



REPUBLIC OF NAMIBIA

MINISTRY OF AGRICULTURE, WATER AND LAND REFORM

CROP PROSPECTS AND FOOD SECURITY SITUATION REPORT



JULY 2022

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1. OVERVIEW

The Agro Business Information Services Unit undertook the 2nd Crop and Household Food Security Assessment (post-harvest) in the seven major communal crop-producing regions¹ as from 16th May to 13th June 2022. The main purpose of this assessment was to assess and quantify the 2022 crop harvest in the major crop-growing regions of Namibia and provide early warning report on geographic locations of agronomic anomalies, the effects of floods/droughts, and other significant events. Moreover, the mission assessed changes in household food security, livestock, water supply and grazing conditions. Information regarding the agricultural situations in other regions of the country was gathered through reports from the Agricultural Extension staff in those regions. The assessment team was composed of the following staff:

Ministry of Agriculture, Water and Land Reform (MAWLR)

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Since the situation may change, it should be noted herein that, this report presents the results of the assessment that took place during the abovementioned dates in the Zambezi, Kavango East, Kavango West, Omusati, Ohangwena, Oshana and Oshikoto regions, supplemented by reports from the Agricultural Extension staff in the Kunene, Omaheke, Otjozondjupa, //Karas, Erongo, Khomas and Hardap regions.

Secondary information on the crop estimates in the commercial areas were obtained through the Namibian Agronomic Board (NAB), National Strategic Food Reserves (NSFR) stock levels from Agro Marketing and Trade Agency (AMTA) as well as dam levels from Namibia Water Corporation Ltd (NamWater) were also used in this report.

¹Zambezi, Kavango East, Kavango West, Omusati, Ohangwena, Oshana and Oshikoto

2. EXECUTIVE SUMMARY

This chapter highlights a summary of key findings of the Crop (post-harvest) and Household Food Security Assessment.

The 2021/2022 rainfall season started off dry over most parts of the country with the exception of the southern regions (//Kharas and Hardap) where exceptional high rains were received from the start of the season with some areas received two or three times the usual rainfall amounts. The central northern regions and eastern Omaheke, Zambezi, Kavango East and Otjozondjupa regions received an intense rainfall deficit since the onset of the rainfall season, with prolonged dry spells which lasted until February 2022. The situation has however improved in the second half of the season when the bulk of the country experienced normal to above average rainfall by the end of February 2022. In contrast, northern Kunene, Omusati, parts of Otjozondjupa and Oshana regions received below average rainfall for the season, while Erongo region only experienced drier than normal rainfall during the last two months of the season.

The revised crop estimates indicated a reduction in the crop harvest, below last season's harvest. Aggregate cereal estimates showed that, the country is expecting a slight decrease of 1% of last season's harvest, but 23% above the average production. Much of this improvement comes from the commercial areas where an increase of 19% above last season's harvest has been reported. Kavango west and Kavango East regions also recorded an improvement of 22% above last season's harvest.

The households' food security situation is reported to have slightly improved, following a recent main harvest since the beginning of May this year, in the major crop producing regions of the country. Elsewhere in the country, food security is satisfactory in areas where better rainfall was received. However, hotspots of food insecurity are expected in regions such as Kunene, Zambezi, north central regions and Erongo. This is due to the erratic rainfall received in those areas and the early cessation of the rainfall.

Grazing and water supply have improved in most parts of the country where good rainfall was received, with grazing and livestock body condition ranging between fair and good. Moreover,

grazing in Kunene, Erongo and Omusati regions has slightly improved from the drought conditions experienced last season.

Based on the findings of this assessment, among others the following recommendations are made for possible interventions and future assistance:

For the Government to continue with the provision of the drought relief measures to households that are faced with food insecurity in Kunene, Omusati and Erongo regions until the situation normalizes, as well as to consider possible drought relief measures to the affected households in Ohangwena, Oshana, Oshikoto and some parts of Zambezi and Kavango East regions.

For the Ministry of Agriculture, Water and Land Reform to strengthen extension services, ensure sufficient and timely provision of agricultural inputs (seed and fertilizers) and services (ploughing and planting) for the 2022/2023 cropping season.

For the Ministry of Agriculture, Water and Land Reform to ensure water provision to the areas with limited water availability (Gam and Ovitoto settlements in Otjozondjupa region, Otamanzi constituency in Omusati region and some parts of Erongo region) and any other area that may experience water shortages, when the need arises.

We would like to take this opportunity to express our most profound appreciation to the Ministries, agencies, regional councils, agricultural boards, millers, farmers and the general public for your cooperation and information provided in compilation of this report.



Ndiyakupi Nghituwamata (Ms)
EXECUTIVE DIRECTOR



3. AGRO-METEOROLOGICAL INFORMATION

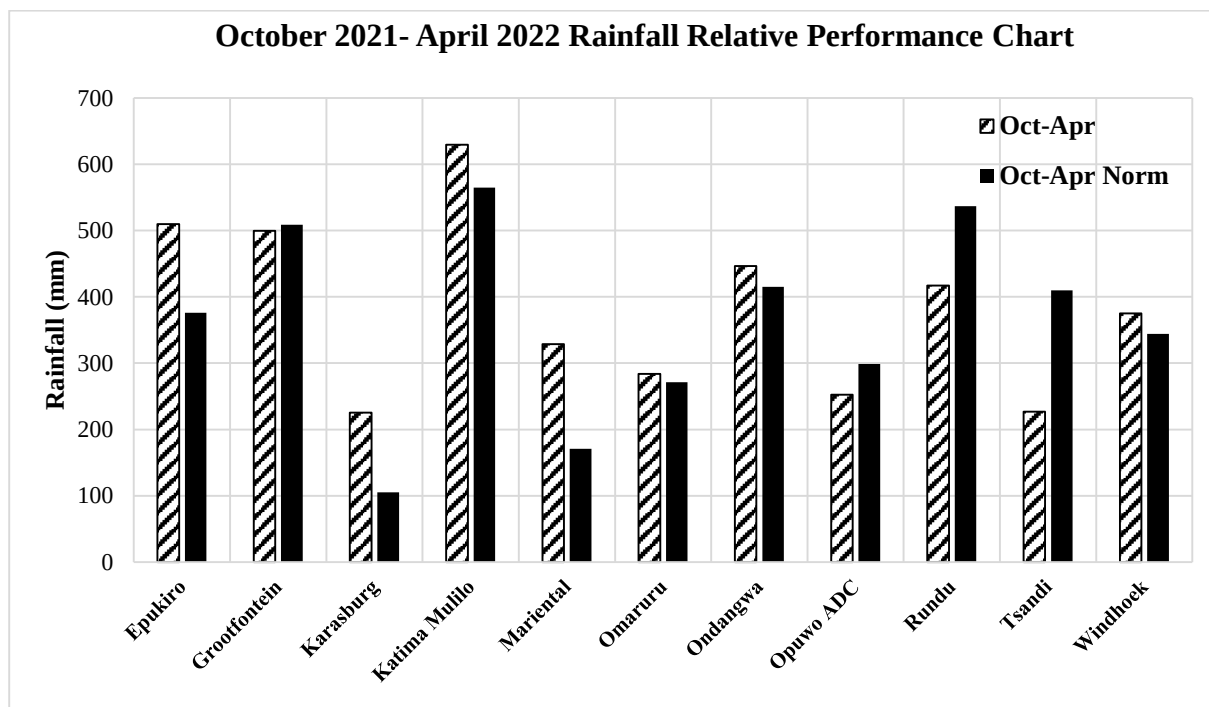
3.1. 2021/2022 Rainfall Performance for Namibia

The 2021/2022 rainfall season started off dry over most parts of the country with the exception of the southern regions (//Kharas and Hardap) where exceptional high rains were received from the start of the season with some areas received two or three times the usual rainfall amounts. The central northern regions (Ohangwena, Oshikoto, Oshana and Omusati) and eastern Omaheke, Zambezi, Kavango East and Otjozondjupa regions received an intense rainfall deficit at the onset of the rainfall season, with prolonged dry spells which lasted until February 2022. However, the situation improved in the second half of the season towards the end of February when the bulk of the country experienced above average rainfall. Moreover, the Kabbe North and Kabbe South constituencies in the Zambezi region were affected by localized floods as a result of the river overflow, thereby affecting crop production. In contrast, northern Kunene, Omusati, parts of Otjozondjupa and some parts of Oshana regions received below average rainfall for the season while Erongo region only experienced drier than normal rainfall during the last two months of the season i.e. March and April 2022. Khomas region and Kavango West regions also received a considerable rainfall this season.

Some regions that were mostly affected by drought conditions in the previous season (part of Omusati and partly Erongo region) have improved slightly in terms of the rainfall received this season, while Kunene region still flagged as an area of concern as a result of persistent rainfall deficits for most of the season. Although the rainfall improved in the second half of the season, it ended unexpectedly especially in the north central regions, thereby affecting crop production, and pasture establishment.

According to the Namibia Meteorological Service, rainfall performance in most areas was within the above normal category. However, some places such as Opuwo in Kunene region, Rundu in Kavango East region and Tsandi in Omusati region recorded a below normal rainfall for the season, as illustrated in figure 1 below:

Figure 1: Rainfall Performance Chart: October 2021 to April 2022 relative to Normal in various areas of the country



Source: Meteorological Service of Namibia, 2022

On average, most areas received good rainfall between normal to above normal categories during October 2021 to April 2022 rainfall season. However, the rainfall this season ended sooner than expected while crops were at the grain maturity stage leading to poor grain quality and consequently low crop harvest.

4. CROP PRODUCTION PROSPECTS

Most crop producing area recorded below normal harvest as a result of delayed onset of the 2021/2022 rainfall season and prolonged dry spells reported in some regions. Although good crop germinations were observed earlier in the season, the rainfall ended earlier than expected and this had a major negative effect on the crop harvest this season. The revised aggregate crop estimates indicate that the country has recorded 151, 723MT which is slightly below last season's harvest of 153, 028MT by 1%, and 23% above the average annual production of 123, 710MT.

Table 1: National cereal production statistics and 2021/2022 estimates compared to 2020/2021 harvest estimates and a 22 – year average.

National Cereal Production Statistics Trend (in '000 Metric Ton) and 2020/2021 forecast production compared to a 22 - year average and 2019/2020 Production														
	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	22-year average	2021/22 as % of average	2021/22 as % of 2020/21
Maize (Communal)	4.6	2.5	5.2	1.4	1.2	6.3	6.9	1.3	8.5	11.5	8.0	6.6	20	-31
Maize (Commercial)	63.2	72.4	71.3	38.9	43.9	76.7	58.0	28.8	51.6	66.6	74.4	47.3	57	12
Pearl Millet	55.9	24.7	44.1	15.3	19.4	57.6	83.5	9.3	90.8	55.2	44.7	53.8	-17	-19
Sorghum	7.7	2.2	4.1	1.7	1.5	2.8	4.0	0.4	7.1	8.2	6.1	6.0	3	-25
Wheat	11.9	14.8	11.3	11.6	11.4	9.8	6.9	7.5	4.5	11.5	18.5	10.0	85	61
Aggregate	143.4	116.6	136.1	68.9	77.5	153.2	159.3	47.3	162.5	153.0	151.7	123.7	23	-1

The table 1 above indicate aggregate cereal production from 2011/2012 to 2020/2021 cropping seasons. The table also indicates the harvest (highlighted in red) for the 2021/2022 cropping season, 22-year average, 2021/2022 production as percentage of the average and as percentage of 2020/2021-cropping season. In the communal area (Zambezi, Kavango East and Kavango West regions), maize production showed a substantial reduction of 31% below last season's harvest, but 20% above average production. In addition, pearl millet production showed a decrease of 17% below average and 19% less than last season's harvest. Moreover, sorghum production indicated a significant decrease of 25% below last season's harvest, but 3% above average production. The reduction is mainly due to excessive rainfall in some areas in the north eastern regions, erratic rainfall observed mainly in the north central regions coupled with prolonged dry spells.

In the commercial, maize harvest showed an increase of 12% more than last season's harvest and 57% above the average production. It is important to note that 72% (53,382MT) of the maize production total (74,437MT) in the commercial area came from irrigated production, while 28% (21,056MT) came from the rain-fed production. However, this increase is attributed to good harvest and the increase in planted area in the commercial area. Wheat is a winter crop which is only produced commercially and production

thereof is ongoing. However, for the purpose of national aggregate and analysis, harvest estimates for the 2021 were used to develop the 2022 estimates. Therefore, wheat production is estimated at 18,489 MT which is 61% above last season's harvest of 11,498MT and 85% above the average production of 10,013MT.

5. FOOD SECURITY SITUATION

5.1. National Food Security Situation

Household food security has slightly improved, following a reduction in the agricultural production recorded in the 2021/2022 season due to dry spells and early cessation of the rainfall. Although the rainfall started off well in some parts of the country, some parts noted a delayed rainfall and prolonged dry spells that consequently affected the agricultural production. Many households in the major communal crop producing regions indicated to have depleted their previous season's food stock and already depending on the current harvest for food access, which is estimated to be depleted between December 2022 and January 2023.

Food security situation in Zambezi, has slightly improved following the just ended harvest, though the improvement is short lived as the harvested stock will only last until December 2022 for most households. In Kavango East and Kavango West region, the situation is a little bit different as the regions recorded a better harvest compared to the previous season's below average production. Nevertheless, Ncuncuni and Kapako constituencies in Kavango West region as well as Rundu urban constituency in Kavango East region recorded poor harvest compared to the rest of the constituencies in these two regions. Household food security in the north central regions (Omusati, Ohangwena, Oshana and Oshikoto) has also improved slightly, after May/June harvest, but the overall harvest this year is lower than last season, and is estimated to be depleted before the next harvest in May/June 2023.

The household food security situations among the three regions (Kunene, Erongo and Omusati) that were severely affected by drought conditions was noted that the situation has not yet normalised and households have not yet fully recovered, and therefore are still flagged as areas of concern in terms of food security.

Moreover, households in these regions were still receiving drought relief food at the time of this assessment which ended on June 30th 2022. Moreover, the north central regions (Ohangwena, Omusati, Oshana and Oshikoto) and some areas in Zambezi and Kavango West region are going to face food insecurity from December 2022 since their produce is estimated to deplete by then.

Food security in the south, east and central Namibia is satisfactory following good rainfall received this season.

It should be noted that, there are few farmers in the north east and north central regions that managed to get a better harvest (though not a significant number), and some have registered to market their surplus production to Agro Marketing and Trade Agency (AMTA) for Strategic Food Reserve re-stocking purpose, while others opt to sell to the local millers because of the better prices.

Notably, Namibia is not yet food self-sufficient and therefore heavily rely on imports to meet domestic consumption. Under normal circumstance, the country produces approximately 60% of its cereal requirements and covers the remaining 40% through imports. Furthermore, Russia-Ukraine conflict has impacted the national economy, particularly on the importation of grains and consequently on food security as it has affected the food systems from production, processing, distribution, marketing, and consumption and also reduces people's purchasing power due to inflation.

5.2. National Strategic Food Reserves (NSFR) Stock Levels

Table 2: National Strategic Food Reserve levels as at 30th June 2022

Location	Capacity (MT)	Stock Level (MT)	Current Stock in %	Grain Name
Katima Mulilo	7,400	2,753.75	37.21	White Maize
Rundu	4,000	645.05	16.12	White Maize
Omuthiya	4,000	663.20	16.58	White Maize
Tsandi	3,000	0.00	0.00	
Okongo	4500	61.51	1.36	Pearl millet
Total	22,900	4,123.51	18%	

Source: AMTA, 2022

Table 2 above indicates the stock level of the National Strategic Food Reserve (NSFR) in various localities in the country. From table 2, it can be seen that as of 30th June 2022, the NSFR stocks were very low, representing only 18% of the overall holding capacity. The NSFR stocks consist of white maize of 2,753.75MT in Katima Mulilo, 645.05MT in Rundu and 663.20MT of white maize at Omuthiya. Moreover, Okongo silo have about 61.51MT of pearl millet, while

Tsandi Silo are currently empty. The silos stock level became very low this year, following some grain sales to the millers to generate additional funds for grain intake during the 2022/2023 marketing season. However, the restocking exercise is yet to start as from July this year.

In addition, social protection measures from the Government remain in place and these include:

- **Orphan and Vulnerable Children (OVC) maintenance Grant:** A monthly grant is given to OVC to improve their quality of life.
- **Emergency food assistance to San communities:** The Office of the Deputy Prime Minister took an initiative to assist the vulnerable San communities with emergency food assistance and sustainable medium and longer-term activities aimed at enhancing their quality of life.
- **School Feeding:** The Ministry of Education's school feeding programme seeks to improve the dietary intake of children whose households have difficulties accessing food. The programme also contributes to national efforts to increase school enrolment, attendance and the ability to concentrate and learn.
- **Old Age Pension:** This is the monthly grant given to senior citizens over the age of sixty to help them afford basic needs and services, thus improve their living standard
- **War Veteran Grant:** This is a monthly grant given to people who were accorded a war veteran status. The grant is aimed at enabling the beneficiaries to access basic needs and services.

The Agro Business Information Services in collaboration with the Regional Councils Office and Office of the Prime Minister will continue to monitor the situation as it unfolds and provide updated information accordingly.

6. GRAZING, LIVESTOCK CONDITION AND WATER SUPPLY SITUATION

6.1. Grazing condition

Despite the slow start of the rainfall season, grazing has responded well from February to April 2022 in most parts of the country and was ranging between fair and very good. However, Oshana, Oshana, Oshana and partly Oshana, grazing conditions is worrisome due to delayed rainfall and prolonged dry spells experienced this season, whereas fair to good grazing conditions were reported in Oshikoto region. Kunene region received better rainfall compared to the previous drought seasons and grazing has significantly improved throughout the region, though, in relation to the rest of the region, Sesfontein area rangeland condition might not carry the livestock to the next rainfall season. The overall grazing conditions in Erongo region has improved and areas such as Omaruru, Omatjette, Karibib and Spitzkoppe have recorded significant amount of rainfall and much improvement is observed in the grazing conditions. However, grazing condition in Utuseb area is critical as the area received poor rainfall this season, hence no improvement in pasture establishment. Furthermore, Erongo regions experienced veld fires in Uis, Omatjete, Spitzkoppe and Tubusis area whereby a total of about 1107 hectares of grazing where destroyed between April and early June.

In the northeastern regions (Zambezi, Kavango East and Kavango West) grazing condition is good in the flood plain and areas along the river as well as the inland. The grazing condition in Khomas, Omaheke and Otjozondjupa region was ranging between good to very good which is attributed to good rainfall received during the period of January to March 2022.

The southern part of the country (Hardap and //Kharas regions) pasture establishment responded well as a result of the above average rainfall received. Hardap region in particular, grazing is good but fast drying. On the other hand, grazing in //Kharas region recovered well in central, west and the eastern side of the region while the far southern part of the region experienced moderate growth due to few rainfall showers received in that area. However, due to the outbreak of brown locust outbreak since October 2021, grazing was affected tremendously and caused economic losses to farmers, therefore posing a huge threat to food security in the region.

6.1.1. Situation in the Kunene Region

Kunene region has been receiving poor rainfall for about past eight years resulting in poor agricultural production. However, unlike the previous seasons, the region received substantial rainfall during 2021/22 rainfall season, breaking the drought condition that relentlessly affected the region for years.

Farming areas east of Khorixas district, the grazing condition is very good, also with noticeable improvement in areas west of Khorixas such as Morewag, Anigab, Bergsig that suffered severe drought condition in the last seasons.

Grazing in the central part of the region (Erwee area) has improved significantly following fairly good rainfall received and is expected to sustain livestock through the dry season. Sesfontein district received better rainfall comparing to last season and the grazing condition has improved in comparison to same time last year. However, in relation to the rest of the region, grazing in Sesfontein area might not carry the livestock to the next season.

The northern part of the region received average rainfall and the rangeland improved very well, however, the area is populated by farmers who migrated from the western part the region in search for better grazing. The body condition of large stock ranges between good and fair while small stocks are generally in a good body condition. Furthermore, grazing condition significantly improved in the western part as a result of improved rainfall received this season in comparison to the previous seasons as a result of few livestock in the area.

The eastern part of the region (Outjo and Kamanjab areas) also received a significant amount of rainfall and rangeland condition has drastically improved. Livestock body condition is good thus far and the available grazing is likely to sustain livestock through to the next rainfall season.

Water situation in the region has improved this season and no major water supply interruptions has been observed in the region apart from isolated cases of broken water pumps.

6.2. Livestock condition

Livestock body conditions ranges between good and very good in most parts of the country where good rainfall was received over the 2021/2022 rainfall season, mainly in the northeast (Zambezi, Kavango East, Kavango West), central (Otjozondjupa, Omaheke, Khomas) and southern parts (//Karas, Hardap) of the country. Additionally, fair to good livestock body conditions were reported in the north central regions (Oshana, Oshikoto, Ohangwena and Omusati regions) where prolonged dry spells experienced and affected grazing establishment. Livestock body condition has also improved in the areas which were affected by drought conditions in the previous season (Kunene, partly Erongo and western part of Omusati region).

On the livestock health, cases of diarrhoea in small stock were highly reported in the north central regions with high mortalities. Sporadic cases of Botulism, Lumpy Skin disease, mineral deficiency, vaginal prolapse, and Preputial prolapse in cattle were reported in Omusati and Ohangwena region. Oshana region have reported cases of Infectious Bovine keratoconjunctivitis (IBK) known as Pink eye, Dystocia Anaplasmosis in cattle as well as Orf and Helminths (Worms) which commonly cause poor body condition, weight loss, diarrhea and eventually death in small stock. There are no reports of livestock diseases reported in Kunene region, however, there are isolated reports of Uterus Gangrene, while Orf and abscess in small stock were reported in Erongo region.

At the time of this reporting, an outbreak of Contagious Bovine Pleuropneumonia (CBPP) commonly known as Lung Sickness was detected in some parts of the Northern Communal Areas (NCAs). The disease is confirmed in several crush pens of Kavango West, Ohangwena, Oshikoto and regions. Meanwhile, the Directorate of Veterinary Services has since put restrictive measures to contain the disease, which include movement restriction of live cattle within, in and out of the infected regions but also including Oshana and Kunene regions as well as Tsumkwe in Otjozondjupa region. Furthermore, roadblocks at strategic points have been set up to enforce movement control and active surveillance and vaccinations of cattle in these areas are ongoing.

6.3. Water supply situation

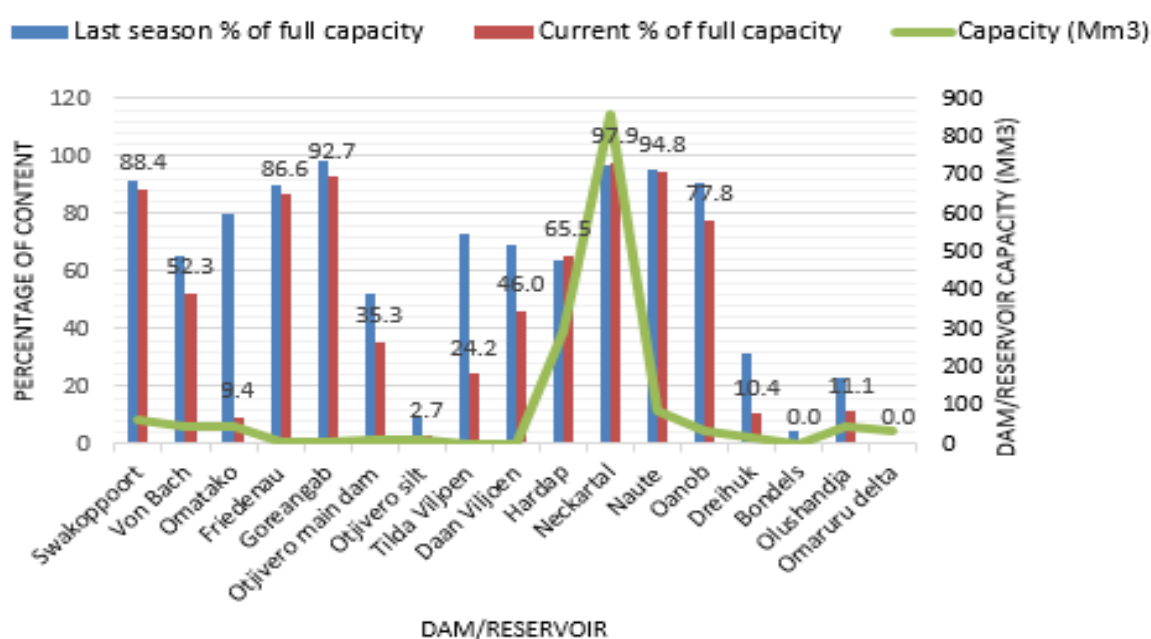
The water supply situation has improved considerably in most regions following good rainfall received mostly in the second half of the season. Water availability in Erongo region is satisfactory in areas of Omatjette, Omaruru, Otjimbingwe, and Utuseb where river flows were reported, other parts remain under severe underground water supply. In the southern and eastern regions (Hardap, //Kharas and Omaheke), water availability is satisfactory and no reports of water scarcity has been reported at the time of this report. Moreover, there are reports of few broken boreholes in Hardap region at some farms, while Omaheke have the issue of low water table in Otjinene and Otjombinde areas. Otjozondjupa region, water availability is also good except Gam and Ovitoto settlements where boreholes in Otjongombe, Okamboro are drying up and needs rehabilitation. Furthermore, the low water level in the two (2) earth dams at Okasuvandjiwo and Otjongombe villages in Omatako Constituency is a major concern for the communities, while water in the Ovitoto area has a high concentration of lime.

The availability of water in Zambezi, Kavango East and Kavango West is abundantly available in the rivers, streams and boreholes. Water supply situation in Khomas region is good due to an increase of the underground water level to be able to feed the boreholes, and most water catchment areas such as earth dams, wells, boreholes and fountains have enough water which might be able to last till the next season. The water supply in the north central (Ohangwena, Omusati, Oshana and Oshikoto) regions was noted to be satisfactory, though not all water catchments have enough water due to prolonged dry spells experienced. Nonetheless, most of these areas have access to either pipelined water supply or borehole as other source.

6.4. Dam levels

Figure 11 below provides a summary of the dams/reservoirs level in the country as of 11th July 2022. Most dams received momentous inflow although not good as the corresponding period last season. As such, Neckartal, Naute and Goreangab Oanob Dams are nearly full with their current levels of 97.9%, 94.8% and 92.7% of their holding capacities respectively. Furthermore, Swakoppoort, Friedenau and Oanob also have a significant amount of water standing at 88.4%, 86.6 and 77.8% of their holding capacity, respectively.

Figure 2: Summary of Dam levels in the country at 11 July 2022.



Source: Namibia Water Corporation Ltd, July 2022

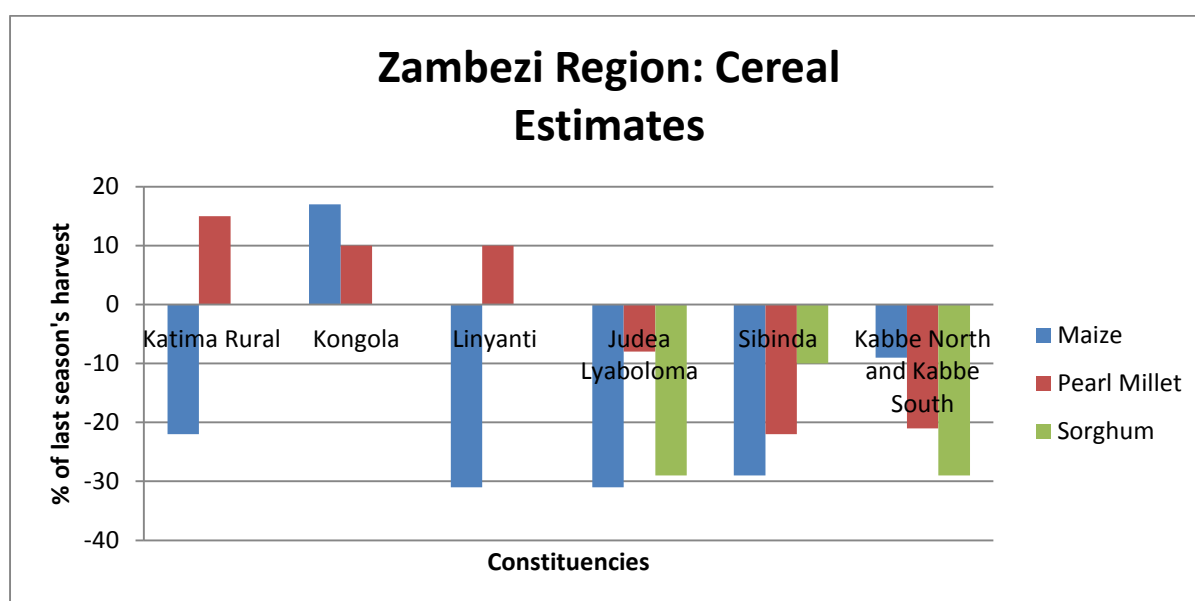
7. REGIONAL CROP AND FOOD SECURITY SITUATION

7.1. Zambezi region

The region suffered poor agricultural production, following poor crop growing conditions that characterized the 2021/2022 rainfall season. The region received good to excessive rains from October to January resulting in some crop fields submerged and subsequently delays in ploughing and weeding activities. In addition, dry spells, sporadic and insufficient rainfall was experienced during February and March, resulting in permanently wilting of the crops, especially maize. Besides that, the eastern part of the region (Kabbe North, Kabbe South) Linyanti and Katima Rural constituencies suffered flood episodes, which affected some crop fields. The average planted area is estimated at 75% of the crop fields, which is approximately 6% lower than the same period last year. As such, the revised crop analysis on aggregate cereals (maize, pearl millet and sorghum) showed a significant reduction in the harvest of about 27% below last season's harvest, but 36% above the average production. In particular, maize production which is a staple crop for the region shows a significant reduction of 31% lower than last season's harvest and 44% above average production. Pearl millet is estimated to have declined by 8% of last season but 35% above the average production. Sorghum has also suffered the effect of poor rainfall, resulting in a reduced harvest of 29% of last season's harvest and 16% below the average production. Furthermore, harvest outlook for non-cereal crops was also noted to have dropped, which according to farmers is lower than last season.

On crop pests, cases of Fall Army Worms were reported throughout the region, but the damage was not severe. As an intervention, the affected farmers were trained on how to use the pesticides and given pesticides, knapsack sprayers and protective gear clothes for protection against chemicals to spray their crop fields. The region has also carried out the first stage of locust scouting as a surveillance measure, in Ngoma, Itomba, Bukalo, Dudukabe, Masokotwane, Nchinchimane and Kongola areas but no locusts were found. In addition, another locust scouting will be done when the flood water subsides. Cases of human wildlife conflict were also widely reported in the region, specifically elephants, Hippos, Kudu's and warthogs that have destroyed some crop fields. The figure below shows the crop harvest per constituency in Zambezi region.

Figure 3: Summary of the revised cereal harvest estimates for Zambezi region.



No major livestock diseases of economic concern were reported at the time of the assessment in the region, apart from Dystocia and vaginal prolapse in cattle as a result of maternal proportion and hormonal imbalances. Orf and foot rot in goats were also widely reported. Grazing condition is still good, but the situation might become critical from September due to overgrazing and farmers may need to intensively do the supplementation. Due to the flood in the eastern part of the region, during time of the assessment the grazing was still standing in water and farmers had already started relocated their livestock to the upper land. Water availability for livestock is abundantly available in the river, earth dams and streams.

The household food security has improved, following the current harvest, but according to most interviewed households, the harvest is only able to sustain them until November 2022 at most. However, as a common practice in the region, most farmers sell much if not all of the harvest and use money from the sales to buy food. On the aspect of marketing grains, farmers have registered through the Agricultural Development Centers (ADCs) to formally sell their produce through Namibian Agronomic Board (NAB).

Figure 4: Crop harvest (a & b) and wilted crops (c) in Zambezi region



(a) Maize corn affected by too much water in, Linyanti constituency



(b) Good maize harvest received in Kongola constituency



(c) Maize crop field affected by the dry spell in Linyanti constituency

Katima Rural

Majority of farmers described the just ended cropping season's rainfall as poor compared to the previous season and it also started late. The late onset of the season and the prolonged dry spells experienced earlier in the season contributed much to the reduction in area planted, as most farmers only managed to plant about 41% of their crop fields, a reduction of 27% compared to the area planted same period last season. Nevertheless, according to the revised crop estimates, maize production has recorded a decrease of 22% while pearl millet increased by 15% of last season's harvest. Sorghum on the other hand showed no improvement and the harvest is more or less similar to that of last year. Furthermore, prospects for non-cereal crops are generally better especially pumpkins. On livestock health, diseases such as lumpy skin disease, gall sickness in cattle and internal parasites especially in small stock as well as abortion in small and large stock were reported. Livestock body condition and grazing were both in good condition at the time of the assessment. Water availability is also good with rivers, streams, boreholes or pipeline being the sources. Food security at household level is stable at the moment after the recent harvest, however, most households indicated that their harvested stock will only sustain them until between October and December this year. Households will then rely on the market for food access thereafter.

Kongola

Despite the delayed, sporadic rainfall, Fall Army Worm infestation and wildlife animal destruction experienced this season, majority of farmers that planted early when the first rainfall was received in November are expecting a better harvest. However, the late planters suffered the effect of water longing

in their crop fields and quelea birds on their grains. On average the estimated planted area is 95% which is 15% more than the area planted last season the same time. As such, the crop estimates indicate an increase in the Maize and pearl millet harvest of 17% and 10% of last season's harvest, respectively, whereas, sorghum production remained the same as last season's harvest. Moreover, non-cereal crops have performed poor as compared to the previous season.

At the time of the assessment, livestock and grazing condition were both in good state. It was noted that, even though grazing has already dried up, it is at least sufficient to sustain the livestock throughout the dry season. The main source of water for livestock in this area is the river and boreholes and during time of the assessment, water was sufficiently available. On livestock health, isolated cases of internal parasite in cattle were reported. With regards to household food security, the situation has improved for most households following the recent harvest. Households further noted that their current harvest is sufficient to sustain them until the next season's harvest.

Linyanti

Farmers described the 2021/2022 rainfall season as poor compared to last season. Farmers also indicated that it was characterized by erratic, uneven distribution with prolonged dry spells in February. Moreover, excessive rains were received in March and left some crop field submerged. Analysis of the crop estimates indicated a significant reduction in the harvest where maize is said to have drastically reduced by 31%, while pearl millet is estimated to increase by 10% of last season's harvest. The reduction in harvest, especially for maize is brought about by the prolonged dry spell which left most of the maize crops dry beyond recovery and water

logging in some fields. However, harvest for non-cereal crop is said to be above last season's harvest. On average, most farmers were able to cover about 97% of their crop fields, which is 6% above the area planted last season around the same time. No major crop pests were reported this season, except few cases of fall army worm reported in Linyanti and Sangwali area with minimal crop damage.

No major livestock diseases were reported at the time of this assessment, apart from tick infestation and foot rot in small stock. Grazing and body condition are both good in the area, but farmers raised fear of the grazing becoming depleted in months to come due to overstocking. Water for livestock is also not a challenge as it is available from the river, swamps, streams and boreholes. On household food security, the situation has improved slightly, following the recent harvest. However, according to households they have depleted last season's food stock and the current harvest is not significant as is expected to sustain them only until December this year.

Judea Lyaboloma

As reported by many constituencies in the region, majority of farmers have recorded a poor crop harvest due to poor rainfall performance received. Crop estimates for this area indicated a significant reduction in the crop harvest with maize production estimated to decline by 31%, while pearl millet and sorghum are set to go down by 8% and 29% of last season's harvest, respectively. This reduction came as a result of excessive rainfall received at the beginning of the season and prolonged dry spell in February. Harvest for non-cereal is also said to be poor than last season, due to wildlife destruction mostly for melons and pumpkins. Average planted area is estimated at about 95% of their crop fields, 3% more than the area planted previous season. Isolated cases of fall army worms on maize were

reported in Satyona and Sangwali ward mostly during the dry spell in February, with insignificant crop damage recorded. Elephants and Hippos were also reported in Satyona area.

Grazing and livestock body condition are said to be in good condition, but farmers indicated that the grazing available will not sustain the livestock for the entire season especially at the river side. No major livestock diseases were reported, apart from tick infestation and Dermatophilosis. Water is also not a problem as it is available from the river, streams and boreholes. On household food security, the situation is good at the moment because farmers are consuming their current harvest. According to the interviewed households, the said harvest will only be able to sustain them until September and thereafter will depend on piece work and the market for food access.

Sibbinda

Farmers reported that the 2021/2022 rainfall season was poor, characterized by sporadic and uneven distribution, when compared to last season. The rainfall also ended early in March as opposed to April. Furthermore, the season was coupled with a prolonged dry spell in most of February which affected most crops germination. On average, most farmers were only able to cultivate about 59% of their crop fields, which is 23% lower than the same period last season. Crop harvest estimates indicated a significant reduction with maize estimated to have reduced by 29%, pearl millet by 22% and sorghum by 10% of last season's harvest. The non-cereal crops have performed better than last season, especially watermelons. No major crop pests were reported this season, apart from isolated cases of fall army worm with minimal damage on maize and cases of wildlife animals such as elephants, Kudus and warthogs damaging melons.

Isolated suspected cases of lumpy skin disease were reported in cattle, with no fatalities by the time of the assessment. Livestock body condition and grazing were noted to be in a very good condition, but farmers indicated that the grazing might become depleted by September. Water for livestock is also not a challenge as it is readily available from ponds and boreholes. On household food security, the situation has improved, as most households have said to be dependent on the current harvest for food access. However, the harvest is not sufficient to sustain households until the next harvest as it is estimated to last only up to February 2023. As a coping mechanism, households will mostly depend on piecework and old age pension for food access.

Kabbe North and Kabbe South

The rainfall this season started late with dry spells in December. However, the rainfall improved in the second half of the season but was excessive causing some crop fields to be submerged. This has affected the area planted as only 63% of the cropping area could be covered, compared to 71% area planted

during 2020/2021 cropping season. As a result of the excessive rainfall and reduced planted area, majority of farmers could not obtain good crop harvest this season. Therefore, crop harvest estimates indicated a substantial reduction with sorghum estimated to have decreased by 29%, pearl millet decreased by 21% while maize reduced by 9% below last season's harvest. In addition, non-cereal crops have also performed poorly this season due to excessive rainfall.

No major livestock diseases were reported apart from internal parasites in both large and small stock. Livestock and grazing conditions are both in good condition and water is also available as most water reservoirs were reported full during the time of this assessment. After the recent harvest, the household food security situation has improved and households are depending on own harvest for food access. This harvest will however not sustain households until the next harvest and is estimated to be depleted between November and January. Some households have already started consuming from the just ended harvest, a sign of possible food insecurity in some parts of the constituency.

7.2. Kavango East and Kavango West Regions

The regions noted an improvement in crop harvest this year, which is better than last season and above the average production. Despite a very good rainfall experienced from November last year with even distribution resulting in good crop germinations, poor rainfall performance in the form of dry spells were experienced during January and February, even though, this did not have much effect on the harvest. Crop estimates for the regions indicated a significant improvement in the harvest with aggregate cereal estimated to increase by 22% of last season's harvest and about 1% above the average production. Specifically, pearl millet production showed an increase of 23% higher than last season's harvest and 20% above the average production, whereas sorghum production is 15% higher than last season's harvest, but 75% below the average production. Maize on the other hand showed a reduction of 3% of last season's harvest and 88% below the average production. During the previous season, these regions had a substantial reduction in all three crops due to excessive rainfall which affected almost all constituencies. Average planted area is estimated at 81% of the cropping area, reflection a reduction of 7% when compared with the corresponding period last year. On crop pests, isolated cases of fall army worms and witchweed (striga) were reported in Kaisosi, Ndonga-Linena and Ndiyona areas on maize but no significant damage was recorded. Locust scouting was also carried out in these regions but yielded negative results.

Figure 5 (a): Summary of the revised cereal harvest estimates in Kavango West region

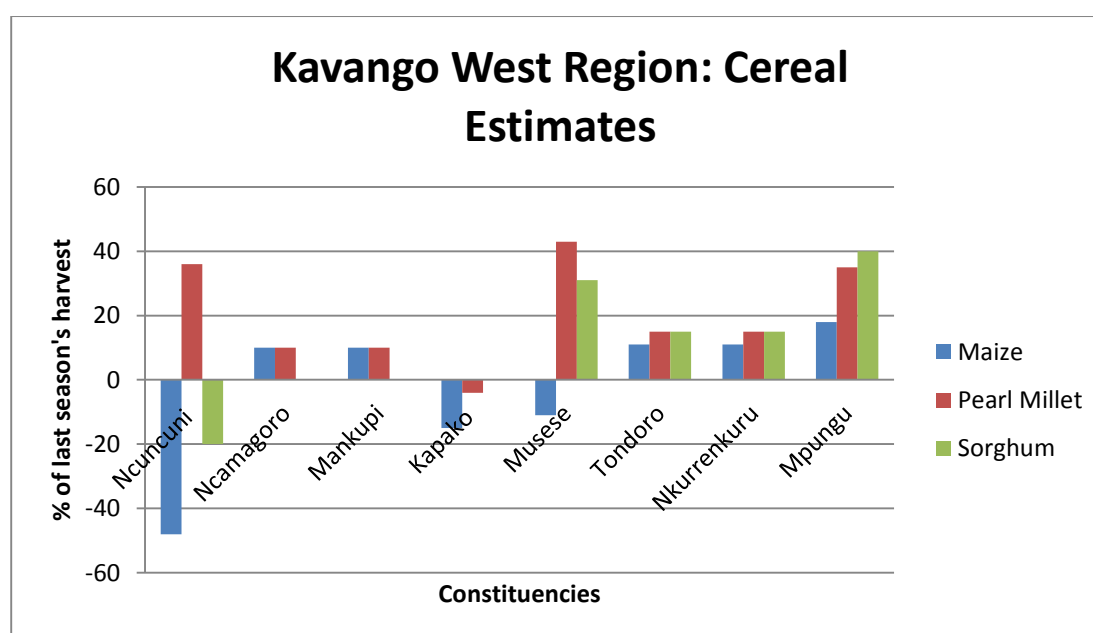
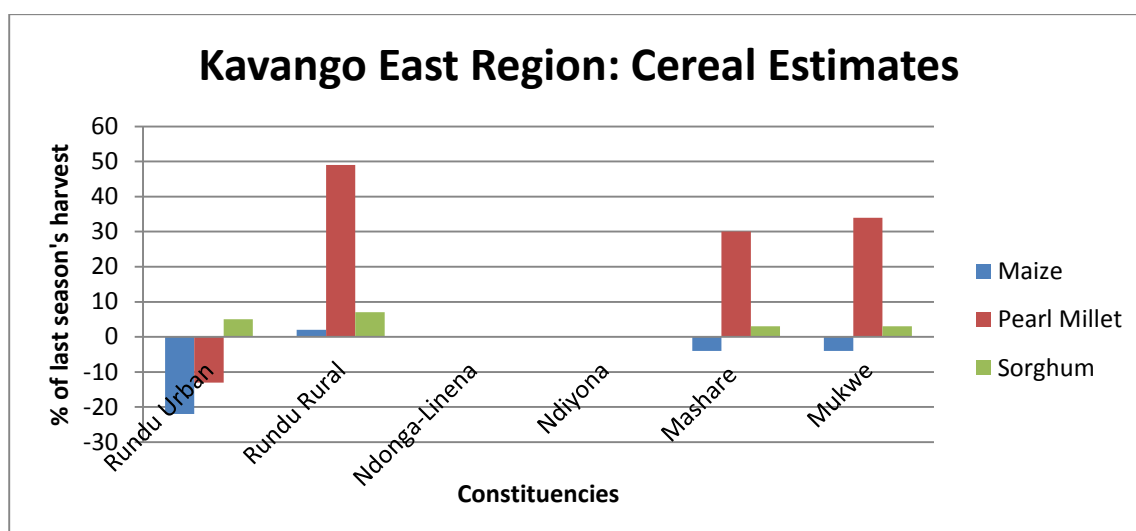


Figure 5 (b): Summary of the revised cereal harvest estimates in Kavango East region



NB: Ndongalinena and Ndiyona constituencies could not be assessed due to unforeseen technical circumstances beyond the assessment team's control they are not included in the analysis.

With regards to animal health, Kavango West region was still battling the Contagious Bovine Pleuropneumonia (CBPP) outbreak at the time of the assessment, which was confirmed in March 2022. The State Veterinarian responsible for the region confirmed the arrival of CBPP vaccine, and vaccinations were ongoing in the two affected constituencies (Ncamagoro and Musese). In addition, isolated cases of Black quarter, Mange, Verminosis were also reported. Livestock and grazing condition is still good, but according to farmers, grazing is not enough for the entire season due to overgrazing in some areas. Water availability for livestock was noted to be very good, with boreholes and the river being the main source of supply. On household food security, the situation is currently satisfactory because most households are consuming from their current harvest. According to most households interviewed, they have depleted last season harvest and although they got above last year's harvest, the current stock is only sufficient to sustain them until December this year.

Figure 6: Crop harvest in Mpungu constituency-Kavango East region



One of the few poorest harvest in Mpungu Constituency

7.2.1. Kavango West

Constituencies

Ncuncuni

Despite a dry spell experienced during December, majority of farmers noted an improved crop harvest following better rainfall received during the 2021/2022 season. According to farmers, since the start of the rainfall season in November, the rainfall performance has been fairly distributed in the area, resulting in good harvest as well as enough grazing and water supply mainly for livestock. The revised crop estimates show a substantial decrease in cereal production with maize harvest estimated to have decreased by 48% while sorghum decreased by 20% of last season's harvest. Moreover, pearl millet has improved by 36% above last season's harvest.

Farmers further indicated that, the harvest for non-cereal crops received this season is also good, above last season's harvest. The planted area is estimated at 93% of the crop field which is 11% more than the area planted same period last season. Cases of birds

were widely reported in the constituency, with minimal damage to the crops.

With regards to livestock health, no major diseases were reported during time of this assessment. The livestock body condition was observed to be good. On the household food security, the situation is worrisome as majority of households have depleted their last season's food stock. Farmers further indicated that although there are expecting a better harvest than last season, it will only sustain them until December and thereafter piece work and markets will become their main source of food.

Ncamagoro and Mankumpi

The 2021/2022 rainfall season as described by the farmers, have started on time and it was favorable for the crops as compared to the excessive rainfall that was received last season. The season was however coupled with prolonged dry spells most of January, with little or no effect to the crops. Planted area is estimated at 92% of the cropping area which is just 1% less than the area planted same period last season. Farmers have indicated that the harvest is

better this year, with maize and pearl millet production both estimated to increase by 10% of last season's harvest. Non-cereals such as Bambara nuts and cowpeas, have also performed better than last season. False army worm, quelea birds and wildlife animals were widely reported in the constituency.

The grazing and livestock body condition was noted to range from good to fair and good, respectively. According to farmers, the grazing available might become depleted before the 2022/2023 rainfall season starts and this is due to increased number of new crop fields in the constituency. No major livestock diseases were reported by the time of this assessment. Water for livestock and human consumption is satisfactory, as it is mainly available from the Boreholes. With regards to household food security, the situation for majority of the households is reported to be good, following a recent harvest. Households indicated that the current harvest is sufficient to last them until the next harvest in May 2023.

Kapako

This constituency have also recorded a better rainfall this season, compared to last season. Farmers further described the rainfall to be fairly distributed, enough for crop production and no crop fields were left submerged as compared to last season. Unfortunately, the season was coupled with a prolonged dry spell in February, which led to significant crop failure. Planted area is estimated at 67% of the cropped area, which is 29% below the area planted last season same time. Farmers stressed that, the reduction in the planted area is brought by the lack of oxen and tractors in the constituency. Accordingly, the crop harvest recorded for this season is below last season production, mainly for farmers that planted late. Harvest estimates indicated a reduction in the crop harvest, where maize and pearl millet are estimated to decline by 15% and 4%

of last season's harvest, respectively. A substantial reduction in maize is brought by about the effect of the dry spell experienced by maize farmers. In addition, non-cereal crops have noted a poor harvest this season. Crop pests reported include the fall army worms and aphids.

Livestock diseases and conditions reported by the farmers included tick infestation and plant poisoning. Grazing in the area is not enough for the season and farmers foresee it becoming depleted in September. Water availability for livestock is not a problem, as it is mainly available from the streams and river. Livestock body condition is good for goats, but cattle are in a fair condition. On household food security, the situation is fair following a recent harvest. This improvement according to farmers is only short lived as many households have indicated to have depleted last season's harvest and thus they will face food shortage by November this year.

Musese

Despite a slight delay in the onset of the rainfall season, rainfall performance has been generally good compared to 2020/2021 rainfall season. According to farmers, production is also better this season, both cereals and non-cereals. The revised production estimates for pearl millet and sorghum recorded an increase of 43% and 31% above last season respectively. On the other hand, maize was affected by heavy rainfall and as such, maize production reduced by 11% below last season's harvest. The area planted this season stood at 71%, a reduction of 29% compared to the corresponding period in the previous season. At the time of this assessment, no major crop pests were reported apart from Aphids and sting bugs on cow peas around Siko and surrounding villages.

On household food security, the situation is said to have improved significantly, following the current harvest. However, due to lack of carryover stock

from the previous seasons, most households indicated that the current food stock will only last up to October this year, and rely on the market purchases thereafter.

This constituency is one of the constituencies where an outbreak of CBPP was reported earlier this year. Farmers have indicated that they lost a number of livestock to this disease, and vaccinations against this disease were ongoing in the affected constituencies at the time of this assessment. Other diseases reported in the constituency is Verminosis in goats, and Diarrhoea in cattle. Farmers have reported these cases to the Veterinary officials in the regions and were still waiting for the response by the time of this assessment. Livestock body condition is good, as well as the grazing in the inland. The area along the river is overgrazed due to a large number of livestock. Although grazing in the inland is good, it is rapidly drying up and off low nutritional value. Water is available mainly in the boreholes and the river

Mpungu

Most parts of this constituency received better rainfall which according to farmers is slightly better than the previous season. There were no severe dry spells this season and production is better than last year. In addition, there were no crop major crop pests and only sporadic cases of false army worms with no major impact on the harvest. Production estimate for pearl millet, maize, and sorghum has increased by 35%, 18% and 40% above last season's harvest respectively. Production for non-cereal crops has also improved this season, especially cow peas and pumpkins among others. On average, most farmers planted about 84% of their total crop fields, indicating a decrease of 9% below area planted at the same time last season.

The recent harvest has bettered the household food

security although it is not sufficient to last until the next harvest. Households have indicated that this harvest will only sustain them up until December 2022 and January 2023. However, it should be noted that not all households managed to harvest better, and there are pocket areas of food insecurity in the constituency.

On livestock health, some diseases reported are Diarrhoea and Mange in goats, Botulism in cattle as well as internal and external parasites. Livestock body condition ranges between fair to good. The grazing is fairly available and livestock are now grazing on the crop residues after the harvest, which is a short lived situation. Water is available mainly in the river and boreholes.

Tondoro and Nkurenkuru Constituencies

Good rainfall performance was received in this constituency and most farmers ploughed about 94% of their total crop fields. This is an increase of 9% compared to the area planted last year at the corresponding period. According to farmers, the 2021/2022 rainfall is better than the 2020/2021 rainfall season and was evenly distributed throughout the constituencies. Production estimate for pearl millet, and sorghum both recorded an increase of 15% above last season harvest, while maize went up by 11%. Non-cereal crops especially cowpeas and bambara nuts have shown an improvement which is much better than last season. Unlike in the previous season, no crop pests were reported this season apart from Aphids on cowpeas with small to moderate impact. Following the just ended harvest, food security situation at household level has significantly improved although the current harvest can only sustain households up until January 2023 before it gets depleted. Households will then rely on market purchases thereafter.

Livestock and grazing conditions are good both in the inland and the river side. In addition, grazing is reported to be good throughout the constituency.

Regarding the livestock health, Mange in goats and suspected cases of black quarter are some of the diseases reported.

7.2.2. Kavango East

Constituencies

Rundu urban

This constituency consists of urban, peri-urban, and rural areas. However, much of the farming activities are confined in the rural areas of this constituency. According the official responsible for this constituency, the 2021/2022 rainfall season started on time. However, productive rainfall which prompted cultivation activities was realized late, which then resulted in reduced crop productions. Nevertheless, farmers have managed to cultivate 88% of their crop fields on average which is 16% more than the area planted the same period last season. Both maize and pearl millet noted a decrease in the harvest of 22% and 13% less than last season's harvest, respectively, whereas sorghum recorded an increased harvest by 5% of last season's harvest. Harvest for non-cereal crops were also reported to be slightly better than last year.

The household food security situation was reported to be satisfactory for majority of the households, owing to a recent harvest. However, the situation is expected to change as from December/January when their current harvest become depleted and there after market will become their main source of food. Regarding animal health, overgrown hoofs in goats were widely reported in the constituency. Fair grazing condition was dominating the area, but according to farmers it is not enough for the season and will become scares from August this year. During time of the assessment, livestock body condition was in good state and water for livestock was abundantly available in the river, steams and boreholes.

Rundu rural

The 2021/2022 rainfall season in terms of performance and distribution according to farmers, is better than the 2020/2021 rainfall season. Despite the dry spell experienced in December and January that left some crops dead and farmers had to replant several times, farmers are expecting a better crop yield than last season. Average planted area is estimated at 57% of the cropping area, which is 41% less than the area planted last season same time. The crop estimates show that, maize has recorded an increase of about 2%, pearl millet 49% and sorghum 7% higher than the last season's poor harvest. Furthermore, harvest for non-cereal crops were also noted to be better than the previous season. Crop pests reported included American bollworms on pearl millet and aphids on beans, with no significant damage recorded.

With regards to household food security, the situation was reported to have slightly improved following a recent main harvest mostly during April and May this year. However, according to households, this improvement is only short-lived and is expected to last till November this year. Grazing was reported to be fair, and farmers are foreseeing it becoming depleted due to overstocking in the constituency. Other than that, livestock are in good body condition. Water for livestock is also not a challenge, as it is readily available from the river and boreholes.

Ndonga Linena

Ndongalinena constituency could not be assessed due to unforeseen technical circumstances beyond the assessment team's control.

Ndiyona

Ndiyona constituency could not be assessed due to unforeseen technical circumstances beyond the assessment team's control.

Mashare

The rainfall this season started well on time and according to farmers, the distribution was also good. This has resulted in a better harvest for this season as compared to the previous season specifically for pearl millet and sorghum, while maize indicated a reduction in the harvest. As such, the revised crop estimates showed an increase of 30% and 3% for pearl millet and sorghum above last season's harvest, respectively whereas maize reduced by 4% of last season's harvest. The harvest for non-cereal crops is generally better this season compared to the previous season especially cowpeas. The total planted area is estimated at 60% of the cropping area compared to 81% planted area for the corresponding time last season.

Grazing and livestock are in good condition and no diseases were experienced apart from sporadic cases of tick infestations especially at Chee village and nearby villages. Water in the catchment areas was reported to be enough both in the inland and on the flood plains. Regarding the household food security, most of households have depleted last season's harvest and were mainly relying on the market purchases for food access. The situation has however changed after the recent harvest, and with the increase in this season's harvest, households have indicated that it is sufficient to last only up to January 2023.

Mukwe

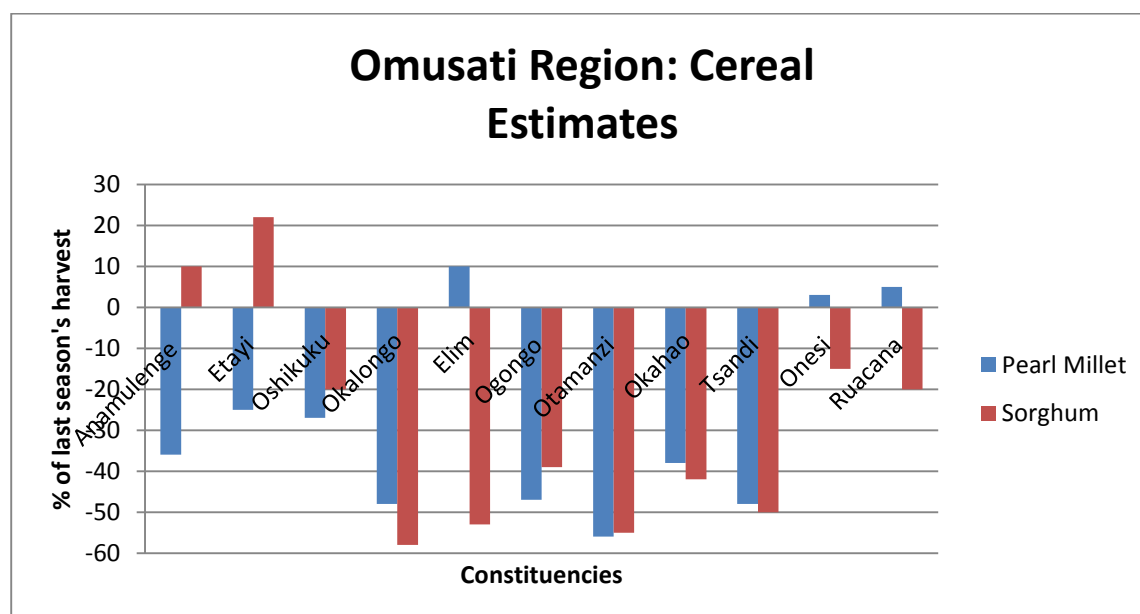
This area received poor rainfall compared to last season and it was coupled with prolonged dry spell in the first half of the season but rainfall improved in January, leading to good crop germination. Moreover, the constituency again suffered a dry spell in February which led to a reduced harvest for maize specifically. The crop estimates for pearl millet indicated an increase of 34% above last season's harvest while sorghum increased by 3%. Maize on the other hand was affected by the late rainfall and dry spells and as such the harvest went down by 4% lower than last season's harvest. Furthermore, the general harvest for non-cereal crops this season is poor apart from cowpeas that have performed a bit better than last season. The planted area is estimated at 93% of the cropping area, which is 4% higher than planted area last season. On crop pests, quillea birds were widely reported in the area, causing damage to the crops especially pearl millet.

No livestock diseases reported at the time of the assessment, and both livestock and grazing conditions are both in good condition thus far. Water is available both in the inland and along the river. On household food security, the situation has improved following the recent harvest because most households were heavily relying on the market for food access prior to this harvest. However, households have indicated that the current harvest will not reach the next season's harvest.

7.3. Omusati Region

The region has recorded a poor agricultural production, below average and lower than last season's production. The reduced agricultural production is a result of poor rainfall performance which is said to have dominated the first half of the season and productive rainfall was only received in February. The eastern part of the region especially Anamulenge, Okalongo, Outapi, Oshikuku and Etayi constituencies received good rainfall during February and March, resulting in crop fields submerged, thereby causing poor crop germination. Elsewhere in the region, most areas reported sporadic and below average rainfall. Although the region had reasonable quantity of improved seeds, many farmers ran out of seeds due to several replanting. Moreover, some crops wilted due to the severe dry spell. The aggregate cereal production for this region showed a reduction of 24% of last season's harvest and still 44% below the average production. In this regard, pearl millet production is estimated to have decreased by 25% of last season's harvest and 51% below the average production. Sorghum production has performed better, although it is down by 15% of last season's harvest, but 6% above the average production. Planted area is estimated at 89% of the cropping area, which is similar to the area planted last season.

Figure 7: Summary of the revised cereal harvest estimates for Omusati region



In addition, harvest for non-cereals such as cowpeas, Bambara nuts and melons are also low because of poor rainfall performance in the constituency. Crop pests reported, included aphids on cowpeas, armoured bush cricket and false army worm and the damage is moderate. No major livestock diseases were reported, apart from Verminosis, rabies and conditions such as abortion,

bull preputial prolapse and Orf. Pasture and livestock body condition are good in the region but the pasture is not enough for the whole season, it will be depleted by end August. Moreover, water for livestock is available in *iishana* 's although they are drying up very fast. On household food security, the situation has improved for now due the recent harvest. However, majority of households are in dire need of food assistance as the current harvest is not significant, it can only sustain them until December this year.

Figure 8: Crop harvest in Omusati region



Elim constituency



Tsandi constituency



One of the better harvest in Ruacana constituency-Omakange area



Constituencies

Outapi

The constituency received poor and sporadic rainfall from the onset of the season. Although the rainfall started in December, it was sporadic and most farmers only started ploughing between January and

February when sufficient rainfall was received. In addition, the rainfall was coupled with frequent dry spells that was experienced in March and a number of farmers replanted several times. Despite erratic rainfall, farmers have managed to cultivate up to 95% of their crop fields on average, which is about

11% more than area planted in the previous season. The revised crop estimates for this area showed a huge reduction on Pearl Millet harvest of 44% below last season's harvest. In addition, the grain quality is also poor which mainly resulted in the early cessation of the rainfall. Sorghum harvests is however above last season harvest by 21%. As for non-cereal crops, the performance is better and harvest is good compared to last season especially for melons and cowpeas. On crop pests, Armored Bush Crickets were widely reported in the area, but with moderate crop damage.

Grazing is in a fair state which led to a fair livestock body condition. Water for livestock is available as most water catchments still have water. Cases of internal parasites in small stock were widely reported in the area. Household food security is satisfactory as households still have stock from last season's harvest. The recent poor harvest has also improved the situation and these combined stock is likely enough to take households through to the next harvest.

Anamulenge

Farmers described this season's rainfall performance and distribution poor as compared to the previous season. Furthermore, it was also coupled with prolonged dry spells from December to early February. This has affected the grain quality and the harvest in general especially for pearl millet. Despite that, majority of the farmers indicated that 97% of their crop fields had been planted, which is similar to the previous season. Compared to the previous season's production, this season's pearl millet production is below by 36%, while sorghum production has increased by 10%. Except for cowpea, non-cereal crop production has declined this season compared to last season due to dry spells experienced. Cases of Armoured bush cricket were

widely reported in the area which caused much damage to the crops. Farmers also indicated that the birds have contributed to the reduced harvest for pearl millet.

On animal health, suspected cases of internal parasites were reported in goats throughout the constituency. Livestock body condition is good so as the grazing condition. Water for livestock is also available in pipelines and earth dams. Household food security is generally good, and the majority of households are still relying on previous harvest as well as the market for food access.

Etayi

The constituency received poor rainfall from the onset of the season and better rainfall was only realized in January. Furthermore, the rainfall ended earlier than expected, affecting crop development, grain quality and the harvest in general. Despite poor rainfall, farmers have managed to cultivate up to 100% of their cropping area, an increase of about 9% compared to the planted area during the corresponding period last year. This season's harvest for pearl millets have reduced by 25% compared to last season, while Sorghum increased by 22% of last season's harvest. On the other hand, the non-cereal crops performed well this season, with a better harvest compared to last season. On crop pests, Armored Bush Crickets and false armyworms were widely reported in the area, but with moderate crop damage.

Grazing is in a good state which leading to a good livestock body condition. Water supply for livestock is worrisome as most water catchment areas have little water and will soon dry up before the next rainfall season. Regarding livestock diseases, cases of gull sickness in Onuumba village and surrounding villages as well as internal parasites in small stock

around the constituency were on a rise at the time of the assessment. Household food security is satisfactory as households still have stock from the last season's harvest. Although the recent harvest is poor, households indicated that it is likely to take them through to the next season's harvest when combined with the old stock.

Oshikuku

As it is being reported in other constituencies, this area also received poor rainfall as compared to last season. Productive rainfall that prompted ploughing activities was received in January, but again it was too excessive, leaving some crop fields saturated which then caused farmers to replant several times. According to farmers, this rainfall season was not good for crop production and thus grain formation has been negatively affected as such. Nonetheless, the planted area is at 95%, which is 12% above the area planted last season. Crop estimates indicated that, pearl millet and sorghum showed a reduction of about 27% and 20% of last season's harvest, respectively. The constituency reported sporadic cases of American bollworms and the effect to the crop yield is said to be minimal.

No major livestock diseases were reported at the time of this assessment. Livestock body condition is good, although the grazing is somehow of poor quality and not enough for the season. Most catchment areas are still having water. Regarding the household food security, the situation has improved following a recent harvest. Although majority of households have indicated to still be dependent on last season food stock, this current harvest combined with last season is however, only able to sustain them until November this year.

Okalongo

Okalongo area received better rainfall this season but

was coupled with severe dry spells in March causing farmers to replant. Farmers indicated that the rainfall started early as usual, however, productive rainfall was only received in January where most farmers started ploughing. The revised crop estimates indicate significant decrease in harvest with pearl millet production recording a decrease of over 48% while sorghum reduced by 58% of last season's harvest. Moreover, poor harvest was also noted on non-cereal crops such as legumes, but slightly better on melons. Average planted area is estimated at 93% of the cropping area, a decrease of 5% above the planted area same time last season. No crop pests were reported in this area, apart from the *Quellea* birds.

At the time of the assessment, no major livestock diseases had been reported however, the constituency did have reports of pulpy kidney in small stock. It was stated that the grazing quality was fair and that it would soon deteriorate before the upcoming rainfall season. Animal body condition was reported to be good at the time of the assessment and water is widely available in the water catchment areas. Household food security is satisfactory as most households are still dependent on last season's harvest for food access. Moreover, the recent harvest will be able to sustain households through to the next harvest in May 2023.

Elim

At the beginning of the season, crop germination looked promising and farmers were hopeful for a better harvest. Unfortunately, sorghum farmers were caught off guard when the rainfall performance became too much during the last quarter of the season leaving some crop fields submerged. Farmers further described 2021/2022 rainfall season as abnormal, such that productive rainfall was received from late January and lasted only for 3 months and

the time was not enough for quality grain formation. Crop estimates for this area indicated an increase in the expected harvest for pearl millet production which is estimated to go up by 10% of last season's harvest. It should be noted that, although a good harvest is expected from pearl millet, the grains are of poor quality as they did not fully mature. Additionally, most of the sorghum has been negatively affected by too much water, such that it never reached the flowering stage hence a decrease of 20% below last season's harvest. As for the non-cereal crops, they have performed better than last season. Planted area is estimated at 89% of the cropping area, a 9% less than the area planted last season. Cases of American bollworms, quelea birds and Armoured bush cricket were reported at Alusati, Ikologo, Amadhala and surrounding villages.

On livestock health, no major diseases were reported apart from tick infestation and plant poisoning mainly in small stock. Livestock body conditions as well as the grazing were reported to be good and there is plenty of water available in *iishanas*. With regards to household food security, the situation is better for now as households interviewed indicated that they are currently dependent on their current harvest for food access as they have depleted their last season food stock. Households further indicated that their harvest is not sufficient until the next harvest, as it can only sustain them until November this year.

Ogongo

This area received poor rainfall compared to the previous season and had prolonged dry spells for most of January and February. As such, crop production was affected which led to a reduced harvest. Crop estimates indicate a substantial reduction in pearl millet production by 47% of last season's harvest, whereas sorghum harvest reduced by 39% compared to last season's harvest. However,

the non-cereal crops performed better this season particularly cow peas and Bambara nuts. Despite poor rainfall, most farmers were able to plant 100% of their crop fields on average, an increase of 22%. More than what was planted last season. Crop pests such as aphids on beans, armored bush crickets and quelea birds were experienced but the crop damage was said to be minimal.

In terms of livestock health, few cases of Orf and internal parasites in goats were reported. Nevertheless, livestock body condition is fair so as the grazing and water is available but most water catchments will be dry by August. The household food security is good as households are still consuming from the previous season's harvest. The current harvest is lower than that of last season and it is expected to last before the following season's harvest in 2023.

Otamanzi

Despite late commencement of the 2021/2022 rainfall season, farmers described the season as poor and below last season. Farmers further added that in terms of rainfall performance it was unevenly distributed, coupled with prolonged dry spells that had a negative effect on the grain formation, crop harvest, water and grazing establishment in the area. Accordingly, farmers on average were only able to cultivate up to 85% of their crop fields, which is 5% less than the area planted last season. As such, both pearl millet and sorghum production is said to have significantly decreased by over 56% and 55% below last season's harvest, respectively. Non-cereal crops are also said to have suffered the effect of poor rainfall as well, thus their harvest is below last season.

No major livestock diseases were reported at the time of the assessment and livestock were noted to

be in a good body condition, despite fair grazing condition dominating the area. Livestock are likely to experience drought this year, as the available grass can only sustain them until August 2022. The constituency is also faced with water scarcity mainly for livestock, since most water catchment areas did not receive enough rain water. With regards to household food security, the situation at the time of the assessment was reported to have improved following the recent harvest. Farmers further added that, the improvement is only short-lived as their current harvest is not significant to sustain them until next harvest in May 2023. It should also be noted that the situation is however different for a few households that still have previous years' food stock, which they can supplement with the current harvest in order to reach the 2023 harvest.

Okahao

As it has been reported in other constituencies, this area was not spared the effect of poor rainfall, in terms of distribution and quantity. According to the agricultural extension official responsible for this area, the poor rainfall performance discouraged some farmers from cultivating this season. On average, farmers managed to cultivate about 83% of their crop fields, a 7% less than the area planted last season. The revised crop estimates have shown a reduced production in all crops, owing to little rainfall and prolonged dry spells received throughout the season. Pearl millet production recorded a 38%, while sorghum recorded 42% less than last season's harvest. Non-cereals production is also below last season, especially Bambara nuts.

Following the recent harvest, the household food security situation has improved to some extent but the current harvest can only sustain them until January 2023, unless supplemented with market purchases. No major livestock diseases were reported at the time of the assessment. Livestock

body condition is good while grazing ranges between poor and fair. Water for livestock consumption is mainly available through pipeline, as water catchment areas did not receive sufficient inflow this season resulting in rainwater shortage.

Tsandi

Rainfall this season started late and was coupled with dry spells since the onset of the season to January. However, it has improved in February and March but stopped prematurely in April which according to farmers affected the grain quality. Therefore, like previous season, majority of farmers did not attain good harvest. The analysis on crop production indicated a reduction in the harvest of 48% and 50% below last season's poor harvest for pearl millet and sorghum respectively. On average, farmers were able to cover about 73% of their crop fields amidst poor rainfall, a decrease of 16% compared to area planted same time last season. Regarding crop pests, Armoured Bush Crickets and birds were widely reported in the constituency which has slightly contributed to the reduced harvest. The non-cereal crops such as cow peas and bambara nuts are also poor this season but melons are much better compared to the last season. On the household food security, the situation has improved due to the recent harvest, but the current harvest is enough to sustain them until the next harvest. Furthermore, households have indicated that they are still receiving drought relief food at the time of this assessment.

Grazing is fair in the inland while good at the cattle post areas, and livestock are in good condition in areas with good grazing. Furthermore, water is available and can sustain livestock until around August 2022. Diseases reported in livestock as such as diarrhoea and internal parasites mostly in small stock.

Onesi

The 2021/2022 rainfall was dominated by insufficient and prolonged dry spells since the onset of the season until early February. Although rainfall was erratic, it was better than last season and most farmers indicated to have attained a slightly better harvest compared to the previous season. Therefore, pearl millet harvest showed an increase of 3% of last season's poor harvest, while sorghum is said to have decreased by 15% below last season's harvest. Moreover, harvest for non-cereal crops is also said to have increased slightly as compared to last season especially melons and cow peas. The planted area is estimated at 70% which is 19% lower than last season. On the household food security, the situation has improved as a result of a recent harvest. Furthermore, the harvest according to farmers is not sufficient to last until the next season, unless supplemented with the market purchases for those that can afford. Otherwise, for the majority of households, this harvest will only last until January 2023.

Crop pests reported included Armoured bush crickets and birds which have moderately affected the harvest. On the livestock health, cases of blindness and diarrhoea in small stock were widely reported. Farmers were advised to visit the veterinary office in the region to report such cases for assistance. Compared to the previous season, grazing is good although it is dry, and livestock are also in a good condition. Water availability is satisfactory as there is still water in the earth dams, though they might dry up before the next rainfall season.

Ruacana

Majority of farmers in this area were able to cover at least 90% of their crop fields amidst poor rainfall performance and prolonged dry spells in January and

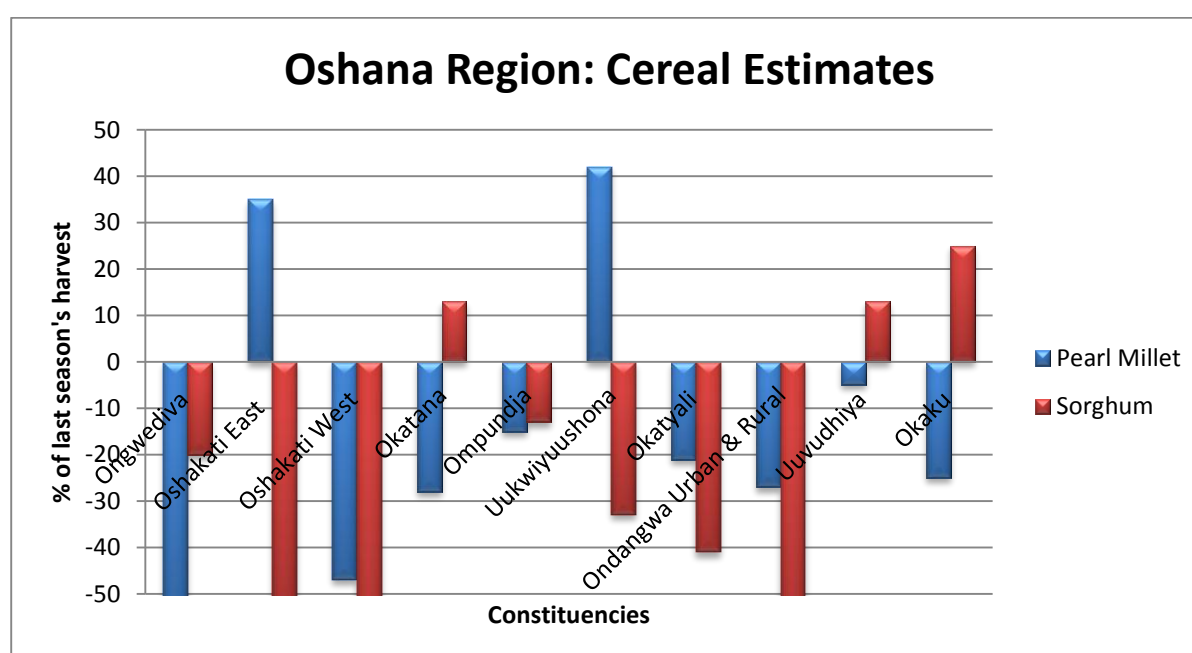
most February, an increase of 8% above last season's planted area. Moreover, farmers indicated that this season's rainfall was much better than last season, although it is still below normal. As such, crop harvest is slightly better than last season's poor harvest with an increase of 5% above last season's harvest for pearl millet whereas sorghum decreased by 20% below last season's harvest. Non-cereal crops have also shown an improvement compared to last year especially cow peas, kalahari melons and water melons. Crop pests reported are Armoured Bush Crickets since grain formation period until the time of the harvest with minimal to moderate damage especially in the areas of Etunda, Eenawa and Oshifo. Farmers have used methods such as hand-picking and burning to control such pests. In addition, Aphids on cow peas were also reported in some parts of the constituency. The household food security has improved, following a recent harvest. However, this improvement is only short lived and according to farmers is only enough to last until January and February 2023. Households have also indicated that they were still receiving the drought relief food, by the time of this assessment.

On livestock health, pulpy kidney and Mange in goats were widely reported, as well as internal and external parasite, abortion in both small and large stock and vaginal prolapse in cattle. Furthermore, farmers reported cases of Parvo virus in dogs, a highly contagious viral disease. Livestock body condition is fair to good throughout the constituency while grazing is good around Omakange area. This according to farmers is because there are no many livestock in the area as a result of severe drought experienced in the previous seasons. Areas around Oshifo and the surrounding villages, grazing is fair but only good in the enclosed/fenced off areas. Water is available mainly in the boreholes, few earth dams and the canal.

7.4. Oshana Region

The revised crop estimates indicated a reduction in the harvest of 17% below last season's harvest but 10% above average production. Pearl millet in particular, recorded a reduction of 15% while sorghum decreased by 25%, but still 65% above the average production. The decrease in crop production this season is attributed to the sporadic rainfall and early cessation of the rainfall, which led to poor grain quality. Moreover, the harvest for non-cereals have improved slightly especially for melons, but lower for cowpeas and bambara nuts. Average planted area is estimated at 95% of the cropping area which is almost similar to the area planted last season, only above by 1% but 6% below the average planted area for the region. No major crop pests reported in the region apart from isolated cases of Bollworms and Armoured bush crickets with moderate crop damages. Quelea birds were also reported in the region during harvesting period but no significant damage reported.

Figure 9: Summary of the revised cereal harvest estimates for Oshana region



No major livestock diseases were reported at the time of this assessment. However, cases of internal parasites and diarrhoea in small stock were reported throughout the constituency with mortalities. Grazing condition is ranging between fair in the inland and good in the southern part of the region. Livestock body condition is good apart from small stock that are in a fair body condition due to internal parasites reported. Water availability is satisfactory as many catchment areas still have water. However, according to farmers, the available water will not

sustain livestock throughout the dry season as some are already drying up. With regards to household food security, the situation has improved following the recent harvest, and majority are now depending on their harvest for food access. Although this season's harvest is below last season's harvest, it is likely to sustain majority of households till the next harvest. However, pocket areas of food insecurity are likely within the region especially in constituencies such as Ongwediva, Uuvudhiya and Ompundja, as some households in these areas were reported to be in critical need of food, according to the Oshana Regional Council at the time of this assessment.

Figure 10: Crop harvest in Oshana region



Sorghum farmer busy with the threshing process in Okatana Constituency and Pearl millet harvest in Oshakati East constituency in Oshana region



Some of a better harvest in Ompundja constituency



African Bollworms-collected by a farmer as a control measure

Constituencies

Ongwediva

Despite late and poor rainfall performance this

season compare to the previous season, majority of farmers were able to cover up to 93% of their crop fields, indicating a decrease of about 5% of area planted same time last year. Although crop germination was good as a result of good rainfall received in February and March, the rainfall stopped early than expected. This has affected the grain quality and the harvest in general. Therefore, the crop harvest this season has declined drastically. In that case, pearl millet has decreased by 18% of last

season's harvest while sorghum went down by 20% below last season's harvest. Furthermore, the non-cereal crops have also performed poorly this season apart from cow peas which showed an improvement compared to last year. Cases of Armoured bush crickets were highly reported in the constituency with minimal to moderate damage. Sporadic cases of False army worms were also reported during the dry spell period, while American bollworms were reported in Onamutayi village during grain maturity period, but the damage was minimal.

Livestock diseases reported at the time of the assessment were internal parasites, diarrhoea and abortion in goats. Farmers have indicated that most of their goats have died, unfortunately these cases were not reported at the veterinarians and animal technicians in the region. Farmers were then advised to report such cases to the Agricultural Development Centre in the constituency or to the nearest veterinary office. Grazing is fairly available although it is dry and with low nutritional value. Livestock are generally in fair to good body condition but goats are in a poor to fair body

condition as a result of internal parasites and diarrhoea. Water availability is satisfactory as most earth dams still have water to sustain mostly the livestock. Moreover, some earth dams in the constituency need to be excavated as they are too muddy and no longer hold water for a longer period.

On the household food security, the situation has improved following the recent harvest. However, for majority of farmers, the current harvest is not sufficient to sustain them until the next harvest as it will be depleted between December 2022 and January 2023.

Oshakati East

Like other areas in the region, this constituency received sporadic and poor rainfall this season compared to the previous season. The rainfall has also ended prematurely while crops were at maturity stage, affecting the grain quality. Despite the late rainfall and dry spells, majority of the farmers were able to finish planting their crop fields covering 100% of the total crop field. Most farmers in this area have planted the improved seed (Kashana and Kangara) and only few used the local variety. As a result, pearl millet production has slightly increased by 15% of last season's harvest while sorghum declined by 25% below last season's harvest. The harvest for non-cereal crops has generally reduced, but bambara nuts are slightly better compared to other non-cereal crops. Isolated cases of bollworms were reported in the constituency with minimal to moderate crop damage, during grain formation and maturity stages. As a way of controlling these pests, farmers have used hand-picking method which according to farmers has helped them to better the situation.

On livestock health, cases of diarrhoea and scabies

in goats were widely reported throughout the constituency and this has led to poor small stock body condition. Cattle are in good body condition while grazing is fair in the open grazing areas and good in the enclosed areas. Water is available as most earth dams still have water, especially for livestock. Regarding the household food security, indications are that the current harvest is likely to last until the next harvest for majority of farmers.

Oshakati West

As it was noted in other constituencies in the region, farmers indicated the 2021/2022 rainfall performance was poor than the last season. Farmers also emphasized impacts of a severe and prolonged dry spell in January and February, causing wilting of crops and farmers had to replant several times. Despite that, most farmers managed to cultivate at least 86% of their crop fields, indicating that they could not cover the remaining area because they were discouraged by the poor rainfall received. The current crop harvest indicated a significant decline in the expected harvest where pearl millet production is estimated to have declined by 22% and sorghum is down by 25% less than last season's harvest. Moreover, harvest for non-cereals such as legumes and melons are also reported to be less than last season. Isolated cases of crop pests reported include American bollworm, armoured bush cricket and quelea birds in Uuthilindindi and surrounding villages.

No major livestock diseases were reported during time of this assessment, but conditions such as suspected cases of botulism in cattle, diarrhea and abortion in goats were reported in Uuthilindindi, Oshitowa and surrounding villages. Both livestock and grazing condition in the area are good, although there are fears that the pasture might become depleted as it is not enough and it is of poor quality.

Water availability especially for livestock is said to be limited since most catchment areas are dry due to poor rainfall received in the area. On the household food security, the situation has improved following a recent harvest. Most households are still consuming from last season harvest, of which if they combine it with the current harvest, it will sustain them until the next harvest in May 2023.

Ompundja

The 2021/2022 rainfall season has been poor with sporadic, erratic and insufficient rainfall which has affected crop production. The early succession of rainfall has affected the quality of grain and farmers could not attain good crop harvest this season. Crop estimates indicated a reduction of 15% and 13% for pearl millet and sorghum respectively, compared to the previous season's harvest. Furthermore, non-cereal harvest has also decreased apart from cow peas which has performed better than melons and bambara nuts. Planted area is estimated at about 98% of the cropped area which is about 3% higher than corresponding period last season. No major crop pests reported this year apart from quelea birds at the time of harvesting.

On livestock health, few cases of abortion in goats were reported especially in the constituency. Furthermore, goats are said to be in a fair body condition while large stock are in a good body condition. Grazing is good in the constituency which according to farmers is due to a limited number of livestock as most farmers have lost their livestock in the previous drought episodes. Water availability for livestock is satisfactory, although some catchment areas are drying up while some have salty water. Therefore, the area might face water challenges during the dry season.

The situation on household food security has

improved so far, following a recent harvest. Although the harvest has declined, it is estimated to last up to the next harvest, when supplemented with the last season stock. Moreover, households are constantly buying maize meal from the market to supplement their limited food stock.

Okatana

Like most constituencies in the region, the 2021/2022 rainfall season is reported to have been poor in terms of distribution and the amount. Poor rainfall performance was seen in a form of sporadic and insufficient rainfall coupled with prolonged dry spells. As a result, majority of farmers are expecting reduced harvest this year, especially for pearl millet. Crop estimates for this area showed that, pearl millet expected harvest is set to decline by 28% of last season's harvest, while sorghum is set to increase by 13% above last season's harvest. Average planted area is estimated at 94% of the cropping field, indicating a 5% more than the area planted last season. Crop pests reported included isolated cases of aphids on cowpeas, armored bush crickets and quelea birds on pearl millet, however, their impacts are said to be minimal.

Grazing condition was noted to range between fair to good in most places, but the pasture is dry and off poor quality due to the dry spell. Livestock body condition is good and no livestock diseases were reported during time of this assessment. Water for livestock consumption is available from the earth dams which is estimated to last until August this year, but pipelines are also available in the constituency as sources of water. Majority of households are still dependent on their last season's food stock and with the addition of the current harvest, this is able to sustain them until next harvest in May 2023.

Uukwiyu Uushona

In contrast to other constituencies, the rainfall performance this season was essentially the same as last season's rainfall, according to farmers. Despite the dry spells and rainfall uneven distribution, the average planted area was estimated at 97% of the cropping area, which is an increase of about 4% compared to the previous season. According to crop estimations, the harvest of pearl millet increased by 15%, whilst sorghum decreased by 33% of the previous season. The decrease in sorghum is mostly attributed to poor germination and erratic rainfall as well as dry spells experienced this season. Furthermore, the harvest for non-cereals is better compared to last season. As for crop pests, Armored Bush Crickets were extensively reported in the area at the conclusion of the harvesting period, but with minimal crop damage.

Although livestock are in good condition, grazing is however not enough, but water is available as most water catchments areas still have enough water and is estimated to sustain livestock up to November 2022. Suspected cases of internal parasites were widely reported in the area and have killed a number of goats. Farmers were advised to de-worm their small stock in order to control the internal parasites. The situation on food security is currently satisfactory after a recent harvest and most households were still dependent on last season stock for food access at the time of this assessment. According to households, the current harvest is adequate to last up to the next season's harvest.

Okatjali

This area received good rainfall at the beginning of the season and germination was good. However, the prolonged dry spells experienced in January have negatively affected crops and farmers had to replant several times. As a result, farmers obtained poor crop

harvest this year, which also resulted from the early cessation of the rainfall. The revised harvest estimates for this constituency indicated a reduction in both pearl millet and sorghum harvest, whereby pearl millet decreased by 21% whereas sorghum reduced by 41% below last season's harvest. In addition, the harvest for non-cereal crops this season is poor in comparison to last the season, particularly for bambara nuts and cow peas. Melons on the other hand has performed better. The average planted area was estimated at 100% of the cropping area which is almost the same as the planted area same time in the previous season.

No crop pests were reported in the area. Internal parasites in small stock were reported in the area at the time of this assessment while grazing and livestock were also noted to be in good condition. Water is abundantly available as most catchment areas had enough water by the time of the assessment but may not sustain livestock until the next rainfall season. With regards, to the household food security, the situation is satisfactory following a recent harvest and despite the below average harvest obtained, the combined stock is expected to last until the next harvest.

Ondangwa Rural and Ondangwa Urban

November. The season was however coupled with prolonged dry spells during January and much of February. As a result, farmers replanted several times. Nevertheless, farmers were able to cover about 83% of their crop fields, a 10% lower than the planted area same period last season. As the rainfall season progressed, rainfall did not improve and it has caused a reduction in the harvest for both pearl millet and sorghum by 27% and 25% below last season's harvest, respectively. The non-cereal crops have also performed poorly this season. No crop pests were reported in the area.

There were no livestock diseases by the time of the assessment, and livestock body condition was good. Grazing on the other hand ranged between fair and poor as no sufficient rainfall was received to improve pasture establishment. Water for livestock is available as most water catchments still have water although not enough to last until the next rainfall season. For household food security, it was noted to be satisfactory as households are depended on their own production for food access. Furthermore, the current harvest, though lower than last season's, is expected to last till the next harvest in May 2023.

Uuvudhiya

According to farmers, this area received productive rainfall late January as opposed to normal start of the rain in November. The rainfall was also unevenly distributed, little when compared to last season and coupled with prolonged dry spells most of February and March, which then affected germination, flouring and grain quality formation of most crops. On average, most farmers were able to cover about 98% of their crop fields, which is about 4% more than the corresponding period last year. Crop estimates indicated that, pearl millet harvest this season is about 5% below last season's production. However, sorghum production on the other hand showed an improvement in the harvest of 10% above last season's poor harvest. Apart from poor rainfall performance, which is a major cause of poor harvest, farmers added that the local seed variety planted by some farmers particularly pearl millet have also contributed to poor grain quality and consequently harvest. Furthermore, non-cereal crops were reported to be generally poor when compared to last season, especially beans and melons. Crop pests reported included Aphids and quelea birds at Engombe and surrounding villages.

No major livestock diseases were reported at the time of this assessment. Livestock body condition and pasture were noted to be good, but farmers are concerned that the grazing will be deteriorated much earlier than usual due to overgrazing. Water for livestock consumption was noted to be satisfactory, with the main source being the earth dams, swamps and pipeline. On the household food security, the situation was noted to be satisfactory following the recent harvest. According to most households interviewed, this improvement is significant and expected to last till the next harvest in May next year, when combined with the previous year's harvests that they reportedly still have in stock.

Okaku

Farmers described this season's rainfall performance and distribution poor as compared to the previous season, as it was coupled with prolonged dry spells in the first half of the season, extending to March. This did not discourage farmers from ploughing and planting their crop fields, and majority of farmers managed to plant 100% of the cropped area, on average. Given the poor rainfall, farmers did not attain good harvest this season, and when compared to the previous season, pearl millet production has gone down by 25%, while sorghum increased with 6%. Except for cowpeas and melons, the production of other non-cereal crops has declined this season compared to last season due to the dry spells experienced. Cases of bollworms were broadly reported in the area but according to farmers, the damage caused was insignificant.

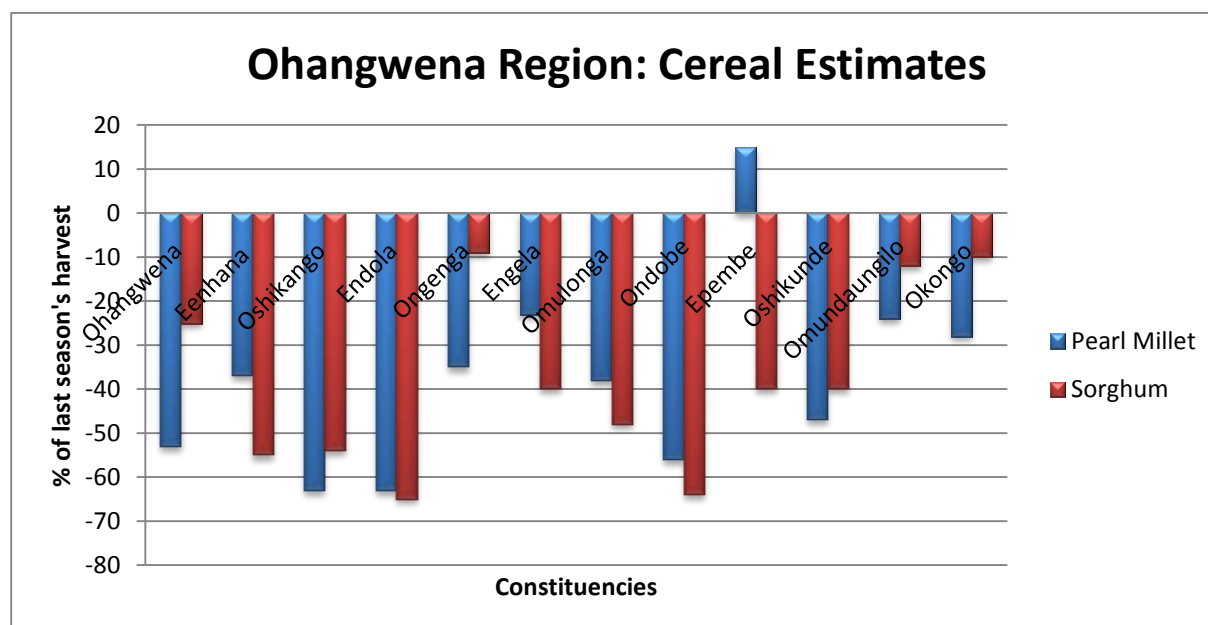
Internal parasites in small stock were the most prevailing livestock disease in the area at the time of this assessment. However, grazing and livestock body condition were still good. Farmers indicated that most catchments areas had little to no clean water as they are about to dry up, therefore, the supply of water for animals will be a concern in the

next months. In terms of food security, households are still consuming from their own production and the recent poor harvest, once combined with the previous stock, can last until the next harvest.

7.5. Ohangwena Region

The region noted a delayed rainfall with severe and prolonged dry spells from the onset of the season until January, which have consequently resulted in reduced crop harvest compared to the previous season. According to the revised crop estimates, aggregate cereal indicated a 36% reduction of last season's harvest, and still 28% below the average production. In particular, pearl millet production showed a reduction of 35% below last season's harvest and 32% below the average production. Furthermore, sorghum has also reduced drastically below last year's production and average production by 40% and 33%, respectively. In addition, non-cereals such legumes, melons and squash have also performed poorly this season but melons are slightly better than last season. Average planted area is estimated at about 93% of the cropping area, reflecting an increase of about 3% when compared with the corresponding period last year and 2% above the average planted area. On the crop pests, American Bollworms were widely reported in the region feeding on grains with minimal to moderate damages reported.

Figure 11: Summary of the revised cereal harvest estimates for Ohangwena region



Livestock disease and conditions reported in the region included few cases of Elephant skin disease in cattle, Parvo virus and TVT (cancerous tumors) in dogs, Infectious Coryza in chickens, Mange and Cytocercosis in goats, Sweating sickness in calves as well as Preputial prolapse in cattle (very common). Furthermore, cases of Hypocalcemia (lack of minerals and vitamins), Abscess, internal parasites as well as Vaginal & Uterine prolapse were also reported.

Grazing is fair in the region. Although livestock were grazing in the crop fields after the harvest, this is short lived and will not sustain livestock for long. Farmers in the eastern part of the region have already started to acquire movement permits to move their livestock to better grazing areas. The water supply situation is satisfactory as most water catchments mostly earth dams in the west, and boreholes and wells in the eastern part of the region still have water, but some catchment areas are likely to dry up before the next rainfall season. Livestock body condition is ranging between fair in areas with fair grazing and good in areas with good grazing. On the household food security, the situation has slightly improved after the recent harvest as most households are currently depending on the current harvest. However, this improvement is only short lived as the harvest on average is estimated to last only up to January 2023 for majority of households. Furthermore, prior to the harvest, households from different constituencies have approached the Regional Council Office for food assistance and at the time of this assessment, the office had **18,556 households** which are food insecure and have registered for possible food assistance.

In order to ensure efficient and effective service delivery, the regional Agricultural Extension Office is requesting the management of the Ministry to improve the transport situation in the region, as the current situation is hampering the region's performance in terms of extension service delivery. As it stands, farmers that benefits from the extension services are mainly those that are in a vicinity of the Agricultural Development Centers.

Figure 12: Crop harvest in Ohangwena region



Poor quality grains in Ondobe constituency-Ohangwena region



Ohangwena constituency-Ohangwena region

Constituencies

Ohangwena

This area received poor rainfall performance for the during the 2021/2022 rainfall which was characterised by prolonged dry spells, sporadic and insufficient rainfall. In addition, rainfall started late and stopped early as expected. As a result, the grain quality as well as harvest in general is affected negatively, with pearl millet production estimated to have decreased by 53% and sorghum by 25% of last season's harvest. Furthermore, harvest for non-cereals has also declined compared to the previous season. On the planted area most farmers have managed to cover about 93% of the cropping area, which is below by 4% of last season's area planted. Crop pests reported this season are bollworms mainly in Okelemba and the surrounding villages during grain formation and maturity periods. However, the damage was insignificant. Regarding the household food security, the situation has improved, following a recent harvest. However, this improvement according to farmers will only last for few months as the current harvest is estimated to be depleted between December 2022 and January 2023.

Grazing and livestock body condition is fair and was also affected by poor rainfall performance, in particular the prolonged dry spells. On the other hand, water is available as most earth dams and wells still have water to sustain livestock.

Eenhana

This area received sporadic and erratic rainfall coupled with dry spells in December and most of January and February. This interrupted the ploughing activities and most farmers were only able to cover about 84% of their total crop fields which is 4% lower than area planted same time last year. The revised production estimates for pearl millet

recorded a decrease of 37% while sorghum decreased by 55% below last season's harvest. Non-cereal crops especially melons are better than the previous season, while cow peas and bambara nuts are poor compared to the previous season. Moreover, the southern side of the constituency is better than the rest of the constituency in terms of the harvest. Cases of African Bollworms were reported in the constituency at the time of grain formation but the magnitude of infestations is said to be minimal. Farmers have indicated to have used traditional means to control them by hand-picking and burning them.

No major livestock diseases reported in the constituency apart from internal parasites in small stock, affecting their body condition. The large stock however, are reported to be in fair body condition. Grazing is generally fair but good in enclosed/confined areas. Water supply situation is satisfactory as there is still rainwater available in the water catchment areas, but it is expected to sustain livestock only up to around August 2022.

The household food security is stable following the recent harvest although it is not sufficient to sustain households until the next harvest. This harvest is estimated to only last up to December and January and households will then rely on the market purchases thereafter.

Oshikango

The constituency received poor rainfall since the onset of the season, which according to farmers only improved in February. Moreover, compared to the previous season, the rainfall was erratic and coupled with severe dry spells which resulted in a decline in the harvest. Nevertheless, the planted area was

estimated at 90% compared to 78% of the area planted during the 2020/2021 cropping season. The revised crop estimates indicated a massive reduction in the crop harvest whereby pearl millet decreased by 63% while sorghum decreased by 54% below last season's harvest. Furthermore, the harvest for non-cereals is also poor but melons are slightly better. Cases of Bollworms were reported almost in all corners of the constituency, particularly during the dry spells in February and March, however, the damage was insignificant to minimal.

At the time of this assessment, there were significant reports of livestock diseases, and livestock and grazing were both in a fair condition. Most rain-fed reservoirs had water at the time of the assessment. The household food security has slightly improved following the recent harvest as majority of households are now depending on the harvested stock for food access. Due to the reduced harvest, the stock will not sustain households until the next harvest as it can only last until December 2022 for most of households.

Endola

According to farmers, the current rainfall season was poor than the previous season, and since the beginning of the season, rainfall has been inconsistent, irregular, and insufficient, with extended dry spells in the middle of January and February leading to most farmers replanting about two or more times. As a result, crop production was affected and the crop estimates indicated a massive loss of 63% for pearl millet and 65% for sorghum. It is also reported that the harvest for non-cereal crops is low, primarily for Bambara nuts, whereas cowpeas are better despite being affected by cutworms during the dry spell period. Average planted area is estimated at 95% of the cropped area, which is 5% lower than area planted same period last season.

Many households have depleted their last season's harvest and have been depending on market purchases for food access. In addition, only few households are reported to still have grains from the previous harvest which is being supplemented with market purchases. However, the situation has slightly improved after the just ended harvest, although, not enough to last until the next harvest in May 2023. No major livestock diseases were reported at the time of this assessment. Livestock and grazing are both a fair condition fair throughout the area, while water is satisfactory as there are still some earth dams with little water.

Ongenga

Most areas of this constituency experienced poor rainfall performance during the 2021/2022 rainfall season. According to farmers, the season was characterised by delayed rainfall, extended dry spells, insufficient rainfall, and a premature cessation of the rainfall season. As a result, an analysis of the harvest estimate revealed a decline in the harvest for both pearl millet and sorghum by 35% and 9% of last season's harvest respectively. Harvest for non-cereal crops specifically the bambara nuts was also reported to be poor, while cowpeas performed better. Despite delayed and poor rainfall performance, farmers have managed to plant all 100% of their crop fields compared to 93% covered in the previous season. The crop pests reported in the constituency are Bollworms between February and April but the damage is insignificant.

There were no serious livestock diseases recorded at the time of this assessment, with the exception of internal parasites mainly in goats. Grazing is poor in all parts of the constituency and it is anticipated that it will get worse throughout the dry season. Water is available in most catchment areas, as a result of good inflow during the 2nd half of the season. The

physical body condition of livestock ranges from fair to good. The household food security has improved after the recent harvest, and some households still have grains from the previous harvest which is estimated to last until end of July this year. However, there are households who have completely depleted their last season's harvest and have already started consuming from the recent poor harvest. Given this season poor harvest, there is a high chance for majority of households to face food insecurity in the course of the year before the next harvest in May 2023.

Engela

Although this season's rainfall performance was poor compared to the 2020/2021 season, farmers tried to cultivate and plant 100% of the crop fields, compared to 95% planted last season. The sporadic rainfall experienced this season resulted in a reduced harvest for pearl millet as well the non-cereal crops. Sorghum on the other hand indicated an increase of 60% above last season's harvest. As such, both pearl millet and sorghum declined by 23% and 40% below last season's harvest. Armoured bush crickets were experienced by most farmers at grain maturity and harvesting periods but with no severe crop damages.

At the time of this assessment, the only livestock disease reported in the area was internal parasites in goats. While livestock body condition was assessed to be good, grazing is poor and will not sustain livestock for long. Farmers are therefore worried about the survival of the livestock especially during the dry season. On the other hand, water availability is currently not a major concern as most water catchments still have water. In terms of food security, the situation is currently satisfactory following the recent harvest, although it will not sustain households till the next harvest.

Omulonga

Farmers reported that, the season was dominated by sporadic and insufficient rainfall since the beginning of the season until early February. Good rainfall was only received late February to early March. Furthermore, the rainfall stopped abruptly in the first week of April and this has affected the grain quality. Majority of the farmers indicated that the prolonged dry spell experienced in the area contributed to poor production for both pearl millet and sorghum. Nevertheless, the revised crop estimates indicated a drop in both pearl millet and sorghum production by 38% and 48% below last season's harvest respectively. This reduction is highly attributed to insufficient rainfall and early succession of the rainfall. In addition, the non-cereal crops are also poor compared to the previous season, but cow peas are better compared to the rest of non-cereal crops.

Despite erratic rainfall, farmers managed to cover about 84% of their crop fields, a reduction of about 11% of area planted at the same time last season. No severe cases of crop pests and diseases reported in the constituency apart from *Quellea* birds, with minimal to moderate damage. Following the recent harvest, household food is currently stable and the stock is likely to last until December to January 2023.

Livestock are in good condition especially large stock while small stock body condition is fair. This is due to internal parasites in small stock leading to diarrhoea in goats throughout the constituency. Apart from that, no other livestock diseases were reported. Grazing is fair in the open grazing areas while good in the enclosed areas. Farmers foresees the challenge regarding pasture availability as the grass has dried up and will not take livestock through the dry season. Meanwhile, livestock are grazing in the crop fields on crop residues. Water is available in

most of the earth dams and is likely to last until August to September 2023.

Ondobe

On average, most farmers were able to cover about 96% of their crop fields, following the prolonged dry spell that was experienced between December and early February. Farmers have indicated that the rainfall started very late and most of them only started with ploughing activities early February. In addition, the rainfall stopped earlier as expected and this has affected the grain quality and the harvest in general. Production estimate for both pearl millet and sorghum has reduced drastically compared to the previous season, by 56% and 64% respectively. The non-cereal crops such as melons, cowpeas and bambara nuts have also performed poorly this season, owing to insufficient rainfall. On crop pests and disease, there were no cases of pests reported in the constituency.

The household food security is currently satisfactory after the recent harvest. However, most households indicated that this harvest is poor and will not be able to sustain them until the next harvest, as it will be depleted between December and January. Households will then depend on the market thereafter, and the escalating food prices is a major concern to many.

Livestock diseases reported in the constituency include diarrhoea in goats. As such, goats body condition is ranging from poor to fair while large stock body condition ranges between fair to good. Grazing is also a major concern to farmers as it is deteriorating and the grass has dried up. Meanwhile, livestock are grazing in crop fields from the crop residues which is only for a month or so. Water availability is satisfactory and most earth dams still have enough water to sustain livestock. Some earth

dams however, do not hold water for a longer period and might dry up before the next rainfall season.

Epembe

Majority of farmers were able to cultivate over 90% of their crop fields, despite poor rainfall conditions received this season. The rainfall performance and distribution were uneven in the constituency, such that some villages received too much rainfall that left the crop fields submerged and crops wilted. On the other hand, there are some villages that received very little rain coupled with prolonged dry spell, and this had an effect on grain formation and quality. Nonetheless, most pearl millet farmers were able to attain a good harvest. Crop estimates indicate an increased harvest in pearl millet of 15%, while sorghum has been drastically affected by too much water and thus decline by 40% of last season's harvest. It was further noted that, harvest for non-cereal crops such as legumes and melons was also reported to be below last season. Crop pest reported includes the American bollworms on fresh pearl millet grains in Omishe and surrounding villages. Moreover, quelea birds were widely reported in the constituency.

With regards to livestock health, no major diseases were reported apart from conditions such as mange, diarrhea, and foot rot mostly in small stock from Omishe and surrounding villages. The livestock body condition is in a range of fair to good. Water availability was noted to be available mainly from earth dams, boreholes and pipeline. On household food security, the situation has improved follow the recent main harvest. According to household owners, they have depleted their last season harvest. The current harvest is insignificant and is expected to sustain them only until December this year.

Oshikunde

According to farmers, the 2021/2022 rainfall season was poor and below last season. Despite late start of the rainfall season, it was also coupled with a prolonged dry spell which then contributed to poor crop germination and consequently poor grain formation and harvest. Many farmers have indicated to have noted a reduction in their crop harvest which is below last season's harvest, mainly because of poor rainfall performance. In this regard, pearl millet production noted a decrease of 47%, while sorghum is noted to have decreased by 40% below the last season's harvest. Moreover, harvest for non-cereal crops were also reported to be below last season, especially cowpeas. The planted area is estimated at about 100% of the cropping area. No major crop pests were reported this season, except isolated cases of cutworms and aphids on beans.

No major livestock diseases were reported at the time of this assessment. Despite very poor grazing condition which was negatively affected by poor rainfall performance, the livestock body condition is still good. Water for livestock was noted to be satisfactory, as it is available from the pipeline, boreholes and water catchment areas such as earth dams. On the household food security, the situation is worrisome as most household could not attain a good harvest, and the little that they have harvested can only sustain them until November this year.

Omundaungilo

As it is being reported in other areas in the region, this constituency have also received a below rainfall in terms of distribution and amount when compared to the 2020/2021 rainfall season. The season was also coupled with prolonged dry spells mostly in December and January, which negatively affected most of the crops germination and grain quality. Average planted area is estimated at 85% of their

cropping area, 15% more than the area planted previous season. Many farmers received poor crop harvest with pearl millet declining by 24% and sorghum is down by 12% of last season's harvest. Harvest for non-cereals was also reported to be poor this season. Cases of African army worms, cutworms and ants was reported in the area, but the damage is said to be minimal.

No major livestock diseases were reported at the time of the assessment, except isolated cases of diarrhea in small stock. Grazing was noted to be ranging from Fair to poor throughout the area but livestock were reported to be in a good condition. Water consumption for livestock is a challenge due to the salinity and the distance to the water points such as boreholes is far for livestock. On household food security, the situation has improved following the recent harvest. However, this improvement is expected to last only until December this year.

Okongo

As opposed to the excessive rainfall received in previous cropping season, the 2021/2022 rainfall season was characterized by prolonged dry spells and sporadic rainfall causing several replanting during December and January. Despite poor rainfall performance, on average farmers managed to cultivate about 95% of their crop fields which is 6% more than the area planted during the previous season. However, the revised cereal crop estimates indicated a reduction in the harvest, where pearl millet is said to have decreased by 28% and sorghum by 10% below last season's harvest. Farmers have indicated that, the grains are of poor quality as most of it did not fully mature, as a result of poor rainfall. The harvest for non-cereals was also reported to be below last season. With regards to crop pest, false army worms and quelea birds were reported, which

according to farmers did not make significant damage to their produce.

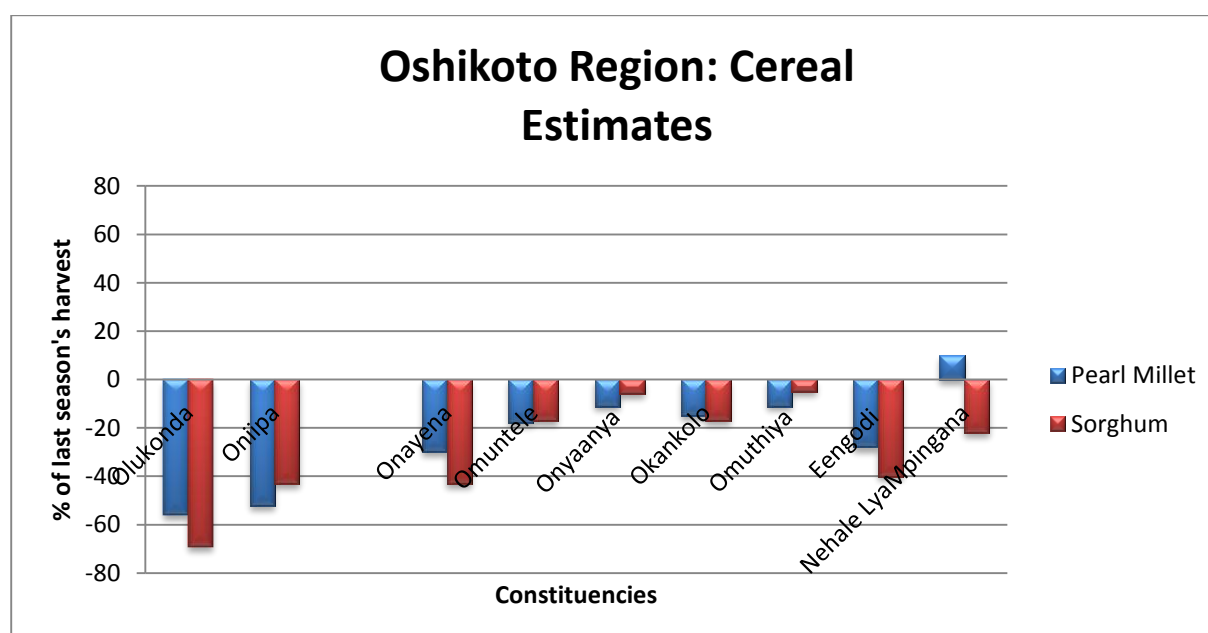
Water for human and livestock consumption is mainly available from Boreholes and wells, although in some areas these water points are far. Pasture condition was noted to be in a fair to poor state in the area. At the time of the assessment, livestock body condition was in a good state. No major livestock

diseases were reported to the assessment team. Despite the reduction in harvest this season, the recent harvest for majority of the household is sufficient to sustain them until next harvest when it's combined with last season's harvest, which they have indicated to still have in stock.

7.6. Oshikoto Region

The 2021/2022 rainfall season have been dominated by poor rainfall performance which was seen in the forms delayed onset as well as erratic rainfall and frequent prolonged dry spells in most parts of the region. The average planted area is estimated at 90% of the cropping area, which is about 5% lower than the corresponding period last year, and 4% below the average planted area. The revised crop estimates indicate a substantial reduction in the harvest with aggregate cereals decreased by 18% of last season's harvest and 10% below the average production. In particular, pearl millet production has reduced by 18% below last season's harvest and reduced by 13% below the average production. Furthermore, sorghum production showed a decrease of 17% of last season's harvest, and 31% below the average production. The harvest for non-cereals is good in some areas where better rainfall was received, especially cowpeas and melons. Crop pests reported included African bollworms mainly in Onyaanya and Omuthiya constituencies with moderate crop damage. Farmers were however assisted by the Agriculture regional office whereby affected crop fields were sprayed in order to minimise the damage. The Quella birds were also reported in various constituencies with no significant damages to both crops.

Figure 13: Summary of the revised cereal harvest estimates for Oshikoto region



Livestock diseases reported this time is mainly diarrhoea in goats which is suspected to be a result of internal parasites. These reports are from all corners of the region and many farmers

have lost a significant number of goats as a result. Isolated cases of Botulism were also reported especially in Omuntele area, while Onyaanya constituency had cases of rabies at the time of this assessment. Grazing condition was reported to be generally fair in the communal grazing areas while good in the enclosed areas. Water is satisfactorily available in most catchment areas such as boreholes, wells and pipelines and boreholes were in good working condition at the time of the assessment. The household food security situation is satisfactory following the recent harvest. Majority of households were also depending on the previous during the assessment period and with the current stock, the harvest is expected to sustain them till the next harvest in May next year. Hotspots of food insecurity is however expected as in some areas of the region towards the end of the year as not all farmers could attain a better harvest.

The regional Agricultural Extension Office is requesting the management of the Ministry to improve the transport situation in the region in order to ensure efficient and effective service delivery.

Figure 14: Crop harvest in Oshikoto region



Effects of quelea birds in Onyaanya constituency



Nehale LyaMpingana constituency-Oshikoto region

Constituencies

Olukonda

Like other constituencies in the region, this constituency was not spared the effect of poor rainfall performance and farmers indicated that the season was characterized by erratic and insufficient rainfall as well as prolonged dry spells most of January. Planted area is estimated at 96% of the cropping area, reflecting an increase of about 2% of last season's ploughed area. Analysis on the crop harvest indicated that, most farmers are expecting poor crop harvest which according to farmers is below previous season. Both pearl millet and sorghum production noted a reduction in harvest of 56% and 69% below the last season's harvest, respectively. Furthermore, non-cereals production was also noted to be poor, below last season's production. No harmful crop pests were reported during time of this assessment.

Grazing was reported to be fair and off poor quality. Farmers have also indicated that the available grass is not enough, and it will get depleted before December. Water for livestock is not a challenge in the constituency, as it is available from earth dams, pans and pipelines. On animal health, no major livestock diseases were reported. Livestock body condition is good. Regarding household food security, the situation has improved following the recent harvest. However, this harvest according to farmers is only expected to last at most October this year.

Onayena

According to farmers, the 2021/2022 rainfall season has been poor in terms of distributions and amount. Farmers further indicated that poor rainfall performance was seen in terms of sporadic and insufficient rainfall coupled with prolonged dry

spells most of January and February. According to the crop estimates, pearl millet and sorghum production declined significantly by 30 % and 43% of last season's harvest, respectively. Furthermore, harvest for non-cereal was noted to be better than last season. Despite the fact that farmers cultivated their crop fields, some households were reported to receive no harvest at all. Average planted area is estimated at 81% of the cropping area, a 15% less than the area planted last season.

No major crop pests and livestock diseases were reported at the time of the assessment. Livestock body condition is good, although the pasture was noted to be of poor quality and not enough for the season. Water for livestock is not a challenge in the constituency, as it is available from earth dams and pipeline. Regarding household food security, the situation is stable for households that harvested. Although a reduced harvest is recorded, households indicated that it is significant to take them until next harvest in May 2023 when combined with the last season's harvest that they are still consuming.

Onyaanya

According to farmers, the 2021/2022 rainfall season was generally poor with prolonged dry spells in January. It later improved in February to early-March but it resulted in some crop fields water-logged and this negatively affected the crop growth. Crop estimates for this area indicate a reduction in the expected harvest with pearl millet estimated to have declined by 11% and sorghum is down by 6% of last season's harvest. Planted area is estimated at 77% of the cropping area, 18% less than the area planted last season. According to the agricultural extension official responsible for the constituency, non-cereals have also performed below last season, as a result of excessive rainfall received towards end the season. Quelea birds were also reported in the

constituency with minimal to moderate crop damage.

Grazing condition was noted to be very poor in the grazing areas, except in the fenced off areas where it is fair and this is attributed to poor rainfall received. Otherwise, the livestock body condition is in a good state and water is available in some ponds, wells and pipeline. On livestock health, cases of internal parasite in small stock was widely reported in the area. The household food security situation was noted to be satisfactory following the recent harvest. The said harvest when it's combined with the previous year's harvest, will be able to sustain them until the next harvest in May 2023.

Oniipa

Like other constituencies in the region, this area also suffered poor rainfall earlier in the season as productive rainfall was only received in the last quarter of the season. According to farmers, the rainfall received was coupled with prolonged dry spells experienced mostly in the first half of the season and the shortly ending of the rainfall that negatively impacted crop growth and subsequently grain quality. Average planted area is estimated at 95% of the cropping area which is the same as the area planted last season. Crop estimates for this area indicated a reduction in the expected harvest with pearl millet production set to decrease by 52%, while sorghum indicated a reduction of 43% below last season's harvest. Harvest for non-cereals was also reported to be poor this season, compared to last season production. Farmers reported that their crops also suffered the effect of aphids on cowpeas and quelea birds on pearl millet during March, but the damage is said to be minimal.

No major livestock diseases were reported at the time of the assessment. With regard to grazing and livestock body condition, livestock are in a better

condition and so is the grazing. According to farmers, grazing is however not good as compared to the same time last season. Some earth dams still have water but pipelines are also available for livestock consumption. Regarding household food security, the situation has improved following the recent harvest. However, the current harvest is estimated to sustain them only until December 2022.

Eengodi

Rainfall this season was delayed as it started late, and was not evenly distributed. In general, the rainfall performance was poor compared to the previous season as it also had prolonged dry spells which affects crop development and consequently the harvest. Furthermore, farmers have replanted several times as crops wilted due to heat stress during the dry spell period. Contrarily, some areas such as Oshitunga and nearby villages received excessive rainfall during February causing water logging in a number of crop fields. Despite all that, farmers have managed to plant about 95% of their crop fields this season, which is similar to the previous season. The revised crop estimates for the 2021/2022 cropping season indicated a massive reduction in the harvest for both pearl millet and sorghum, whereby pearl millet reduced by 28% while sorghum decreased by 40% below last season's harvest. This huge reduction is attributed to severe dry spells experienced in one side of the constituency as well as water logging on the other side. Moreover, cowpeas and squash production have performed better in some areas compared to the previous season.

Livestock body condition and grazing is fair due to erratic rainfall received this season. No livestock diseases reported in the constituency. Water availability is satisfactory with boreholes and wells being the main water source. Household food

security is satisfactory since majority of the household still have stock from the previous harvest. Nevertheless, the current poor harvest will not last until the next harvest for the majority of households. Few households have however indicated that the combined stock for the two seasons is likely to sustain them until the next harvest.

Okankolo

The 2021/2022 rainfall season for this constituency was unevenly distributed and coupled with prolonged dry spell during December and most of February to middle of March. As a result, crop germination was poor and most farmers had to replant twice on average. Despite poor rainfall this season, farmers did not get discouraged and planted most of their crop fields at 100% compared to 96% area planted during the 2020/2021 season. The revised crop estimates show a significant decrease of 15% in pearl millet production while sorghum decreased by 17% of last season's harvest. Furthermore, the non-cereal crops such as melons and cowpeas have slightly improved as compared to the previous season's production.

Grazing and water is of a great concern for farmers in this area. There is no enough grazing for livestock and this might affect livestock during the dry season, while Livestock body condition is ranging between fair and good despite inadequate grazing. Water on the other hand is available in few catchment area and the situation is likely to worsen before the next rainfall season. Cases of internal parasites have been widely reported in the constituency but mostly in small stock and as such small stock body condition is not so good. After this season's harvest, the household food security has improved although the harvest is lower in comparison for the previous season especially for the pearl millet. Prior to the harvest, most households were relying on market

purchases for food access. Nonetheless, the harvested stock is estimated to last until next year, but likely to be depleted between February and March 2023.

Nehale LyaMpingana

The 2021/2022 rainfall season was slightly better compared to 2020/2021 season and majority of farmers managed to plant larger portions of their crop fields. As such, the planted area was estimated at 100%, compared to 89% of the area planted in the previous season. The revised production estimates for both pearl millet and sorghum indicated an increase in the harvest with pearl millet production estimated to have increased by 10% while sorghum reduced by 22% of last season's harvest. Moreover, harvest for non-cereals is generally good, much better than the previous season. On crop pests, few cases of false army worms were experienced with insignificant damage, however Armoured bush crickets were widely reported during March with moderate crop damage.

Grazing ranges between fair and good while livestock body condition is generally good throughout the constituency. The boreholes as a main water source in this area are reported to have enough water by the time of the assessment. Isolated cases of botulism in cattle were reported around Olukupa area. On household food security, majority of households were still depending on the previous season's harvest, and with the current harvest, the stock is enough to last until the next harvest.

Omuntele

Rainfall started late November culminating in good crop germination. Heavy rainfall was experienced during January to March and many crop fields were submerged. This has in return affected weeding activities as well as crop development, which led to

a reduced harvest for both pearl millet and sorghum. Crop estimates indicated that pearl millet has reduced by 18% while sorghum reduced by 17% of last season's harvest. Non-cereal crops such as cow peas, melons and bambara nuts harvest has also reduced this season in comparison to last year. On average, farmers were able to cultivate and plant 95% of their crop fields, a reduction of 3% when compared to the corresponding period last season. Crop pests reported in the constituency are mainly Armoured bush crickets during grain maturity until the harvest period. According to farmers the pest infestation was not severe and crop damage is estimated to be moderate.

Grazing condition is fair to good, while livestock body condition is currently good. No major livestock diseases reported in the area at the time of the assessment. However, sporadic cases of internal parasites and diarrhoea in goats were reported in the area, whereby some farmers lost their goats as a result. Farmers are therefore, encouraged to make use of the Agricultural Development Centre in the constituency or the regional veterinary office, to report such cases. Water is currently not a big concern as most earth dams and wells still have water, although will not take livestock through the dry season to the next rainfall season.

The household food security has improved and the recent harvest is likely to reach the next harvest if supplemented with maize meal from the market.

Omuthiya

This area received good rainfall compared to last season but it became excessive in February and March, which resulted in the submerging of most crop fields. Farmers also indicated that the rainfall

ended sooner than expected while crops were at the maturity stage. As such, grain quality and the general harvest was negatively affected. On average, most farmers managed to plough about 94% of the total cropped area, which is 1% lower than area planted same time in the previous season. The crop estimates for Pearl Millet have recorded a reduction of 11% while sorghum decreased by 5% of last season's harvest. Furthermore, the non-cereal crops especially cowpeas and melons have performed well this season, compared to the previous season. Pests, such as Armoured bush crickets were widely reported by farmers, which were experienced during February and March, as well as sporadic cases of false army worms earlier in the season.

Regarding livestock health, cases of internal parasites and diarrhoea in goats were widely reported in the constituency. Grazing is good in the eastern part of the constituency while fair in the west. Good grazing is however more visible in the fenced off areas, and livestock body condition ranges between fair and good. However, livestock body condition was generally reported to be ranging from fair to good. Water availability is available in the boreholes and earth dams and according to farmers, some earth dams are already drying up especially in the western part of the constituency. Household food security is generally good as households were still depending on the previous harvest stock. The current harvest stock will however, not be able to sustain households until the next harvest as it can only last up to January next year, for most households. Furthermore, households indicated that they will need to supplement their stock with market purchases to be able to reach to the next harvest.

8. NATIONAL CEREAL PRODUCTION SITUATION ANALYSIS FOR 2021/2022 CROPPING SEASON

The national aggregate coarse grain production (white maize, sorghum, pearl millet and wheat) is presented in Table 3 below and is estimated at **151,723 metric tons**, reflecting a decrease of 1% of last season's harvest of 153,028 MT, but 23% above average production of 123,708 MT. This consist of 82,398 MT of white maize, 44,689 MT of pearl millet, 6,147 MT of sorghum and 18,489MT of wheat². The reduction in cereal production came as a result of a very poor harvest recorded in the major crop producing regions; following poor crop growing conditions that were seen in the forms of delayed onset of the rainfall season, erratic rainfall and prolonged dry spells experienced earlier in the season, as well as excessive rainfall in the last part of the season.

Table 3: Namibia: Total Cereal Production trend ('000 MT), 2021/2022 compared to a 22-year average (1999/2000 to 2020/2021) and 2020/2021 production.

Region/Sector	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	22-year average	2021/22 as % of average	2021/22 as % of 2020/21
Zambezi	5.6	3.5	7.5	2.5	2.1	7.4	7.9	1.7	11.2	15.3	11.1	8.2	36	-27
Kavango East & West	4.0	1.8	3.8	1.1	1.8	4.2	7.3	1.8	8.7	4.6	5.6	5.7	1	22
Omusati	12.6	3.2	7.4	3.3	4.7	13.1	21.7	1.1	22.1	10.7	8.2	14.5	-44	-24
Ohangwena	12.3	4.9	7.3	2.6	4.2	12.1	16.7	2.5	19.8	14.8	9.6	13.2	-28	-36
Oshana	13.6	4.4	8.9	3.3	2.2	9.4	16.0	0.5	16.4	12.1	9.9	9.1	10	-17
Oshikoto	20.2	11.5	18.6	5.8	7.0	20.1	24.8	3.4	28.3	17.5	14.3	15.9	-10	-18
Commercial	75.2	87.3	82.6	50.5	55.4	86.4	64.9	36.3	56.1	78.1	93.0	57.3	62	19
Namibia	143.4	116.6	136.1	68.9	77.5	153.2	159.3	47.3	162.5	153.0	151.7	123.7	23	-1

Compared to last season, all the major crop producing regions recorded a reduction in the harvest, except Kavango East and Kavango West regions which showed an increase of 22% of last season's harvest and 1% above average production. However, the commercial area has shown an improvement in the expected harvest which was reportedly caused by good rain experienced in the second half of the season, as well an increase in the planted area by many commercial producers.

The national planted area to coarse grain production in various parts of the major crop producing regions is presented in Table 4 below.

²This is a provisional estimate, since wheat is a winter crop and production thereof is ongoing.

Table 4: Namibia: Total planted area trend ('000 hectares) and 2021/2022 area planted estimates compared with a 22-year average (1999/2000 to 2020/2021) and 2020/2021 cropping season.

Region/Sector	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	20-year average	2020/21 as % of average	2020/21 as % of 2020/21
Zambezi	20.1	20.6	19.4	20.4	15.4	20.1	18.9	13.6	19.4	20.4	18.9	20.7	-9	-7
Kavango East & West	20.6	20.6	21.6	18.4	17.4	21.8	19.6	10.7	22.3	21.8	34.0	19.4	75	56
Omusati	73.4	61.5	78.0	64.3	74.4	83.5	78.9	49.6	77.1	81.7	81.7	80.6	1	0
Oshana	84.3	76.2	79.8	65.5	75.3	86.1	80.7	62.8	85.2	80.7	83.4	81.6	2	3
Oshana	35.1	33.2	35.1	30.8	33.9	35.9	37.4	26.5	35.1	36.7	37.1	39.3	-6	1
Oshikoto	60.1	54.1	58.1	54.8	56.1	60.1	57.4	7.2	55.4	62.7	59.4	61.6	-4	-5
Commercial	18.0	16.5	16.0	16.5	12.1	16.6	11.6	10.1	13.6	20.4	35.4	14.4	145	73
Namibia	311.6	282.7	308.0	270.6	284.4	324.2	304.7	180.5	308.2	324.4	349.8	317.6	10	8

Table 4 above shows the analysis of the planted area estimates in hectares. As indicated in the table above, the national total planted area for cereal coarse grain for the 2021/2022 cropping season is estimated at 349,804 hectares, reflecting an increase of 8% more than last season and 10% above the average planted area. Much of the increase is mainly from Kavango East and Kavango West regions, as well as from the commercial area due to the good rainfall performance experienced in those areas during the 2021/2022 rainfall season.

9. CEREAL FOOD SUPPLY AND DEMAND SITUATION

Table 5: Cereal supply and demand situation update

Namibia: Cereal Supply/Demand Forecast for 2022/2023 Marketing Year(May/April)				
('000metric tons)				
	Wheat	Maize	Millet/Sorghum	Total
Domestic Availability	28.1	89.1	51.5	168.7
Opening stocks (as at May2022)	9.7	6.7	0.7	17.0
Forecasted Production*	18.5	82.4	50.8	151.7
Total Utilization**	89.4	197.9	86.0	373.4
Food use	78.5	179.7	63.4	321.6
Losses and other uses***	0.9	8.2	7.6	16.8
Closing stocks (as at April 2022)	10.0	10.0	15.0	35.0
Shortfall to be covered by import	-61.3	-108.9	-34.5	-204.6
Commercial imports received****	33.3	6.8	0.0	40.0
After trade Deficit/Surplus	-28.0	-102.1	-34.5	-164.6

*Excludes cereal production for animal feed

**An average of 2.6 million people (NSA, 2021 projections.), each consuming 124 kg of cereals per annum

***Includes seed use and waste; excludes commercial livestock feed

After Trade Surplus/Deficit = Planned Imports - (Shortfall + Exports)

**** Imports are only for May and June 2022

Table 5 above presents the Cereal supply and demand situation for the 2022/2023 marketing/consumption period as from 1st May 2022 to 30th April 2023. The locally available cereals for the current marketing/consumption period is estimated at 168 700 metric tons. This comprises of 28 100 tons of wheat, 89 100 tons of white maize and 51 500 tons of pearl millet and sorghum. In contrast, the current cereal domestic availability is only about 45% of the domestic cereal requirement of 373 400, hence a total of 204 600 tons is needed to cover the shortfall, consisting of 61 300 tons of wheat, 108 900 tons of maize and 34 500 tons of pearl millet and sorghum. This deficit under normal circumstances is expected to be covered through commercial imports. At the time of this report, a total of 40 000 tons of coarse grains were received from May to June 2022, which consist of 33 300 tons of wheat and 6 800 tons of maize. There were no pearl millet/sorghum imports received during that period. As it stands, there is still a total deficit of about 164 600 tons of cereals which need to be covered through commercial imports during 2022/2023 marketing year.

According to the Namibian Agronomic Board, the supply of wheat to Namibia from European countries, specifically Russia and Ukraine has been heavily affected by Russia-Ukraine war. Nevertheless, the

country is currently importing wheat only from South Africa, but the import prices are very high. These sky rocketing prices are mainly felt by the consumers especially on wheat by-products and sunflower oil.

Meanwhile, South Africa where Namibia gets most of its maize imports, reported a reduction of 13.13% of last season's harvest. According to the South African Monthly Food Security Bulletin June 2022, the harvest is still sufficient for both local and export demands.

10.CONCLUSION AND RECOMMENDATIONS

10.1. Conclusion

The 2021/2022 rainfall season started off dry over most parts of the country with the exception of the southern regions (Karas and Hardap) where exceptional high rains were received from the start of the season with some areas received two or three times the usual rainfall amounts. The situation has however improved in the second half of the season when the bulk of the country experienced normal to above average rainfall by the end of February 2022.

The revised crop estimates indicated a reduction in the crop harvest below last season's harvest. Aggregate cereal estimates showed that, the country is expecting a slight decrease of 1% of last season's harvest, but 23% above the average production. Much of this improvement comes from the commercial areas where an increase of 19% above last season's harvest has been reported. Kavango west and Kavango East regions also recorded an improvement of 22% above last season's harvest

The households' food security situation is reported to have slightly improved, following a recent main harvest since the beginning of May this year, in the major crop producing regions of the country. Elsewhere in the country, food security is satisfactory in areas where better rainfall was received. However, hotspots of food insecurity are expected in regions such as Kunene, north central regions (Omusati, Oshana, Ohangwena and Oshikoto), Erongo, and part of Zambezi and Kavango East regions. This is due to the erratic rainfall received in those areas and the early cessation of the rainfall.

Grazing and water supply have improved in the most parts of the country where good rainfall was received, with grazing and livestock body condition ranging between fair and good. Moreover, grazing in Kunene, Erongo and Omusati regions has slightly improved from the drought conditions experienced last season.

10.2. Recommendations

Based on the findings of this assessment, the following recommendations are made for possible interventions and future assistance:

- Government should continue with the provision of the drought relief measures to households that are faced with food insecurity in Kunene, Omusati and Erongo regions until the situation normalizes.
- The following regions should also be considered in the provision of drought relief measures as from November 2022: Ohangwena, Oshana, Oshikoto, Zambezi (Linyanti, Judea Lyaboloma, Kabbe North and Kabbe South constituencies), Kavango West, (Ncuncuni and Kapako constituencies) as well as Kavango East region (rural part of Rundu urban constituency where much of the farming activities are confined).
- Regional Councils with the assistance of community leaders (village/settlement headmen) should identify the most affected and vulnerable households in those respective regions.
- Government through the Ministry of Agriculture, Water and Land Reform (Directorate of Water Supply and Sanitation Coordination) should ensure water provisions to the areas with limited water availability, such as Gam and Ovitoto settlements in Otjozondjupa region, Erongo region and any other area that may experience water shortages, when the need arises.
- Government through the Ministry of Agriculture, Water and Land Reform (Directorate of Agriculture Production, Extension, and Engineering Services) should ensure sufficient and timely provision of agricultural inputs (seed and fertilizers) and services (ploughing and planting) for the 2022/2023 cropping season.

11. ACKNOWLEDGEMENTS

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- Directorate of Agriculture Production, Extension & Engineering Services (DAPEES)
- Directorate of Veterinary Services (DVS)
- Agro-Marketing and Trade Agency (AMTA)
- Namibian Agronomic Board (NAB)
- Meteorological Service of Namibia (MNS)
- Office of the Prime Minister-Directorate of Disaster Risk Management (OPM-DDRM)
- Namibia Statistics Agency (NSA)
- Regional Councils
- Namibia Water Corporation Ltd (NamWater)
- Commercial Millers