children being introduced to solid foods before the age of 6 months due to the scarcity of nutritious options. Additionally, the heat waves and stress from losing agricultural investments have led to increased instances of illness and depression among community members.

Energy

Further the energy sector has not been spared from the impacts of prolonged dry spells. The FGD participants noted that load shedding has become a common occurrence as there is insufficient water to power hydroelectric plants. This has adversely affected small scale businesses such as barbershops and salons, disrupting their operations and livelihoods.

Preferred Recovery Activities

When asked about the potential support in the short to medium term, 65.4 percent of the surveyed households proposed support with agricultural inputs such as seeds and fertilizers for winter cropping as well as for the next farming season. Furthermore, 58.4 percent proposed the drilling

of boreholes for irrigation and 42.7 percent requested for irrigation equipment. Additionally, 42.4 percent with the majority being from Southern Province proposed support with livestock to enhance their household livelihoods. Slightly less than a third of the surveyed households proposed construction of water harvesting structures which could harvest water that will be used for irrigation and for livestock. In addition to the household results, key informant results similarly suggest prioritizing initiatives focused on water resource management and infrastructure development essential to enhance accessibility to reliable water sources for both domestic use and agriculture. This could involve the construction of water harvesting systems, such as dams, reservoirs, and boreholes, along with the rehabilitation and maintenance of existing water infrastructure to ensure sustainable water supply during future droughts. Promotion of climate-smart farming practices and the distribution of drought-resistant crop varieties such as cassava and investing in irrigation schemes and micro-irrigation technologies to mitigate the impact of water scarcity on crop yields and ensure food security for rural communities. In terms of longer-term resilience building support, 78.8 percent of the surveyed households proposed the promotion and provision of climate smart inputs such as drought tolerant crop. In addition, 55 percent proposed supply of short cycle livestock, while the rest proposed provision of livestock feeds (30 percent), livestock drugs (21.9 percent, construction and rehabilitation of water points (18.8) and irrigation (46.9 percent) among other interventions.

Conclusion

This study exposes the severity of the drought's impact on assessed regions. Food insecurity has reached crisis levels, jeopardizing lives, and livelihoods. Immediate humanitarian intervention is an absolute necessity food aid, clean water provision, and support for the most vulnerable populations cannot be delayed. Yet, this crisis underscores the fragility of current systems in the face of climate shocks. To build a more secure future, investment in resilience must go together with urgent relief efforts. Prioritizing drought-resistant agricultural practices, improving water management through rainwater harvesting and efficient irrigation, and empowering communities with early warning systems will be essential for mitigating the impact of future droughts.

Addressing this crisis demands a coordinated, multisectoral approach that tackles underlying vulnerabilities. Strengthening early warning systems, integrating climate risk assessment into development planning, and building community-level preparedness will ensure a proactive, rather than solely reactive, approach to future droughts. Social safety nets, targeted at the most vulnerable, will help mitigate the worst impacts. Moreover, investment in education and awareness campaigns about climate-smart practices will empower communities to become agents of resilience. The interconnectedness of food security, health, livelihoods, and water resources underscores the need for collaboration among governmental agencies, NGOs, the private sector, and international partners fostering the exchange of knowledge, technology, and resources for a truly comprehensive and sustainable response.

Recommendations

Recommendations have been split into three categories are these are: Improve water management systems through Humanitarian Assistance, Resilience Building and Multi rainwater harvesting,

borehole rehabilitation and sectoral collaboration. The development of community-managed water resources and promote winter cropping.

Humanitarian Assistance

Strengthen early warning systems and integrate climate risk assessment into development planning.

1) Provide immediate food assistance as this is the to enable proactive measures in the face of future most preferred form of assistance by most of the drought prone districts.
2) Provide support for the restoration of livelihoods, including distributing seeds, tools, and livestock to Multi-Sectoral Collaboration affected households and establishment of temporary health clinics for the treatment.
3) Foster collaboration among Government of drought-related health concerns such as NGOs, the private sector and malnutrition and waterborne illnesses. The international partners to develop a comprehensive and sustainable response to the drought.
4) **Resilience Building:** Embark on resilience building of the citizenly and invest in drought-resistant agricultural practices, vulnerable populations to mitigate the impact of like conservation farming and the use of future and promotion of drought-tolerant crop varieties.

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