Namibia Vulnerability Assessment Committee (NAMVAC)

Namibia 2021 Vulnerability Assessment and Analysis Findings

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Executive Summary

The Namibia Vulnerability Assessment Committee (NAMVAC) conducted this year's vulnerability assessment and analysis (VAA) from mid-August to mid-October 2021. The main objective of the assessment and analysis is to provide accurate and timely information about the prevailing food and nutrition security situation in Namibia for evidence-based planning and decision making.

The assessment findings indicate that the population at risk to food insecurity between October and December 2021 is estimated at 658,588 people. This represents 26 percent of the 2021 Namibia estimated total population. The food insecure population is projected to increase between January and March 2022 to 750,313 people representing 30 percent of the 2021 Namibia estimated population. All the regions have food insecure population. The most affected regions are the drought prone areas, and these include Kunene, Erongo, Omusati, Omaheke and //Kharas. Kunene Region has been experiencing drought conditions for the past 7 consecutive years.

The contributing factors to the current food insecurity situation include COVID-19 and its restrictive measures, rising food and non-food prices, drought conditions and prolonged dry spells in some regions, excessive rainfall and flooding in selected regions, livestock disease outbreaks, pests' infestation, loss of employment and closure of mines and businesses and wildfire outbreaks amongst others.

The cereal crop production figures indicate that the national production is high (154 000 MT) this year but lower compared to last year (162 500 MT). The main contributing factor is the favourable rainfall performance for the 2020/21 Rainfall Season. The statistics indicate that the commercial agricultural sub-sector has mostly contributed to this high production.

Household level analysis of indicators from primary data collected during this round of vulnerability assessment indicate that consumption patterns for a significant number of households have moderate to poor consumption patterns, leading to inadequate dietary diversity and food intake. The situation is getting worse considering the loss of employment and closure of businesses due to COVID -19 restrictive measures

The nutrition status of children under five is worse in infants under the ages of two, compared to children aged between two and five years, indicating challenges with feeding during the vital window period of the first 1000 days of a child's life. The first 1000 days of a child's life is the unique period of opportunity during which the reversal of stunting (low height-for-age) and its negative effects on a child's health and cognitive development is still possible for a growing young child. Optimal feeding (exclusive breastfeeding for the first six months, and continued breastfeeding with age-appropriate complementary foods), during the first 1000 days is of utmost importance.

Nationally, 68 % of the salt samples collected from households contained iodine, indicating that <90 % of the households are using adequately iodized salt and that Namibia is still on its way to achieving universal salt iodization.

Of the total household oil samples analysed 33 % contained vitamin A at concentrations above 3mg RE/kg while no trace of vitamin A was detected in 67 % of the samples. Fortification of edible oil with vitamin A is one of the many strategies to combat prevent and reduce vitamin A deficiency at population level. The most common adverse effect of Vitamin A deficiency is night blindness.

All samples of flour and meal analysed contained iron and the average iron levels ranged from 12.9 to 61.8 mg/kg. Kunene region, where all samples were white maize meal had the lowest average iron concentration of 12.9 mg/kg which is less than the recommended minimum of 20mg/kg iron. Omusati region, where all collected samples were pearl millet meal had the highest average iron concentration of 61.8 mg/kg, which is well above 20mg/kg iron. The promotion of consumption of pearl millet, compared to refined maize meal and imported wheat varieties could be an important strategy to reduce and prevent iron deficiency, while at the same time promoting local production and local farmers.

The Government of Namibia and its stakeholders, therefore, is being advised to continue with the implementation of existing lifesaving interventions. In addition, OMAs are required to continue implementing the medium to long term interventions as per Cabinet Decision NO. 19TH /01.12.20/002).

Meanwhile, the continuous monitoring of the food security situation is required to ensure prompt action when required.

Contents

List of Abbreviations and Acronyms

AML	African Migratory Locusts
ART	Anti-Retroviral Therapy
CAA	Catholic AIDS Action
FAW	Fall Army Worms
FCS	Food Consumption Score
FMD	Food and Mouth Disease
HDDS	Household Dietary Diversity Score
HWC	Human Wildlife Conflicts
IPC	Integrated Food Security Phase Classification analytical framework
JHU	John Hopkins University
LCS	Livelihood coping strategy
MAWLR	Ministry of Agriculture, Water and Land Reform
NAMVAC	Namibia Vulnerability Assessment Committee
NRCS	Namibia Red Cross Society
NSA	Namibia Statistics Agency
OPM	Office of the Prime Minister
PSU	Primary Sampling Unit
RC	Regional Council
rCSI	Reduced Coping Strategy Index
RVAA	Regional Vulnerability Assessment and Analysis
SADC	Southern Africa Development Community
UNAM	University of Namibia
VAA	Vulnerability Assessment and Analysis
WFP	United Nations World Food Programme

1.0 Background

Namibia is ranked as a high middle-income country and its economic performance is deemed to be among the strong performers on the African Continent. However, there is a huge historical income gap between the rich and the poor within the country. In collaboration with its development partners, the Government of the Republic of Namibia is addressing these inequalities through various interventions ranging from emergency to development programmes and projects.

According to the World Food Programme Country Annual Report of 2020 the COVID-19 pandemic outbreak and chronic episodes of drought and flooding have strained these programmes. The continuous income inequalities play a major role in the perpetuation of poverty, hunger, and malnutrition in Namibia. The nation's food supplies are heavily dependent on food imports, mostly from South Africa, leaving the poor specifically vulnerable to imported price inflation. The marginalised communities in most parts of Namibia are more vulnerable to chronic livelihood vulnerability (poverty) and depend mainly on Government safety nets. The persisting impacts of HIV and AIDS also takes its toll despite the implementation of targeted food assistance intervention for people on antiretroviral therapy (ART) to improve their nutritional status and treatment outcomes.

While commercial farming is quite successful in Namibia, measures to build more effective food systems for the wider population, especially in the north, have been hampered by intensely variable weather and, now in 2020, by the COVID-19 pandemic.

To continuously monitor the vulnerability, food and nutrition security situation in the country, Namibia has enacted a law that has resulted in the establishment of the Namibia Vulnerability Assessment and Analysis Committee (NAMVAC). This is a government led multi sectoral body within the Office of the Prime Minister (OPM), in particular, Directorate of Disaster Risk Management and its membership consists of government ministries, United Nations (UN) agencies, Non-Governmental Organisations (NGOs), the academia, and the private sector.

NAMVAC is mandated to conduct bi-annual livelihood vulnerability assessments and analysis in all the regions and focusing both in urban and rural areas. The first assessment is conducted around April and May to assesses the impact of the rainfall and shocks such as floods on the harvest. The assessment projects the vulnerability situation later in the consumption period based on several assumptions such as price trends in food and non-food commodities, availability of casual labour on farms, food availability, among others. The second assessment is conducted around October and November to update the findings of April and May and validate assumptions made then. However, this year the NAMVAC has only conducted one vulnerability assessment and analysis due to COVID-19 pandemic and limited resources. The assessment was conducted from mid-August to mid-October 2021 and included training for enumerators on listing, map reading, open data kit (ODK) for data transmission, Integrated Phase Classification, data collection and analysis.

The main objective of these assessments and analyses are to provide timely results for decision makers in the government and the stakeholders. The assessments and analysis focus on impacts of shocks and hazards on people's livelihoods, food, and nutrition security situation. Based on assessment findings, the NAMVAC makes recommendations, and these vary from emergency interventions to long-term development programmes.

2.0 Macroeconomic Overview

2.1 Seasonal rainfall performance

According to the 2020/21 rainfall performance for Namibia, the greater part of the country received good rainfall despite delays in the onset. Normal to above normal rainfall was received in the North Eastern regions (Kavango West, Kavango East, and Zambezi). However, heavy rainfall in the second half of the season (January – March 2021) was experienced in the same regions which affected crop production due to flooding.

In contrast, the Southern regions of //Kharas and Hardap received exceptionally high rains, with some areas receiving two to three times of their average annual rainfall amounts. Khomas, Otjozondjupa and Omaheke regions received normal to above normal rainfall. However, the Western part of the country (Kunene, Erongo and Western part of Omusati regions) received below average rainfall with intense drought conditions evident in the Northern Kunene[1].

2.2 The Namibia 2020/21 Economic performance

The economy has contracted by approximately 7.3 percent in 2020, the deepest recession since independence. This reflects the adverse impact of the pandemic-induced lockdown measures and trade disruptions. A lot of businesses have closed, and thousands of jobs have been lost. The recovery process of the economy will take time and requires a conducive policy environment. The gains made on per capita incomes have been eroded and worsened unemployment levels, poverty, and inequalities[2].

2.3 Agriculture, forestry, and fishing sector

The Namibia economy relies on the agriculture, forestry, and fishing sectors. The sectors create employment, food security, foreign earnings, and provision of raw material to the manufacturing industry. The Agriculture, Forestry and Fishing Sector employs 167 242 people out of 725 742 employed people in Namibia, thus accounting for 23 percent of the labour force[3]. However, the sector has been characterised by ups and downs performances because of disasters such as drought, diseases outbreak (human and livestock), wildfire outbreaks, human and wildlife conflicts, and pests' infestation. Despite a recent sluggish in growth, the sector remains central to the lives of most people, contributing directly and indirectly to their livelihoods[4].

2.4 Mining and Tourism sectors

The Namibia economy also relies on the mining and tourism sectors. These two sectors were greatly affected by COVID-19 restrictive measures. The hotels and restaurants industry sub-sector is estimated to have contracted by 70.2 percent, and diamond and basic metals processing contracted by 39.4 percent and 42.8 percent respectively. Most mines were closed due to rising cases of COVID-19. The tourism sector was hard hit due to very low inflow of visitors and restricted movements within Namibia. Tourist establishments such as hotels and lodges are

[1] Namibia crop prospects and food security situation report July 2021
[2] Namibia 2021/22 Budget Statement (Updated) by Minister of Finance, Ipumbu Shiimi (17 March 2021)
[3] Namibia Statistics Agency (NSA), Namibia Labour Force Survey of 2018
[4] NSA, Agriculture, Forestry and Fishing Statistical Bulletin First Quarter 2021.

still struggling, especially those that cater for the upper-market segment. Risks to domestic growth are dominated by the COVID-19 pandemic and the pace of vaccination rollouts in Namibia[5].

2.5 Inflation

In July 2021, the annual inflation rate increased by 4.0 percent compared to 2.1 percent recorded in July 2020. On a monthly basis, the inflation rate increased by 0.2 percent lower than the 0.5 percent recorded a month earlier. The main drivers to the July 2021 annual inflation rate were transport and food and non-alcoholic beverages contributing 1.4 percentage points and 1.1 percentage points to the overall inflation rate[6]. The increase in inflation is largely attributed to global rise in fuel prices.

2.6 Shocks and hazards

Namibia has been experiencing an unprecedented increase in the frequency and intensity of hazards that threaten the stability of many human populations. These hazards have increasingly affected the economy, environment, infrastructure, and human wellbeing.

Namibia experienced the infestation of the African Migratory Locusts AML), Red Locust (RL) and Brown Locusts (BL) which caused and continue to be a huge threat on food and nutrition security. The first wave of the outbreak was reported in February and March 2020 in Zambezi, Otjozondjupa, and Oshikoto regions.

Numerous fire outbreaks were reported in all fire prone regions between April 2020 and March 2021. A total of 3, 2 million hectares of grazing land and forest area were destroyed[7]. This resulted in infrastructure, properties and grazing areas destroyed and loss of lives in both human and animal lives.

Furthermore, the livestock sub-sector was impacted by the Food and Mouth Disease (FMD) which resulted in restrictions and a ban on movement of animals within Kavango East, Kavango West, Ohangwena, Oshikoto, Kunene, Oshana and Omusati regions.

2.7 In-Migration

The Omusati, Ohangwena and Kunene regions have been experiencing the migration of Angolans into Namibia due to persistent drought experienced in southern provinces of Angola. The number of migrants have been growing steadily, adding up to over 800 people towards end of March 2021[8]. To date, the Government of the Republic of Namibia is support a combined estimated number of about 2500 Angolan immigrants.

[5] Bank of Namibia Economic Outlook, August 2021
[6] Namibia Consumer Price Index bulletin, July 2021
[7] Ministry of Environment, Forestry and Tourism, 2021
[8] Namibia Population Movement, April 2021

2.8 Risks to economic growth

Risks to domestic growth includes new waves of the COVID-19 pandemic, the pace of vaccination rollout in Namibia, low international uranium prices and the potential effects of the recent political unrests in South Africa[9].

3.0 Objectives

The main objective of the assessment and analysis is to provide accurate and timely information about the prevailing food and nutrition security situation in Namibia for evidence-based planning and decision making.

The specific objectives of the vulnerability assessment and analysis include the following:

a) Assess the current and projected food and nutrition security situation in the country.
b) Investigate the effects of hazards on current and future access, availability, utilization and stability to food, non-food items and services.
c) Monitor food security and livelihood patterns as part of early warning,
d) Monitor the nutrition status (anthropometric measurements) in women of child-bearing age and children under five years.
e) Assess population iodine status and micronutrient fortification status of staple food, cooking oil and salt.
f) Build capacity of technical Namibia Vulnerability Assessment Committee (NAMVAC) members
g) Determine the needs for interventions and policy related interventions, and
h) Make recommendations to policy makers and stakeholders.

4.0 Methodology

4.1 Sample design and listing

The 2021 Namibia Vulnerability Assessment and Analysis had multi-stage cluster systematic random sample survey design. The sampling design was developed by the Namibia Statistics Agency (NSA) for alignment with NSA data collection standards. This was the first sampling design for Namibia Vulnerability Assessment Committee since its inception.

The unit of sampling was the Primary Sampling Unit (PSUs). In the sampling design, firstly a total of 209 PSUs were selected from all 14 regions (98 PSUs in rural areas and 111 PSUs in urban areas across Namibia). Secondly, households within a PSU were listed. Thirdly, a fixed number of 15 households were selected by equal probability systematic sampling using tablet computer assisted personal interviewing (CAPI) software. The assessment covered 2,120 households of which 926 rural and 1,194 urban from 180 PSUs due to limited time in sampling, listing and actual data collection. The sampling frame of the assessment was based on the 2011 Namibia Census sampling frame designed by NSA.

[9] Bank of Namibia Economic Outlook, August 2021

4.2 Map reading and orientation

Teams were trained in map reading and were given maps to assist them in identifying the geographical location of PSUs. This assisted in avoiding over-coverage of households.

4.3 Questionnaire design and sample collection

The assessment used the two questionnaires, the household, and the key informants, which were designed and used during the 2020 assessment. The questionnaires covered topics on demographic characteristics of households, food consumption, health and nutrition, water and sanitation, crop and livestock production and food sources and prices. MHSS, UNICEF and the University of Namibia (UNAM) included more questions in the household questionnaire on nutrition measurements and micronutrients. The questionnaires were developed in XLSForm format; a Microsoft excel spreadsheet to be compatible with mobile data collection.

Sample size for urine and food samples was based on a minimum sample for measuring urinary iodine excretion, which is 400 per population group (UNICEF, 2019). The 14 regions were combined into four population groups (zones) to provide an estimate for each zone, and 400 women of reproductive age (15-49 years of age) were targeted in each zone for urine sample collection. The four zones are:

- Zone 1: Zambezi, Kavango East, Kavango West
- Zone 2: Omusati, Ohangwena, Oshana, Oshikoto
- Zone 3: Otjozondjupa, Kunene, Omaheke
- Zone 4: Khomas, Hardap, //Kharas, Erongo

Collected samples included urine, cooking oil, cereal meal or flour, and salt to examine contents of micronutrients, particularly urinary and salt iodine, vitamin A in oil and iron in meal or flour. Samples for micronutrient analysis were collected by volunteers from Catholic AIDS Action (CAA) and Namibia Red Cross Society (NRCS).

4.4 Primary data collection and data transmission

Primary data was collected in all the 14 regions and in sampled PSUs. One key informant and fifteen households were interviewed at each sampled PSU. The interviews were guided by structured questionnaires and responses captured by Android devices. Data was collected using ODK collect and was transmitted to NSA server.

4.5 Use of secondary information

Secondary data was collected both at regional and national levels to complement primary data during data analysis. The secondary information collected included rainfall performance during the 2020/21 rainfall season, market prices, hazards among others.

4.6 Participants training and data analysis

Training for the participants including regional trainers from all 14 regions, was conducted before and after data collection. Prior the data collection exercise, the regional trainers were trained in map reading for identifying the sampled PSUs and software used for sampling and listing. In turn, the regional trainers trained the data collection enumerators at regional level.

After the data collection exercise, the regional trainers had a refresher training in data analysis and Integrated Food Security Phase Classification (IPC).

Volunteers from the Namibia Red Cross Society and Catholic AIDS ACTION were trained in urine and food sample collection, labelling and appropriate storage before transportation.

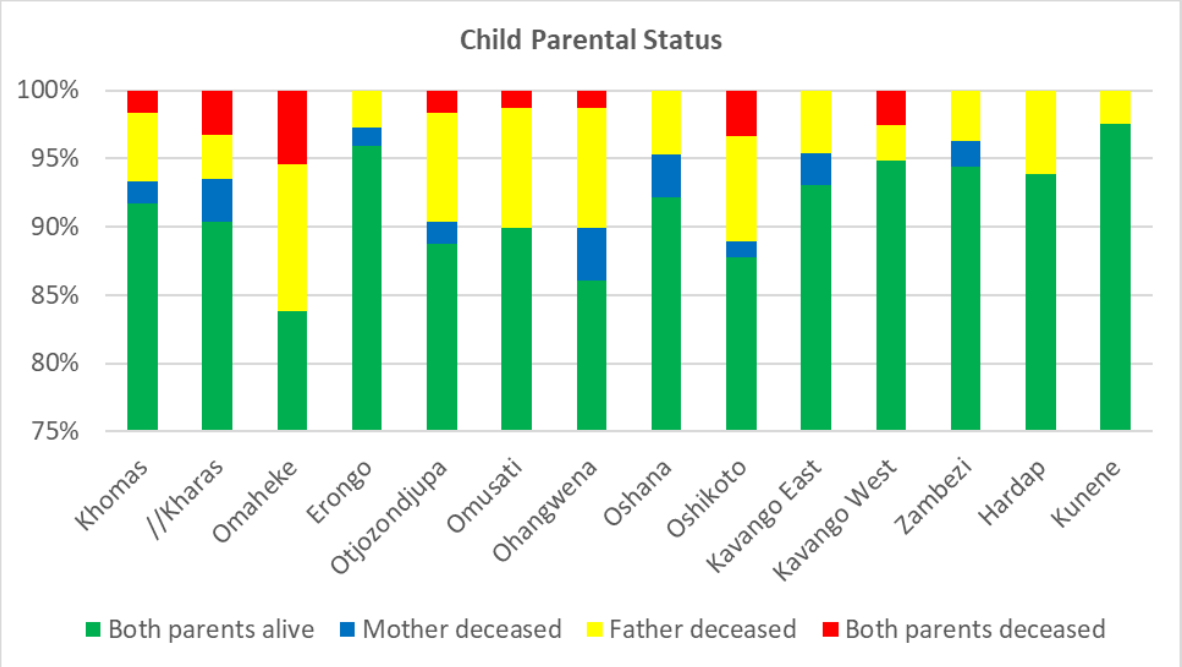
Data was analysed using SPSS and the IPC analytical framework. Appendix 3 shows pictures of NAMVAC team members analysing both primary and secondary data.

5.0 Household demographic characteristics of the sample

Average sampled household size ranged from 4 to 6. Regions that reported an average household size of 6 included Ohangwena, Kavango East, Kavango West, and Zambezi. The remaining regions had an average household size of 4.

Child parental status indicated that at least 80 percent of the households in all the regions have both parents alive. However, a significant proportion of households ranging from 8 to 11 percent in Omaheke, Otjozondjupa, Omusati, Ohangwena, and Oshikoto has no father. Graph 5.1 indicates variations in child parental status.

Graph 5.1: Child parental status



Households which reported chronic illnesses (HIV/AIDS or TB) were in the range of 5 to 7 percent in //Kharas, Omaheke, Oshana, Kavango East, and Kavango West regions. In the other regions, reported household chronic illnesses were in the range of 2 to 4 percent. Table 5.1 below shows the variations in chronic illnesses.

Table 5.1: Households with chronic illnesses (HIV/AIDS or TB)

Chronic Illnesses (Living with HIV or TB)				
		Living with HIV or TB		Total
		Yes	No	
Region name	Khomas	2.0%	98.0%	100.0%
	//Kharas	6.5%	93.5%	100.0%
	Omaheke	5.7%	94.3%	100.0%
	Erongo	3.8%	96.2%	100.0%
	Otjozondjupa	4.4%	95.6%	100.0%
	Omusati	3.7%	96.3%	100.0%
	Ohangwena	2.9%	97.1%	100.0%
	Oshana	6.7%	93.3%	100.0%
	Oshikoto	3.9%	96.1%	100.0%
	Kavango East	5.8%	94.2%	100.0%
	Kavango West	5.6%	94.4%	100.0%
	Zambezi	3.2%	96.8%	100.0%
	Hardap	3.1%	96.9%	100.0%
	Kunene	3.6%	96.4%	100.0%

Households that reported household members as being disabled (physical and mental disability) ranged from 3 to 6 percent and these included Khomas (3%), Kharas (5%), Otjozondjupa (4%), Zambezi (6%), Hardap (3%) and Kunene (3%) limiting the engagement of such household in productive activities. Table 5.2 indicates the percentages of disabled household members.

Table 5.2: Households with disabled members

Demographics - Disability						
		Disability				Total
		Physically disabled	Mentally disabled	Both	Not disabled	
Region name	Khomas	2.0%	1.3%	0.0%	96.7%	100.0%
	//Kharas	3.7%	.9%	0.0%	95.4%	100.0%
	Omaheke	2.1%	0.0%	0.0%	97.9%	100.0%
	Erongo	2.2%	0.0%	.5%	97.3%	100.0%
	Otjozondjupa	2.5%	1.3%	.6%	95.6%	100.0%
	Omusati	1.1%	1.1%	.5%	97.3%	100.0%
	Ohangwena	2.9%	1.0%	0.0%	96.1%	100.0%
	Oshana	1.8%	0.0%	.6%	97.6%	100.0%
	Oshikoto	1.3%	0.0%	0.0%	98.7%	100.0%
	Kavango East	.8%	.8%	.8%	97.5%	100.0%
	Kavango West	.9%	0.0%	.9%	98.1%	100.0%
	Zambezi	4.0%	2.4%	0.0%	93.7%	100.0%
	Hardap	3.1%	0.0%	0.0%	96.9%	100.0%
	Kunene	2.7%	0.0%	0.0%	97.3%	100.0%

6.0 National Level Food Security Situation

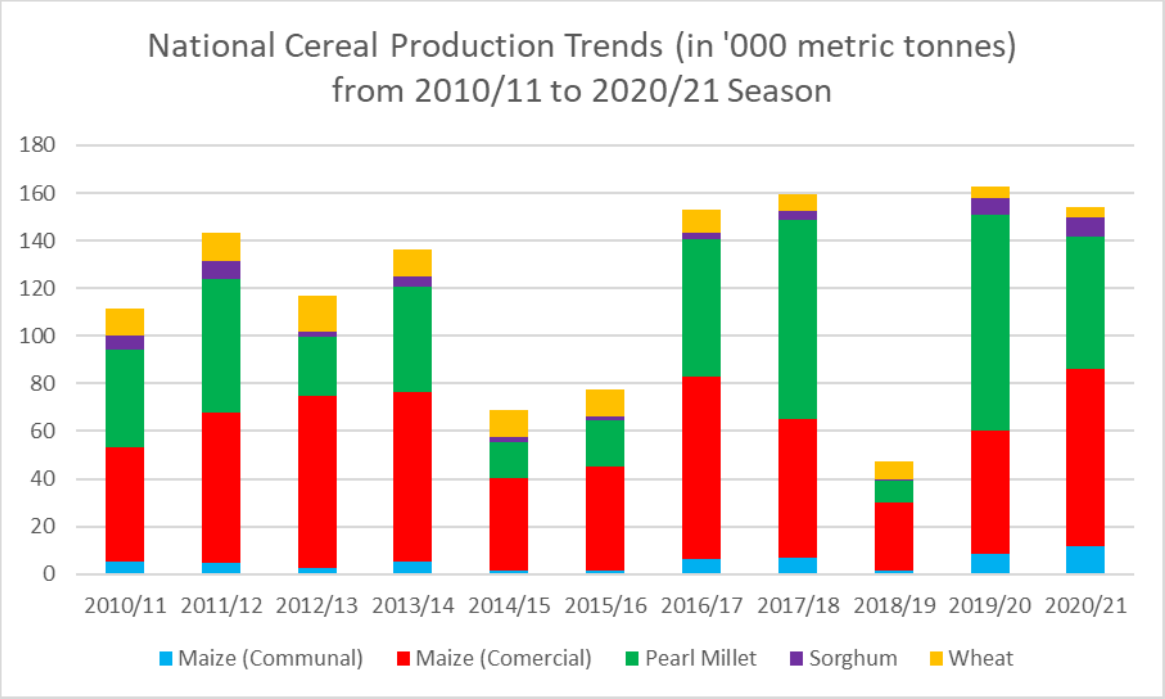
6.1 Crop Production Performance for 2020/21 Season

Most crop producing areas recorded normal to above normal harvest amidst delayed onset of the 2020/21 rainfall season, prolonged dry spells and the African Migratory Red Locust reported in some areas. The aggregate crop estimates indicate that the Namibia has recorded 154, 000 metric tonnes which is 5 percent less than last season's harvest of 162, 500 metric tonnes, but 26 percent above the average production of 122, 400 metric tonnes[10].

Maize production in the communal area (Zambezi, Kavango East and Kavango West regions) was estimated at 11,500 metric tonnes which is about 35 percent higher than last season's harvest of 8,500 metric tonnes and 77 percent above the average production of 6,500 metric tonnes. Much of this improvement is from the Zambezi region which recorded an increase of 123 percent above the average production and 36 percent over the last season's harvest. Graph 6.1 below displays national cereal production from 2010/11 to 2020/21 Season.

[10] Namibia Crop Prospects and Food Security Situation Report, July 2021, Ministry of Agriculture.

Graph 6.1: National Cereal Production Trends from 2010/11 to 2020/21 season



Data source: Ministry of Agriculture Crop Assessment Report, July 2021

Maize production in the Kavango East and Kavango West regions showed a reduction of 30 percent of last season's harvest and 88 percent below the average production. The poor and below average production according to farmers, is due to excessive rainfall, locust outbreak and mice damages during germinations. Maize production in the commercial area on the other hand recorded a bumper harvest of 74,700 metric tonnes which is 45 percent higher than last season's harvest of 51,600 metric tonnes and 74 percent above the average production of 38,500 metric tonnes. This is the biggest maize harvest ever recorded in the commercial area and this improvement was attributed to favourable crop growing conditions which have prevailed over the season causing farmers to increase planted areas. It is important to note that 54 percent (38,700 metric tonnes) of the maize production total (71, 400 metric tonnes) in the commercial area came from irrigation schemes, while 46 percent (32,600 metric tonnes) came from the rain-fed production.

Additionally, Pearl millet production was estimated at 55, 200MT which is about 39 percent lower than last season's harvest of 90,800MT, and 3 percent below the average production of 57,000MT. This reduction is largely attributed to poor rainfall performance experienced in the north central regions which was seen in the forms of delayed onset of the rainfall season and general poor rainfall performance in the first half of the season as well as the prolonged dry spells experienced between end of January and Mid-March this season. Furthermore, sorghum was estimated at 8,200MT, reflecting an increase of over 16 percent of last season's harvest of 7,100MT and 21 percent above the average production of 6, 800MT. Wheat is a winter crop and production thereof was ongoing by the time of assessment.

6.2 Overview on Livestock Production

6.2.1 Grazing conditions

Grazing conditions are poor in the western parts of the country due to ongoing drought because of poor rainfall received in these areas. These western parts include Kunene, parts of Erongo, and western parts of Omusati.

In the north-eastern regions of Zambezi, Kavango East and Kavango West, grazing conditions ranged from good in the flood plain, areas along the river to very good. Fair to good grazing conditions were reported in the north central regions of Ohangwena, Oshana and Oshikoto with the exemption of western parts of Omusati region where poor grazing conditions were reported.

In the Khomas, Omaheke and Otjozondjupa regions, grazing was in good state but fair in the eastern parts of the Khomas region. Grazing conditions in Omaheke region was good except the Aminius Constituency where cases of veld fire outbreak occurred in June 2021 with 60 percent of the grazing area affected in Ozondjiva, Okombepera and Ondjiripumua.

The southern parts of the country (Hardap, and //Kharas regions) grazing ranged between fair and good. It was noted that, the woody/shrubs and grass components (perennial) had established very well with more pioneer grass than any other grass species and most areas were having good ground cover. Farmers in these regions have already started stocking up fodder by harvesting grass along the roadsides and corridors.

The overall grazing in Erongo region ranged from fair to poor due to sporadic rainfall with relatively prolonged dry spells. The shrubs and trees have however shown improvement and provide fodder for livestock.

6.2.2 Livestock conditions

According to NSA, livestock (cattle and sheep) required for slaughter recorded a decline of 7.5 percent during the current season[11]. This reduction may be because of an outbreak of Lumpy Skin disease and Foot and Mouth Disease in cattle. Livestock body conditions ranged between good and very good in most parts of the country where good rainfall was received over the 2020/21 rainfall season, in particular, the northeast (Zambezi, Kavango East, Kavango West), central (Otjozondjupa, Omaheke, Khomas) and southern parts (//Kharas, Hardap) of Namibia.

Livestock body conditions were reported to be improving in the north central regions (Oshana, Oshikoto, Ohangwena and Omusati regions) where prolonged dry spells were experienced and affected grazing establishment. Poor livestock conditions were reported in areas affected by drought conditions in the Kunene region, parts of Erongo and western parts of Omusati region with Kunene region being the hardest hit with high livestock mortalities.

[11] Namibia Statistics Agency: Agriculture, Forestry, and Fishing Sectors Statistical Bulletin, First Quarter 2021; Gross Domestic Product, First Quarter 2021.

6.3 Food availability and food access

Generally, food security situation was satisfactory soon after the harvest in selected regions although this was predicted to be short-lived as the harvest was expected to be depleted by end of September this year.

The household food security situation in terms of access to food is not good in the regions hit by drought and these include Kunene (chronic drought for 8 consecutive years), Erongo (Walvis Bay Rural, Karibib and Daures constituencies) and the western parts of Omusati region affecting Ruacana, Onesi and Tsandi Constituencies. The food security situation is also not good in the regions of Kavango West and Kavango East which recorded below average harvest due to crop damages caused by excessive rainfall, African Migratory Red Locust and mice during crop germinations[12].

In the north central regions of Omusati, Oshana, Ohangwena, and Oshikoto, the harvest this year is lower than last season.

In the Zambezi region, household food security has improved significantly following a bumper harvest experienced this year.

The food security situation has improved following a good rainfall received this season in the southern regions (//Kharas and Hardap regions), central regions (Khomas, Otjozondjupa) and the eastern parts (Omaheke) of the country.

It should be noted that Namibia is a net food importer whereby under normal circumstance the country produces approximately 60 percent of its cereal requirements and covers the remaining 40 percent through imports. Therefore, under current conditions, the country will import more that it normally buys due to damages to crop production caused by drought, late onset of planting rains, prolonged dry spells in some parts, excessive rainfall, floods, African Migratory Red Locusts, Fall Army Worms and mice among others.

7.0 Household Level Food Security

This section discusses household level food security indicators from the household level primary data collected from all the 14 regions. The indicators discussed include Food Consumption Score, Household Dietary Diversity Score (HDDS), Food Expenditure Shares, Livelihood coping strategy (LCS), and Reduced Coping Strategy Index (rCSI).

7.1 Food Consumption Score

The food consumption score (FCS) is a score calculated using the frequency of consumption of different food groups consumed by a household during the 7 days before the survey. There are standard weights for each of the food groups that comprise the food consumption score. Therefore, the FCS focuses on the diversity and frequency of food groups consumed over the

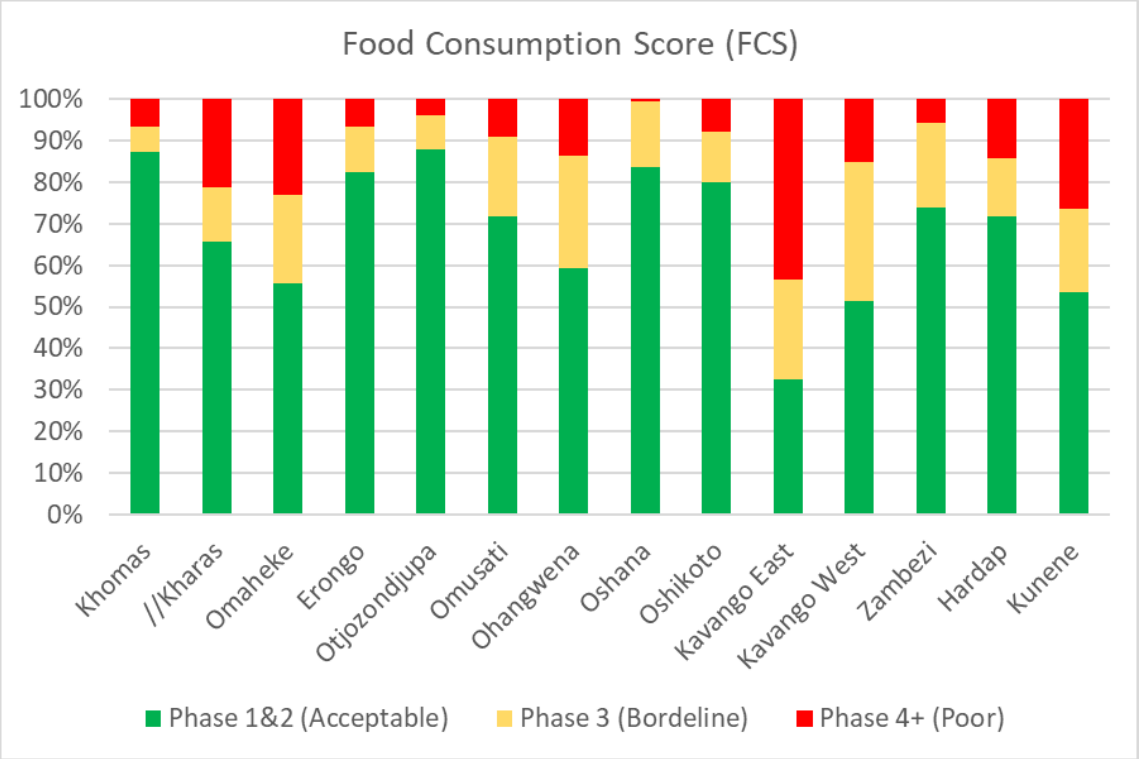
[12] Namibia Crop Prospects and Food Security Situation Report, July 2021, Ministry of Agriculture.

previous seven days and it also considers the relative nutrition importance of different food groups. FCS is used to assess food security and vulnerability in populations.

The analysis of household level data shows that Khomas, Erongo, Otjozondjupa were more food secure prior to the assessment followed by Omusati, Oshikoto, Zambezi, and Hardap. On the other hand, Omaheke, Ohangwena, Kavango East, Kavango West, and Kunene were in the borderline to poor food consumption patterns implying that a significant population in these regions are consuming less diversified food compromising their food security.

However, there is need to closely monitor both food availability and access as most households are approaching the lean season. Graph 7.1 below shows variations in food security situation using the FCS.

Graph 7.1: Food Consumption (FCS)

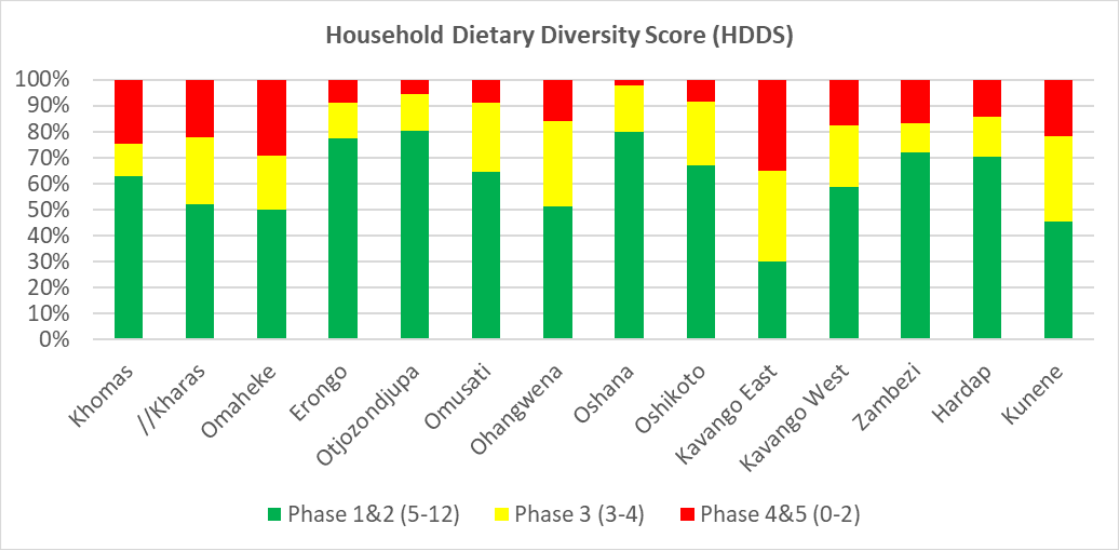


7.2 Household Dietary Diversity Score (HDDS)

Household dietary diversity Score (HDDS) is a qualitative measure of food consumption that reflects household access to a variety of foods. Dietary diversity scores aim to reflect nutrient adequacy. HDDS consists of a simple count of food groups that a household has consumed over the preceding 24 hours. HDDS reflects the economic ability of a household to access a variety of foods. An increase in dietary diversity is associated with socio-economic status and household food security. HDDS measures diet quality and micronutrient adequacy in the 12 food groups.

The analysis indicates that 80 percent of the households in Otjozondjupa and Oshana consumed 5 to 12 different food groups followed by 70 to 78 percent of households in Erongo, Zambezi and Hardap. //Kharas, Omaheke, Ohangwena, Kavango East, Kavango West and Kunene performed poorly on the food groups consumed by households 24 hours prior to the assessment. In this case the food groups ranged from 0 to 4 groups. Graph 7.2 below provides the variations in food groups consumed by households in different regions.

Graph 7.2: Household Dietary Diversity Score (HDDS)

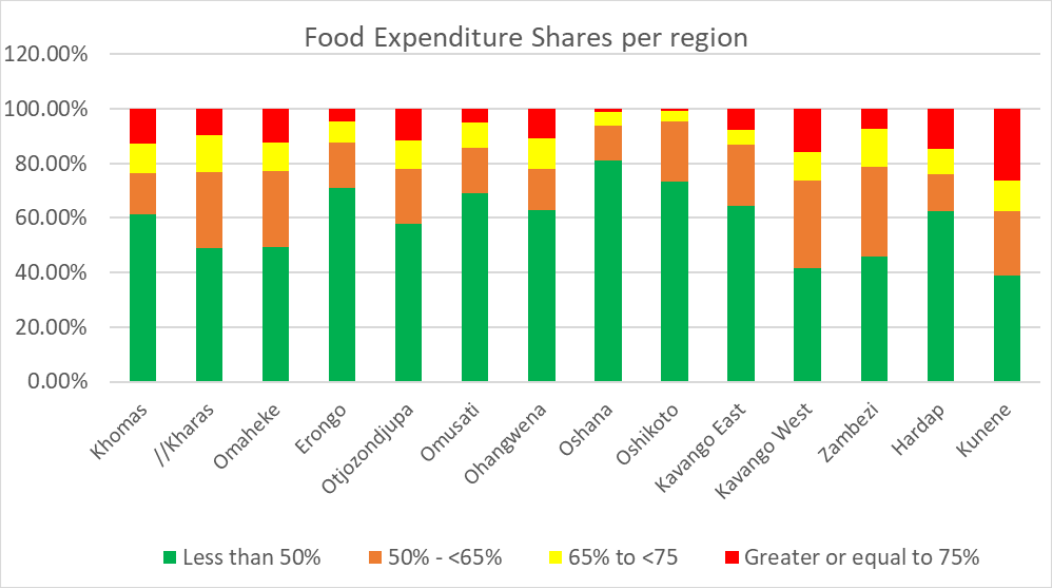


7.3 Food Expenditure Shares

The share of total household expenditure (as a proxy of income) spent on food is an indicator of household food security because it is widely documented that the poorer and more vulnerable a household, the larger the share of household income spent on food.

The food expenditures shares are high in the range of 50 to 65 percent in most regions. This shows how stressed the households are. The main contributing factors are high food prices, low-income levels, and distance from the main food source areas. Graph 7.3 below shows the variations in food expenditure shares by categories and by region.

Graph 7.3: Food expenditure Shares

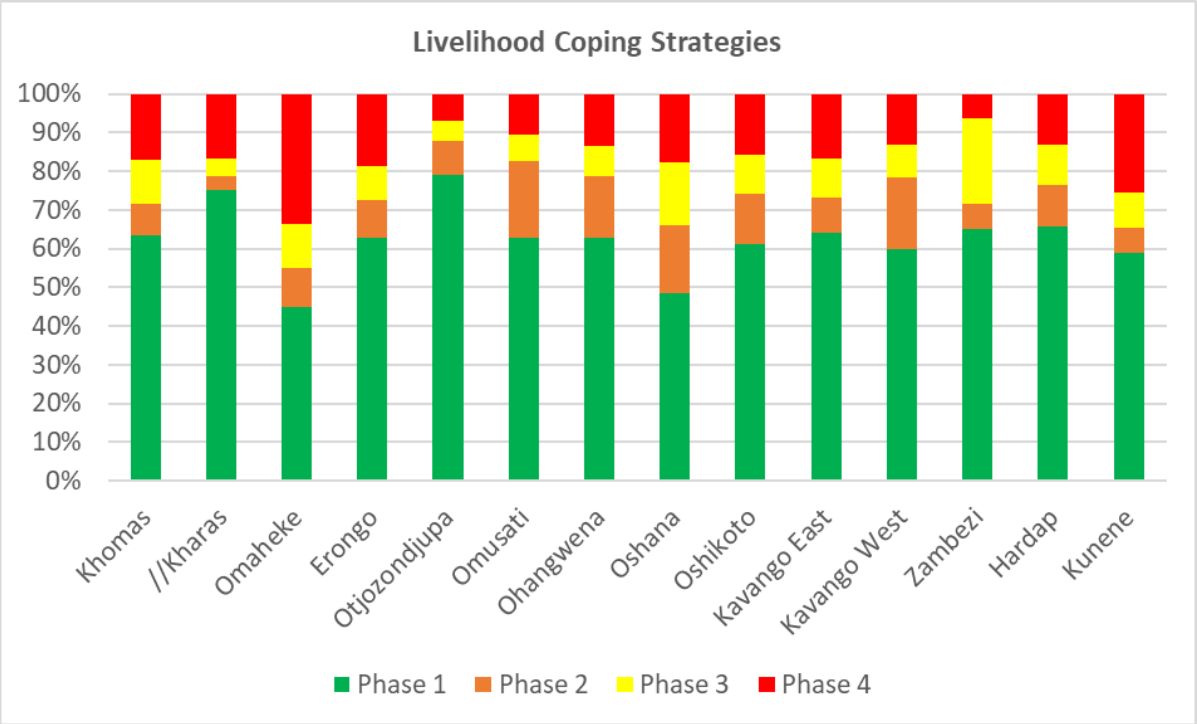


7.4 Livelihood Coping Strategies

Livelihood coping strategy (LCS) is an indicator to measure the extent of livelihood coping households need to utilise as a response to lack of food or money to purchase food. It analyses the rate at which households dispose of assets to meet food consumption gaps. Households using no stress, crisis or emergency strategies are allocated to Phase 1, households using stress strategies are allocated to Phase 2, households using crisis strategies are allocated to Phase 3, and households using emergency strategies are allocated to Phase 4.

The analysis shows that on average 60 percent of households in most regions are in phase 1 except in Omaheke and Oshana where there are more households in the other 3 phases. All the regions have about 40 percent of households in phases 2, 3, and 4. Graph 7.4 below shows variations in distribution of households in each of the 4 phases.

Graph 7.4: Livelihood Coping Strategies

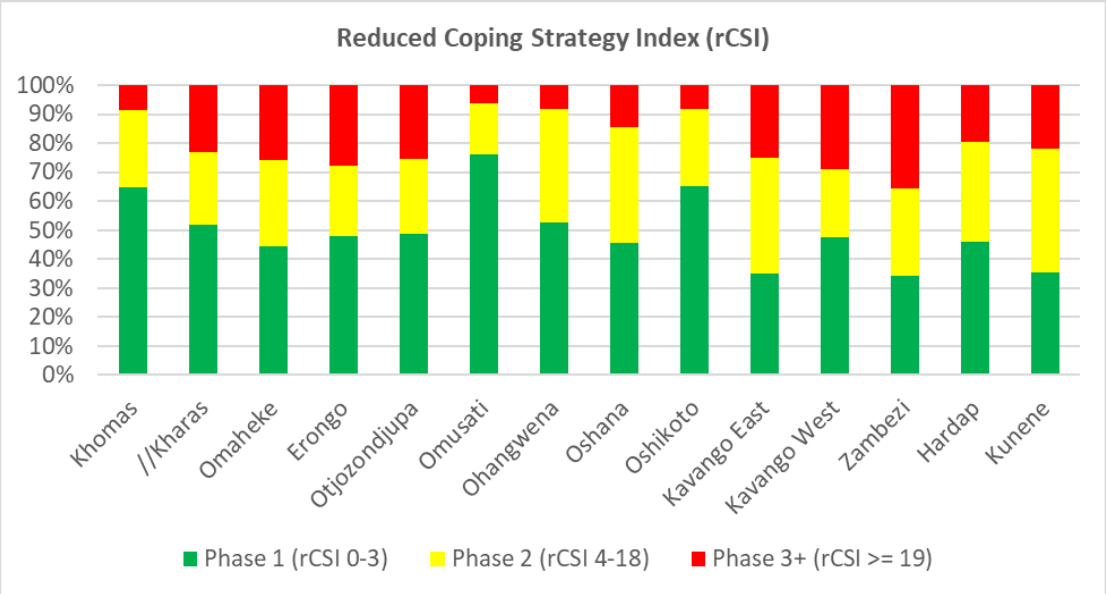


7.5 Reduced Coping Strategy Index (rCSI)

The rCSI is an experience-based indicator measuring the behaviour of households over the past 7 days when they did not have enough food or money to purchase food. The rCSI is used for monitoring and identifying changes in household behaviour especially in early stages of a crisis. It is used as a proxy for food quantity availability.

The rCSI is categorized into three phases; no stress, crisis or emergency strategies and are allocated to Phase 1 when no stress is experienced, households using stress strategies are allocated to Phase 2, households using crisis strategies are allocated to Phase 3. The analysis indicates that 5 to 25 percent of interviewed households are in phase 3 across the regions. Graph 7.5 below shows the rCSI phases by region.

Graph 7.5: Reduced Coping Strategy Index (rCSI)

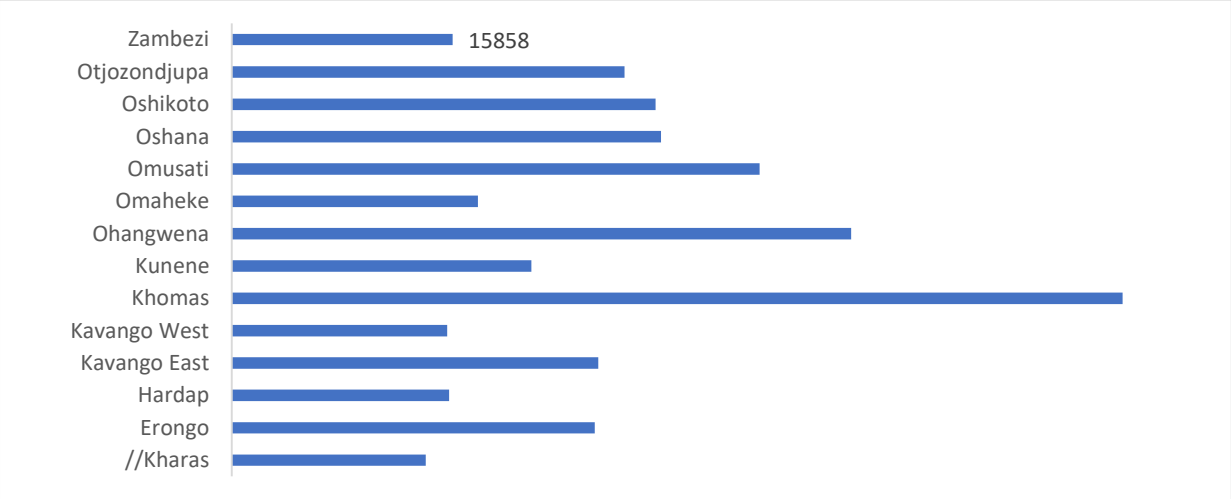


8.0 Nutrition Status and Micronutrients

8.1 Overview of Nutrition in children 6-59months old

Malnutrition is not a simple problem with a single cause. Underlying causes include inadequate dietary intake and illness, which can create a vicious cycle. The most commonly used anthropometric indices to assess children's growth and nutritional status are wasting and overweight/obesity (weight-for-height), stunting (height-for-age) and underweight (weight-for-age). According to the 2011 census, the estimated number of children under 5 in Namibia is 388,202, with the following regional distribution (NSI, 2016).

Graph 8.1: Regional distribution of number of children under 5



Note: Sample size calculation for the VAA survey was based on poverty/vulnerability indices and not prevalence of malnutrition. Therefore, the malnutrition results should be read with caution while making inference.

8.2 Levels of child malnutrition

A total of 730 children aged 6-59 months in 2,120 sampled households were assessed for anthropometry. However, during data management, errors were observed on the children's raw anthropometric data which prompted a plausibility analysis. To execute this, the weight and height anthropometric data was entered into the Emergency Nutrition Assessment (ENA) software which flagged close to one-third of the children as having incorrect weight or height measurements due to enumerators' errors. A conclusion was therefore reached that the weight and height anthropometric data was not credible and thus the results could not be reported and inferred as country results. It is therefore recommended that Namibia uses the CDC MUAC screening guidelines and tools for future VAAs and does not include weight and height data collection. The MUAC data was analysed using the CDC analysis template to check for bias in age/sex and was found to be ok, with no significant bias between children less than 2 years or more than 2 years. Table xx below shows the results of the analysis, which can be interpreted as proxy for Global Acute Malnutrition (GAM), Moderate Acute Malnutrition (MAM), and Severe Acute Malnutrition (SAM), as they are MUAC data from and assessment rather than a SMART survey.

Table 8.2 Nutrition Status of Children 6 to 59 months old

Age	**GAM**	**MAM**	**SAM**
<2 years	2.7	2.2	0.5
>2 years	0.3	0.3	0.0
TOTAL 6-59 months	**1.1**	**0.9**	**0.2**

Generally, the levels of GAM for Namibia are less than 1.1% (less than the Global recommended thresholds for concern of 5%). What should be noted as of concern to Namibia, however, is that acute malnutrition is worse in infants under the ages of two, compared to children over the age of two, indicating challenges with feeding during the vital window period of the first 1000 days of a child's life. The first 1000 days of a child's life is the unique period of opportunity during which the reversal of stunting (low height-for-age) and its negative effects on a child's health and cognitive development is still possible for a growing young child. Optimal feeding (exclusive breastfeeding for the first six months, and continued breastfeeding with age-appropriate complementary foods), during the first 1000 days is of utmost importance.

8.3 Salt Iodization status

Out of the total 2120 households included in the survey, 1581 salt samples were collected based on availability and household willingness to donate, giving 75 % of the targeted sample size. Table 8.3 shows the number of salt samples collected in the various population zones and the percentages of salt with any iodine, with adequate iodine, with inadequate iodine and with excess iodine.

Table 8.3. Number of salt samples collected and percentages of salt with any iodine, adequate iodine, inadequate iodine and excess iodine

	Region	Number of samples collected	Percentage (%) salt with any iodine	Percentage (%) salt with adequate iodine (15-40ppm)	Percentage (%) salt with inadequate iodine (<15ppm)	Percentage (%) salt with excess iodine (>40ppm)
Zone 1	Zambezi	165	93	25	56	11
	Kavango East	140	72	21	33	18
	Kavango West	97	70	30	19	22
Total for Zone 1		**402**	**80**	**25**	**39**	**16**
Zone 2	Omusati	93	59	32	2	25
	Ohangwena	132	46	17	8	21
	Oshana	119	52	12	8	32
	Oshikoto	190	58	17	4	37
Total for Zone 2		**534**	**54**	**19**	**5**	**30**
Zone 3	Otjozondjupa	33	48	21	18	9
	Kunene	61	66	25	11	30
	Omaheke	122	52	24	4	24
Total for Zone 3		**216**	**56**	**24**	**8**	**24**
Zone 4	Khomas	96	75	24	22	29
	Hardap	85	61	16	13	32
	//Kharas	70	93	24	17	51
	Erongo	178	85	24	16	44
Total for Zone 4		**429**	**79**	**23**	**17**	**39**
National total		**1581**	**68**	**22**	**18**	**28**

Universal salt iodization is defined as >90% of households using adequately iodized salt, with adequate being defined as salt containing between 15 and 40 parts per million (ppm) at household level (UNICEF, 2019). Nationally, 68 % of all the salt samples contained any iodine, indicating that <90% of the households are using salt with any iodine and that Namibia is still on its way to achieving universal salt iodization. According to the NDHS, the percentage of households using salt with any iodine was 83% in 2000 and 77% in 2013 (NDHS, 2013). The 2021 results show a reduction of 9% in the percentage of salt containing any iodine. The 2013 NDHS also showed lower coverage of iodized salt in poor households, in rural areas, and in regions with natural salt pans, which suggested that direct collection of non-iodized coarse salt from salt pans was an important barrier to achieving universal salt iodization among

certain populations. Further research is necessary to determine more factors associated with low consumption of iodized salt.

Zonally, all the zones had >50% of salt samples containing any iodine. Iodine concentrations in the salt samples from households ranged from less than 15 to above 40 ppm. Nationally, the percentage of adequately iodized salt with 15 to 40 ppm iodine was 22%, percentage salt with inadequate iodine content, less than 15 ppm, was 18% and percentage salt with excess iodine, above 40 ppm, was 28%. The variation in the iodine content of salt raises concerns on the accuracy of iodization and quality of iodized salt. A substantial proportion of the salt was not iodized in accordance with the legal requirement, with underiodization, overiodization and no iodization at all being evident. Effective salt iodization and monitoring is essential to ensure that iodine concentrations are in the required range and to prevent thyroid diseases.

Iodine deficiency can lead to adverse effects, including goitre, cretinism, neonatal hypothyroidism, growth retardation, and increased risks of pregnancy loss and infant mortality. Thyroid hormone is particularly critical for foetal and infant neurodevelopment. Brain development is dependent on adequate thyroid hormone, and severe iodine deficiency during pregnancy may result in maternal and foetal hypothyroidism and serious neurologic and cognitive deficits in children (Pearce EN, 2016). Universal salt iodization is one of the most effective ways to prevent iodine deficiency in a population and is therefore vital, not only to improve the health and nutrition of a population, but also to national development. Chronic exposure to excess iodine from poorly monitored salt iodine status, however, poses risk factors for hyperthyroidism and hypothyroidism in the population.

Oversight of salt iodization and monitoring of salt iodine status in Namibia may have national, regional, and global implications. Namibia is a major exporter of salt, supplying food-grade salt to neighbouring countries such as South Africa, Zimbabwe, Angola, Zambia, and Botswana, and to more distant countries such as Democratic Republic of Congo and Nigeria. It is in this context that monitoring of universal salt iodization in Namibia is imperative.

8.4 Vitamin A levels in oil

A total of 920 collected oil samples were analysed, giving 57 % of the targeted sample size. Table 8.13 shows the number of oil samples collected in the various population zones and percentages of oil with vitamin A above 3 mgRE/kg (9.99IU). Vitamin A fortification of oil is generally done at concentrations greater than 3 mg RE/kg.

Table 8.13. Number of oil samples collected and percentages of oil with vitamin A levels greater than 3mg RE/kg

	Region	**Number of samples collected**	**Percentage (%) with oil containing vitamin A greater than 3mgRE/kg**
Zone 1	Zambezi	112	27
	Kavango East	142	35
	Kavango West	53	15

Total for Zone 1		**307**	**29**
Zone 2	Omusati	64	39
	Ohangwena	33	39
	Oshana	75	28
	Oshikoto	77	47
Total for Zone 2		**249**	**38**
Zone 3	Otjozondjupa	24	17
	Kunene	39	23
	Omaheke	87	41
Total for Zone 3		**150**	**33**
Zone 4	Khomas	64	25
	Hardap	41	34
	//Kharas	60	42
	Erongo	49	35
Total for Zone 4		**214**	**30**
National total		**920**	**33**

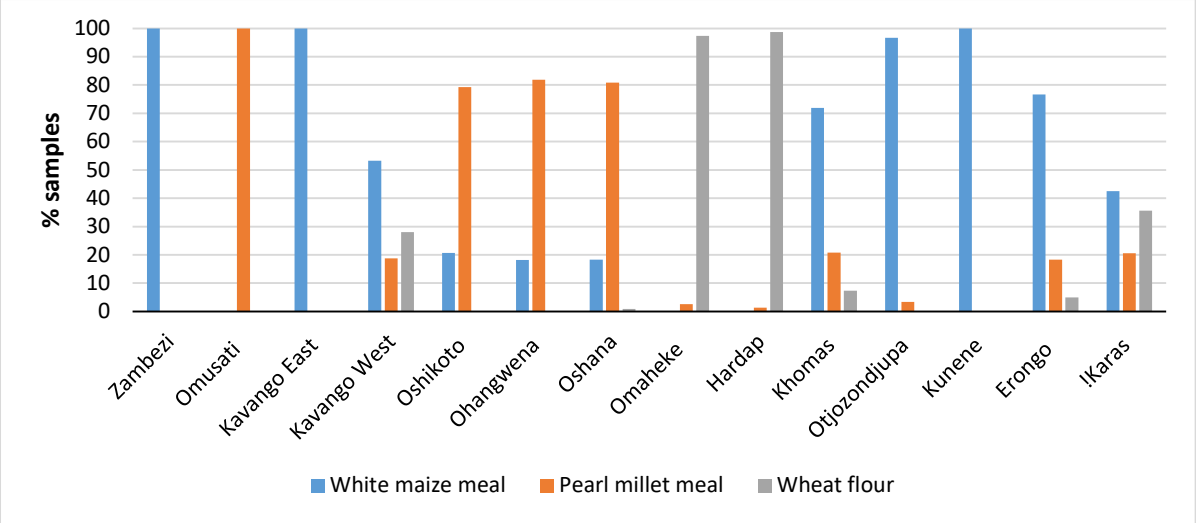
Of the total samples analysed 33 % contained vitamin A at concentrations above 3mg RE/kg while no trace of vitamin A was detected in 67 % of the samples. Regionally, the number of oil samples with vitamin A levels above 3mg/kg was below 50 % of all samples in all the regions, with Oshikoto region having the highest percentage of samples containing vitamin A (47 %) and Kavango West having the lowest (15 %).

The findings show that, while vitamin A fortification of vegetable oils is a strategy that has been employed to prevent vitamin A deficiency, 67 % of the oil samples had no trace of vitamin A in them. This indicates that the 67% of the households consume oil which is either not fortified with vitamin A or fortified oil in which vitamin A has been lost during shipping from manufacturers, storage or food preparation. It is thus necessary to regularly assess and monitor the Vitamin A content of fortified oils through the distribution chain. Additionally, some households reuse oil and vitamin A may be reduced with food preparation. Monitoring of vitamin A levels of used oil is recommended. Fortification of edible oil with vitamin A is one of the many strategies to prevent and reduce vitamin A deficiency at population level.

8.5 Iron levels in flours and meals

A total of 1343 flour and meal samples were collected and analysed, giving 83 % of the targeted sample size. Graph 8.1 shows a comparison of the regional percentages of meal and flour samples collected. All samples collected from Zambezi, Kavango East and Kunene regions where white maize meal samples while all samples collected from Omusati region were pearl millet.

Graph 8.1 Regional percentages of flour and meal samples



For the same number of samples collected, Table 8.14 gives us the breakdown of number of meal or flour samples collected by population zone and the percentages of meal and/or flour samples containing at least 20mg/kg of iron which is the recommended fortification range.

Table 8.14: Number of meal and/or flour samples collected and percentages of meal and/or flour with recommended iron levels

	Region	**Number of samples collected**	**Average iron concentration in meal and/or flour (mg/kg)**	**Percentage of (%) meal and/or flour with Iron in fortification range (≥20mg/kg)**
Zone 1	Zambezi	148	19.9	30
	Kavango East	140	19.3	36
	Kavango West	139	29.0	62
Total for Zone 1		**427**		**42**
Zone 2	Omusati	99	61.8	97
	Ohangwena	77	29.3	78
	Oshana	115	31.9	73
	Oshikoto	116	40.3	84
Total for Zone 2		**407**		**81**
Zone 3	Otjozondjupa	30	15.9	23
	Kunene	59	12.9	7
	Omaheke	115	28.1	67
Total for Zone 3		**204**		**48**
Zone 4	Khomas	96	18.9	36
	Hardap	76	20.1	49
	//Kharas	73	22.0	47
	Erongo	60	15.9	23

Total for Zone 4		**305**		**51**
National total		**1343**		**54**

All samples analysed contained iron and the average iron levels ranged from 12.9 to 61.8 mg/kg. Kunene region, where all samples were white maize meal had the lowest average iron concentration of 12.9 mg/kg which is less than the recommended minimum of 20mg/kg iron. Omusati region, where all collected samples were pearl millet meal had the highest average iron concentration of 61.8 mg/kg, which is well above 20mg/kg iron. Omaheke and Hardap regions, with 97% and 99% wheat flour samples, had average iron concentrations of 28.1 and 20.1 mg/kg respectively. Average iron levels were below recommended fortification levels in Erongo, Kunene, Otjozondjupa, Khomas and Kavango East regions therefore regular monitoring will be necessary to ascertain the meal and flour quality in those regions.

The findings suggest that pearl millet, a staple cereal to rural farming communities in arid and drought-prone regions may be an important locally sourced dietary source of iron compared to maize meal. The promotion of consumption of pearl millet, compared to refined maize meal and imported wheat varieties could be an important strategy to reduce and prevent iron deficiency, while at the same time promoting local production and local farmers. Iron deficiency is commonly associated with anaemia, which is one of the significant WHO recommended global targets to be reduced by at least half by the year 2025.

8.6 Urinary iodine status

A total of 664 out of a targeted 1620 samples of urine were collected, representing 41% of the target (Table 8.6).

Table 8.6 Number of samples of urine collected per region and percentage of target per zone

	Region	**Number of samples collected**	**Percentage of samples collected versus number targeted per zone (%)**
Zone 1	Zambezi	145	
	Kavango East	38	
	Kavango West	106	
Total for Zone 1		**289**	**72**
Zone 2	Omusati	29	
	Ohangwena	19	
	Oshana	44	
	Oshikoto	42	
Total for Zone 2		**134**	**34**
Zone 3	Otjozondjupa	12	
	Kunene	50	
	Omaheke	76	
Total for Zone 3		**138**	**35**

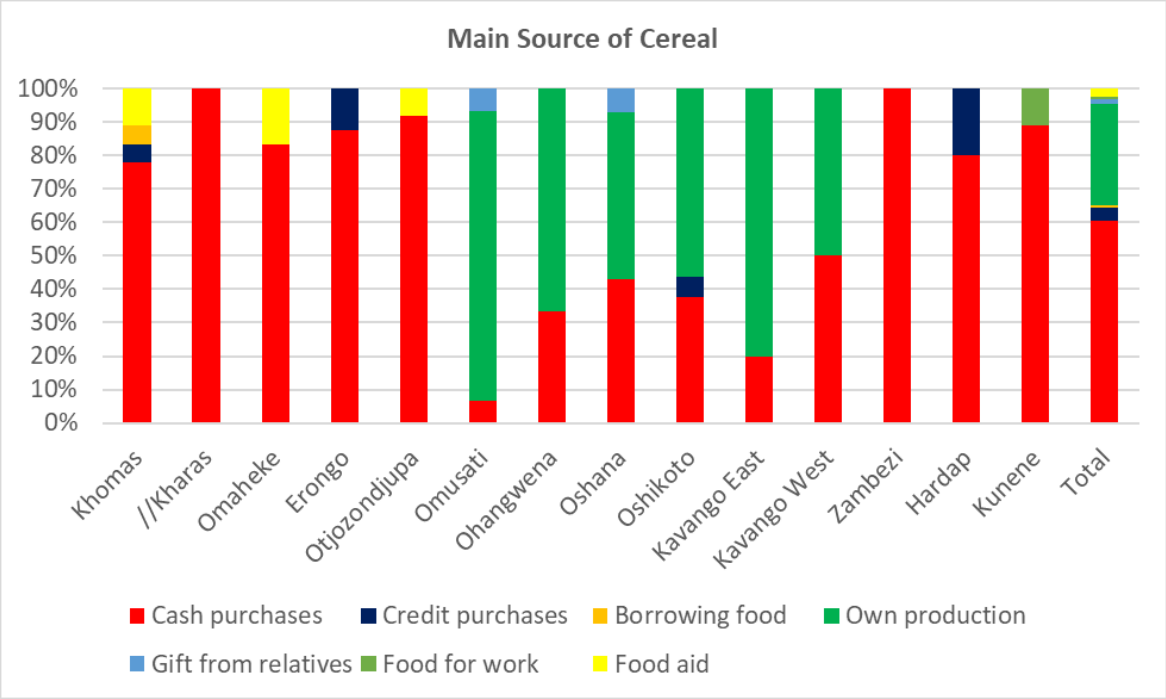
Zone 4	Khomas	41	
	Hardap	22	
	//Kharas	12	
	Erongo	28	
Total for Zone 4		**103**	**26**
National total		**664**	**41**

Households were reluctant to provide samples of urine, resulting in low numbers of samples. The collected samples were not sufficient to provide nationally representative population iodine status. There were also delays in receiving the reagents for analysis of the urine samples. The urine samples collected during 2021 and the reagents will be used for standardising and ensuring quality of the urinary iodine procedures for future assessments.

9.0 Markets

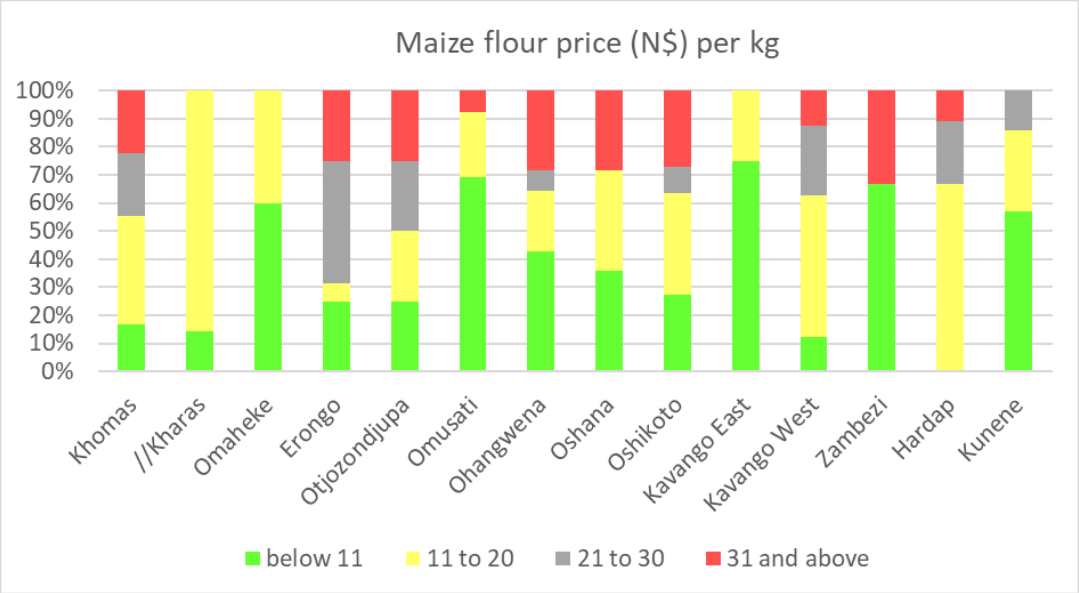
Markets play a significant role in food availability and food access. The analysis from the household data indicates that most people rely on cash purchases of cereals followed by own crop production. Out of the 14 regions, 9 regions significantly rely on cash purchases and these include Khomas, //Kharas, Omaheke, Erongo, Otjozondjupa, Kavango West, Zambezi, Hardap, and Kunene. The regions that rely on own crop production include Omusati, Ohangwena, Oshana, Oshikoto and Kavango East. In the Zambezi Region, despite registering a high harvest by commercial farmers, the majority relied on cereal purchases. On average at national level, 60 percent of the households rely on cash purchases. Graph 9.1 below indicates variations on the sources of cereal at household level.

Graph 9.1: Main Sources of Cereal



The average price of both maize flour and maize grain per kilogram (kg) vary within the region and across the regions. Prices are relatively lower in //Kharas, Omaheke, Omusati, and Kavango East. Higher prices have been reported in parts of Khomas, Erongo, Otjozondjupa, Ohangwena, Oshana, Oshikoto, and Zambezi. Graph 9.2 below indicates price variations of maize flour per kg across all the regions.

Graph 9.2: Maize meal per kg

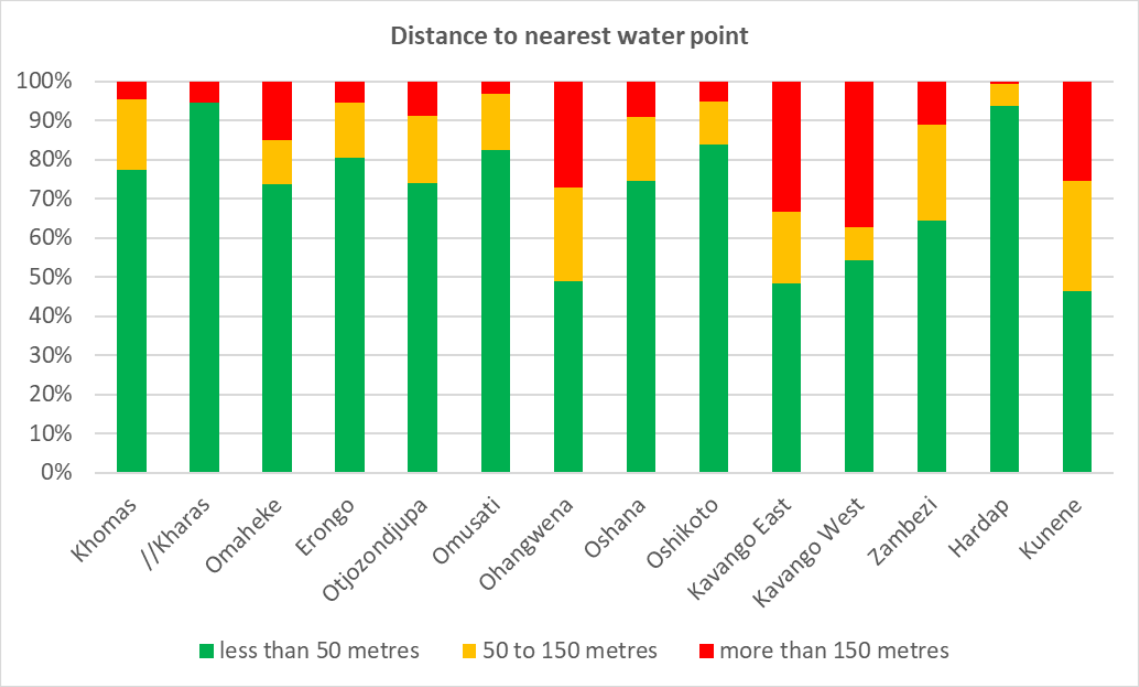


10.0 Water, Sanitation, and Hygiene (WASH)

10.1 Access to water

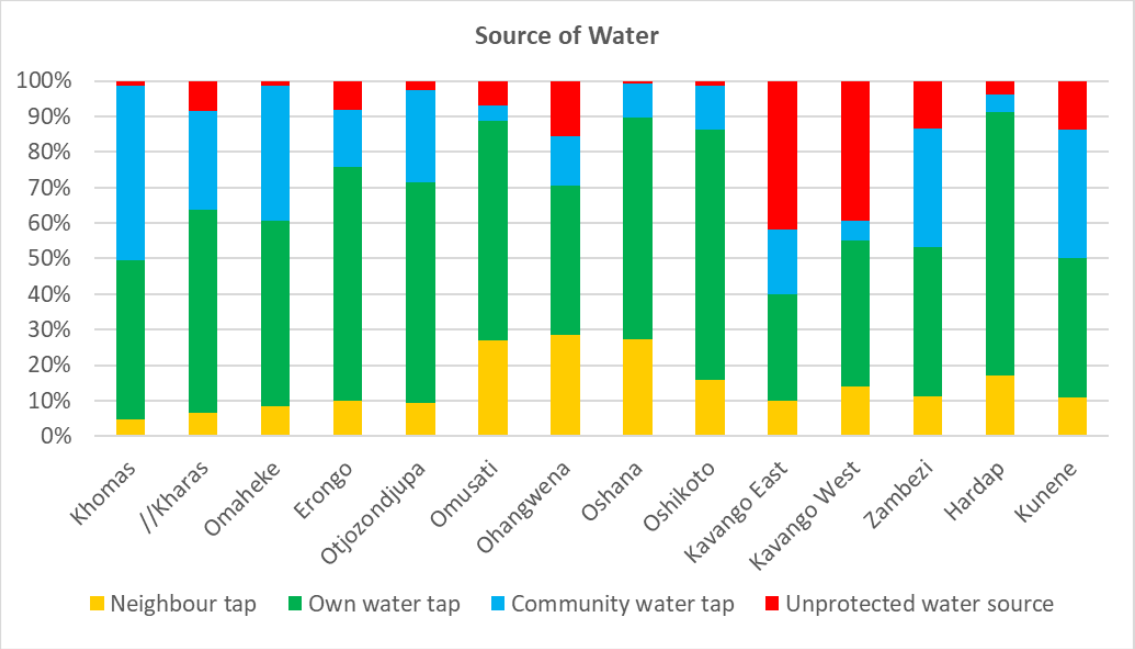
Analysis of household survey data from the regions indicate that at least 80 percent of the people in //Kharas, Erongo, Omusati, and Oshikoto regions travel less than 50 metres to fetch water followed by people in Khomas, Omaheke, Otjozondjupa and Oshana where they also travel less than 50 metres. On the other hand, 25 to 40 percent of people in Ohangwena, Kavango East, Kavango West, and Kunene travel more than 150 metres to fetch water. Graph 10.1 below indicates percentage breakdown in terms of distance covered to the nearest water point by region.

Graph 10.1: Distance to nearest water source



According to Namibia Demographic Survey of 2013, percentage of population using an improved drinking water source was 84 percent. The situation is better in urban areas compared to rural areas. Distance to the nearest water point varies from one region to another. Analysis on water source shows that in most regions people either rely on water from own water tap or community water tap. However, the situation is worse in Kavango West and Kavango East where 40 percent of people in rural areas rely on unprotected water sources followed by Ohangwena, Zambezi and Kunene where 13 to 15 percent of people also rely on unprotected water sources. Graph 10.2 below displays the percentage breakdown by region on water sources.

Graph 10.2: Source of water



10.2 Access to Sanitation

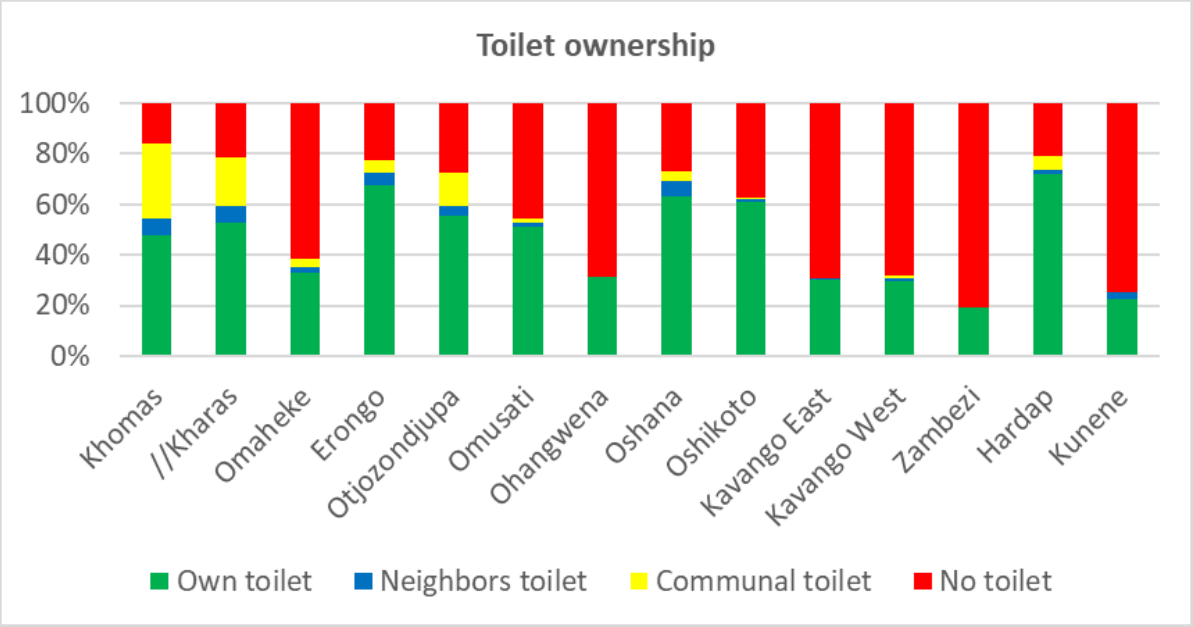
Namibia has the lowest levels of sanitation coverage in Southern Africa. Only 53.4 percent of the population has access to improved sanitation[13]. This is an improvement in access to improved sanitation from 33.8 percent in 2013[14]. That percentage drops to 14 percent in the country's rural areas. The practice of open defecation, which occurs in 14 percent of urban areas and 77 percent of rural areas, increases the spread of diseases, and impacts general health.[15]

According to the Namibia DHS of 2013, a household is classified as having an improved toilet if the toilet is used only by members of one household (i.e., not shared) and if the facility used by the household separates waste from human contact. The types of facilities considered improved are toilets that flush or pour flush into a piped sewer system, septic tank, or pit latrine; ventilated improved pit (VIP) latrines; and pit latrines with a slab.

Analysis of data from 2021 Namibia Vulnerability Assessment and Analysis indicates that ownership of toilet varies across the country. At least 50 to 70 percent of the household interviewed in //Kharas, Erongo, Otjozondjupa, Oshana, Oshikoto, Omusati, and Hardap own toilets. On the other hand, 60 to 80 percent do not have toilets in Omaheke, Ohangwena, Kavango East, Kavango West, Zambezi and Kunene. Graph 10.3 below provides the percentage breakdown by region for accessing own toilet, neighbour's toilet, communal toilet and with limited access to proper toilets.

[13] Namibia Multidimensional Poverty Index (MPI) Report 2021
[14] Namibia Demographic and Health Survey 2013.
[15] https://borgenproject.org/sanitation-in-namibia/

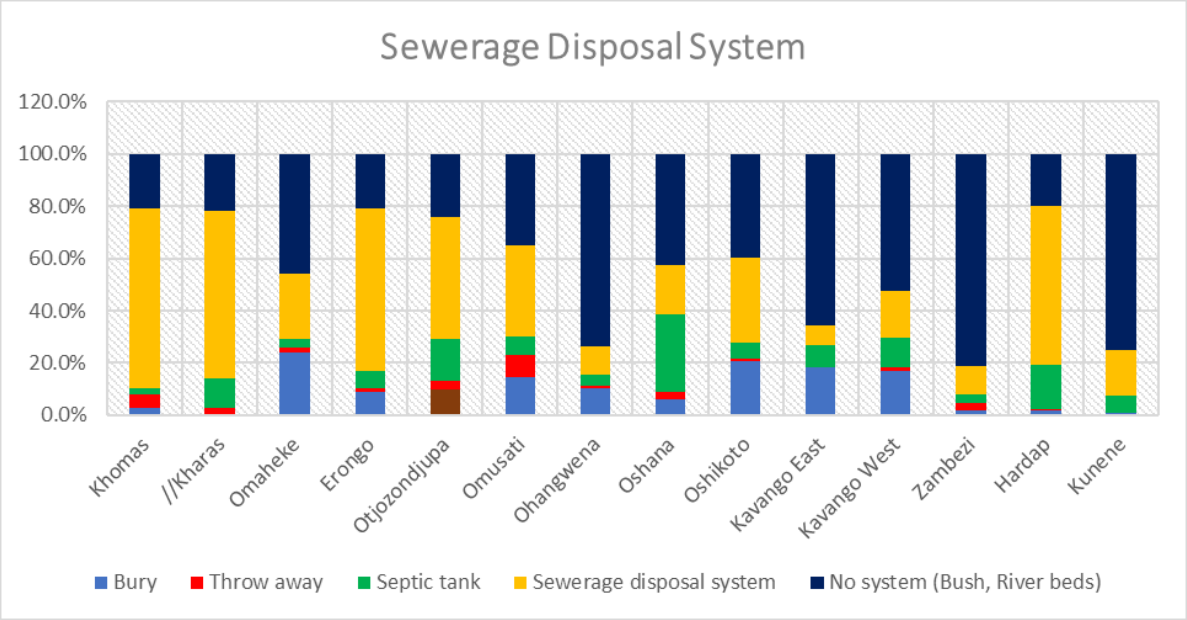
Graph 10.3: Toilet ownership



An analysis on household data on the disposal of sewerage confirms the trends and behaviour of households in the regions where a significant percentage of households do not have access to proper toilets. At least 45 to 80 percent of households in Omaheke, Ohangwena, Kavango East, Kavango West, Zambezi and Kunene do not have proper system of sewerage disposal and they either use the bush or riverbeds among other areas. This is a worrying situation because open defecation is a health hazard and contributes to spread of diseases.

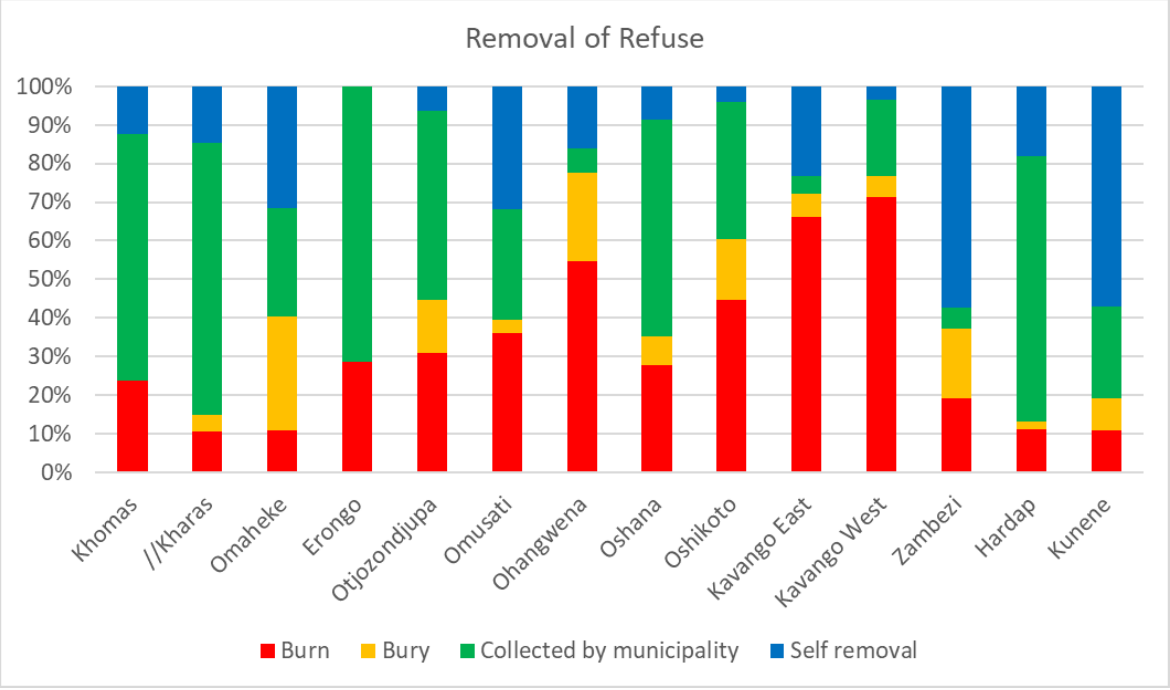
The data further indicates that regions of Khomas, //Kharas and Hardap rely on sewerage disposal system. Graph 10.4 provides percentage breakdown of sewerage disposal by region and method of disposal.

Graph 10.4: Sewerage Disposal



On removal of refuse, the analysis indicates that Khomas, //Kharas, Erongo, Oshana, and Hardap rely heavily on the municipality on refuse removal. Regions of Ohangwena, Kavango East, and Kavango West burn their refuse. Graph 10.5 provides percentage breakdown by region on refuse removal.

Graph 10.5: Removal of refuse



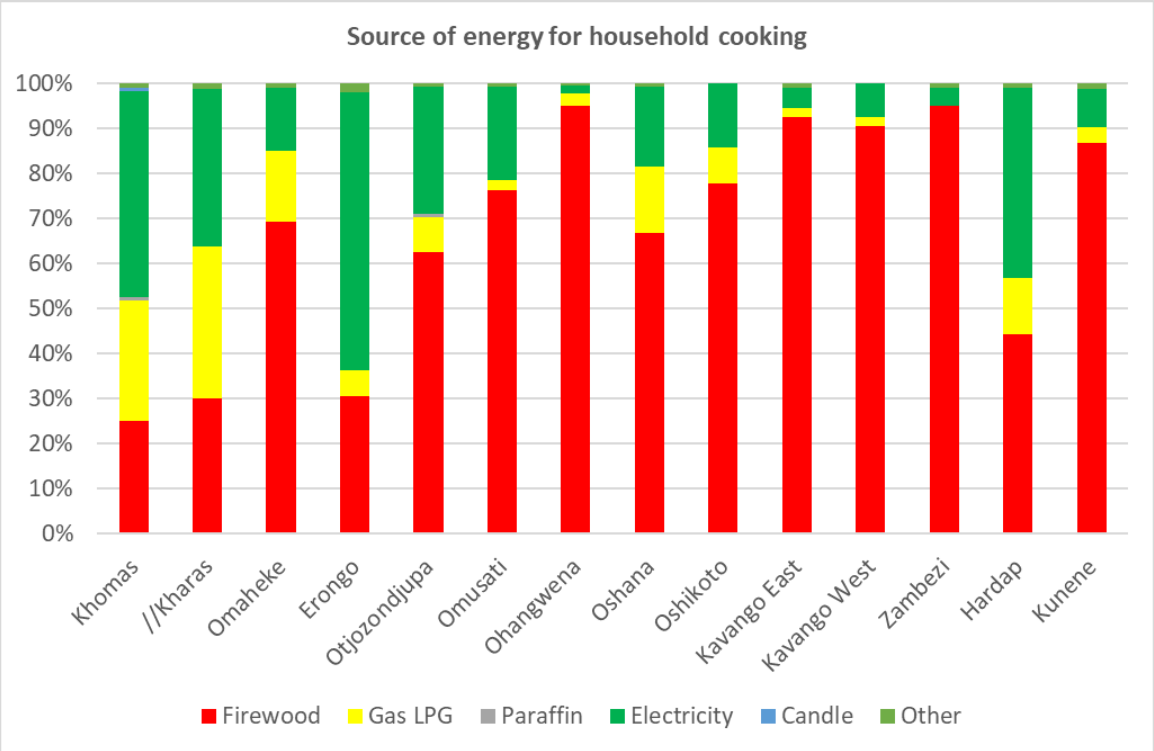
11.0 Sources of Energy

This section looks at both sources of energy for cooking and lighting. The focus is on use of electricity, firewood, gas, paraffin and other sources.

10.1 Energy for cooking

Most households in the regions rely on firewood for cooking followed by electricity and gas. Electricity and gas are mostly used in Khomas, //Kharas, Erongo, and Hardap. The remaining regions heavily rely on firewood. Graph 11.1 below shows the variations in the use of different sources of energy for cooking.

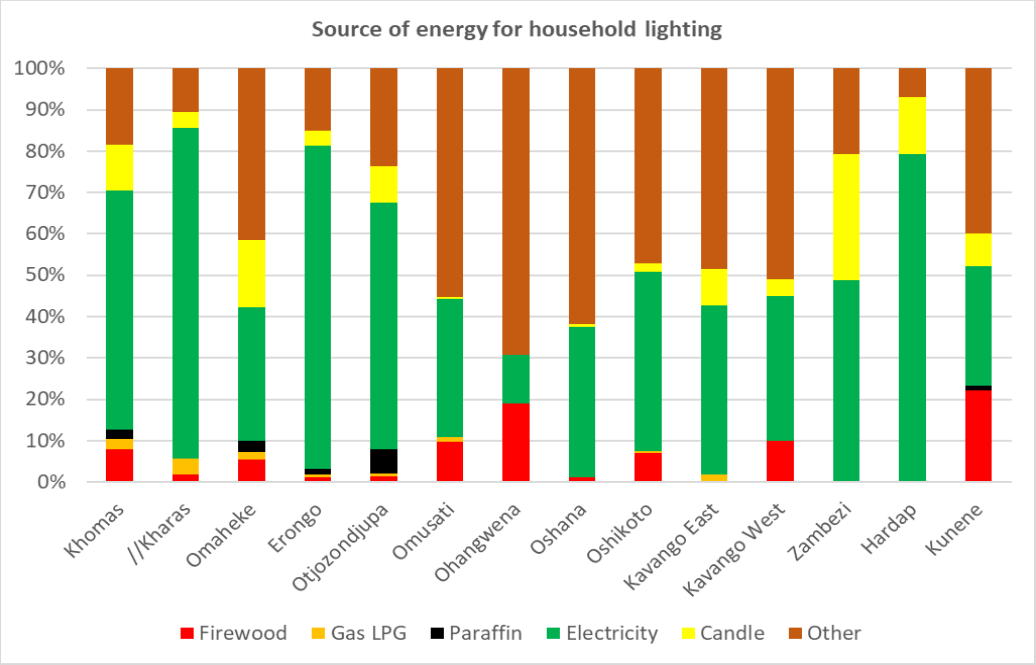
Graph 11.1: Sources of energy for cooking by region



11.2 Energy for lighting

In all the regions households rely on electricity and other sources for lighting. Like in the case of energy for cooking Khomas, //Kharas, Erongo, and Hardap also rely on electricity for lighting followed by Otjozondjupa. Graph 11.2 below shows the different uses of energy for lighting.

Graph 11.2: Sources of energy for lighting



12.0 Factors Affecting Food Security Situation

This section discusses the factors that have contributed to the current food insecurity situation in Namibia.

12.1 Drought

The drought of 2019 affected all the 14 regions. Most regions are still recovering from the impacts of the drought. However, there are still regions that are still experiencing the effects of the droughts, and these include Kunene, Omaheke, Erongo, //Kharas and Omusati. Kunene has been experiencing droughts for 8 consecutive years. The impact of the drought affected both crop and livestock production. In livestock production, farmers experienced high rates of livestock mortalities due to lack of grazing fields and drinking water for livestock. Farmers are slowly re-stocking their livestock.

The negative impacts of the drought are numerous, and these include loss of livestock, loss of income, migration of farmers within and outside the regions looking for water and pasture for livestock, decreasing water level, depletion of grazing land, soil degradation, and loss of livelihood.

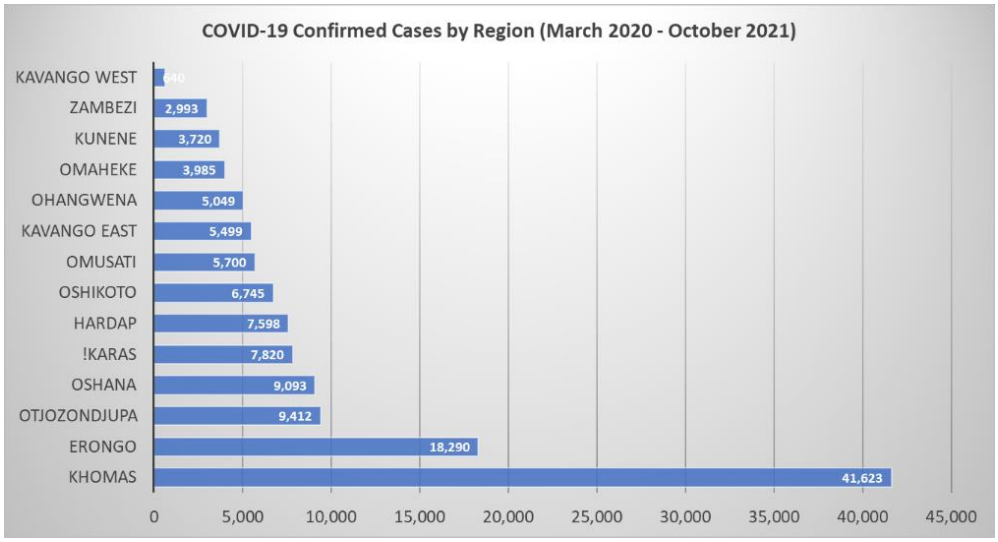
The drought conditions have also affected the southern parts of Angola bordering Namibia. This has led to migration of people from affected areas in Angola into Namibia. The people from Angola are being accommodated in the regions of Kunene, Omusati, and Ohangwena where the limited resources are already stressed. The migrants from Angola are competing on casual work with the locals.

12.2 COVID-19 pandemic

The pandemic contributes greatly to the current food insecurity situation in Namibia because of the negative impacts it afflicted on the national population. It has led to an increase in mortality rates with Khomas, Erongo, and Hardap being the hot spots using incidence rates per 1,000 population[16]. The outbreak was at its peak during the months of May, June, and July 2021. According to Namibia Statistics Agency (NSA), the country has registered a total of 128,167 confirmed positive cases and 3,527 deaths as of 14 October 2021.

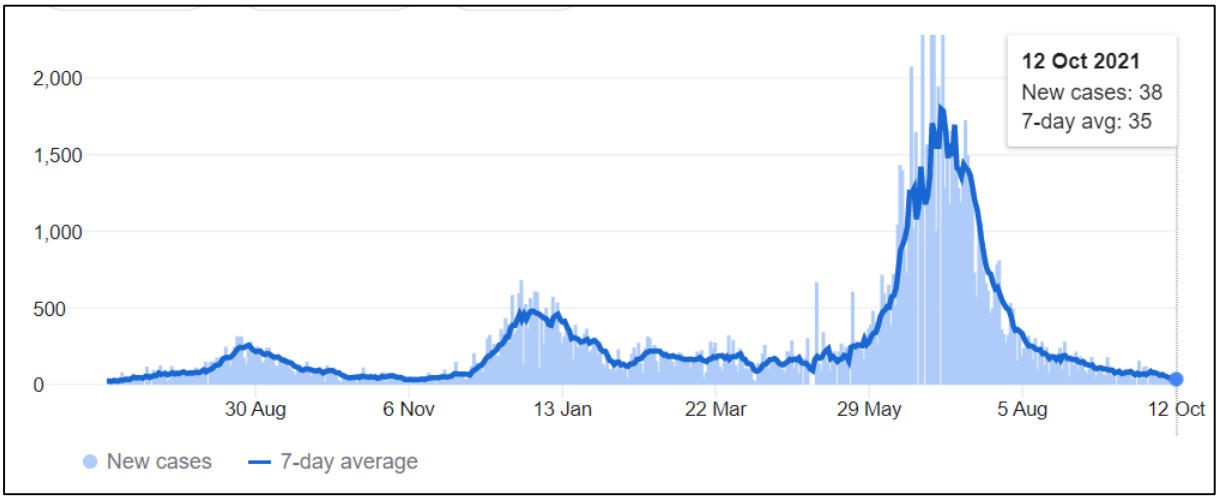
Graph 12.1 below provides COVID cases breakdown by region from March 2020 to October 2021.

Graph 12.1: COVID cases by Region from March 2020 to October 2021



Data source: Namibia Statistics Agency website

Graph 12.2 below shows trends in reported COVID-19 cases from 30 August 2020 to 12 October 2021.



Source: JHU CSSE COVID-19 Data – John Hopkins University

[16] Namibia Statistics Agency: https://nsaonline.maps.arcgis.com/apps/dashboards/3c1b4d50ea994610a1397c9c678b09d9

Besides high mortality rates, the pandemic led to high unemployment levels across the country as a result of businesses and mine closures, deaths of breadwinners and consequently increase in child-headed households, increase in demand for health services and in some cases construction of new structures as isolation centres.

COVID-19 pandemic has contributed greatly to the current situation due to its restrictive measures which have resulted to disruptions in food and non-food supply chains, increasing food prices, high rates of unemployment, loss of income for most businesses including the tourism sector due to business closures, and deaths of breadwinners. The impacts are equally felt across the country both in urban and rural areas.

12.3 Dry spells

Prolonged dry spells were reported in Oshana, Oshikoto, Ohangwena and Omusati regions. These dry spells affected crops at germination to vegetative stages. Furthermore, grazing fields for livestock were poor.

12.4 Excessive rainfall and floods

Some parts of Namibia experienced excessive rainfall. However, heavy rainfall in the second half of the season (Jan-Mar 2021) experienced in Kavango West, Kavango East and Zambezi regions resulted in flooding and affected crop production.

12.5 Livestock diseases

Cases of Food and Mouth Disease (FMD) and Lumpy Skin disease were reported in cattle in the Zambezi region in June 2021 and November 2020, respectively. Lumpy skin disease was also reported in the north central regions.

Pasturella disease in goats were report in the Kavango East and Kavango West regions with high mortality rates. Internal and external parasites in small stocks were reported in Kavango East and Kavango West regions and in the north central regions.

12.6 Crop pests' infestation

12.6.1 African Migratory Locusts (AML), Red Locusts

Namibia experienced the infestation of the African Migratory Locusts, Red Locust, and Brown Locusts. These locusts are trans-boundary pests which can fly long distance to affect crops and pastures. The first wave of the outbreak of African Migratory Locusts in Namibia was reported in February 2020 at Zambezi region, along the flood plains of Chobe and Linyathi rivers. In March 2020 the flying swarms were observed at Mururuane in Kavango West, Grootfontein in Otjozondjupa and Tsumeb in Oshikoto affecting a total of 400,216 hectares of the grazing areas.

The second wave of the outbreak was reported in August 2020 at the flood plains of Chobe, Linyathi and Zambezi River in Zambezi Region affecting 150 000 hectares of grazing areas, and this was during off cropping season.

The third wave of the locust outbreak was reported in December 2020 in Zambezi, Ohangwena, Kavango East and Kavango West regions, while in Hardap, //Kharas, Oshikoto, Ohangwena, Oshana, Omusati Regions it was reported in March 2021 affecting a total of about 734 000 hectares of grazing areas and 2600 hectares of crop fields.

12.6.2 Brown Locusts

The presence of the Brown Locusts in the last cropping season 2020/2021 was reported at //Kharas along the orange rivers and which spread to other areas such as Karasberg and Keetmanshoop rural constituencies and it has reached Maltahohe District at Hardap.

It should be noted that the Ministry of Agriculture, Water and Land Reform (MAWLR) continues to monitor the situation with the assistance of local communities and Traditional Authorities. As one of the measures, the Ministry has established a National and Regional African Migratory Locust Outbreak Information Desk to ensure efficient and effective coordination of information in combating the African Migratory Locust outbreak.

12.6.3 Other pests

Some regions experienced Fall Army Worm (FAW) and mice which destroyed maize and other crops at vegetative to development stages.

12.7 Rising food and non-food prices

Food inflation has risen faster than other consumption items. During the first quarter of 2021, food inflation (5.8 percent) was higher than all item inflation (2.8 percent). Increases were recorded in meat, 'oils and fats', and Fruit items[17]. During the second and third quarters, Namib Mills increased their food prices twice in the range of 2 to 6 percent.

These price increases are being triggered by the global price increments in fuel products. As a result, people's purchasing power has been reduced. The situation is worse because people have lost their jobs and incomes following the outbreak of COVID-19 pandemic.

12.8 Wildfires

Wildfires are a chronic problem in Namibia during the dry season. The wildfire season starts from May to October/November just before the rainy season. These fires are believed to be started by charcoal burners, those clearing the land for new grass to sprout, and other arsonists. These fires are contributing to food insecurity through destruction of grazing fields, livestock, wild animals, and human life. The frequency, intensity and extent of veld fires have become extremely prevalent across Namibia in 2021 due to the good rainfall that was received during the 2020/21 rainfall season, which resulted in the accumulation of a high fuel load in many parts of the country.

It is estimated that approximately 3 million hectares of grazing land, including land on 604 farms and in many protected areas, have been affected by forest and veld fires in 2021. This has resulted in the destruction of infrastructure and properties, vast grazing areas and in the loss of both human and animals. It is estimated that approximately 635 animals have perished due to the forest and veld fires outside protected areas[18].

[17] NSA

[18] Statement on the Situation with regard to Veld Fires in Namibia, Ministry of Environment, Forestry and Tourism, 29 September 2021

In total so far, the veld fires have affected 10 out of 14 regions, and these include: Hardap, Kavango East, Kavango West, Khomas, Kunene, Otjozondjupa, Ohangwena, Omusati, Oshana, and Zambezi.

The veld fires have also affected Etosha National Park. An estimated 487,732 hectares, which accounts for approximately 22 percent of the Park's area, have been affected by forest and veld fires in 2021.

The Ministry of Environment, Forestry and Tourism monitors the outbreaks of forest and veld fires nationwide based on remote sensing and aerial surveillance techniques. Daily updates are available on forest and veld fire outbreaks.

12.9 Human-wildlife Conflicts (HWC)

Human Wildlife Conflict is a big challenge in Namibia mainly due to competition for the same resources between human, their livestock and wildlife. The situation has been made worse with the droughts. The main problems occur on the land where wild animals are found outside protected areas and where people are least able economically to bear the costs of damage and losses.

In some cases, the locals have encroached protected areas meant for wildlife. During this year's assessment it was reported that elephants destroyed crop fields in Kavango West and Zambezi regions in the north.

The notable impacts of wildlife conflicts include loss of human life, injuries to people and death of livestock, damage to property, damage to vegetation and wildlife, competition with livestock for forage, and destruction of crops and gardens.

12.10 Unemployment and loss of income

During the period of assessment, it was reported that people lost their jobs due to COVID-19. People were either laid off or their businesses were closed due to either COVID-19 restrictions or low demand which led to significant losses of livelihoods.

13.0 Namibia population at risk to food insecurity

This section presents the assessment findings on food insecure population. The findings are divided in two periods: October to December 2021, and January to March 2022.

13.1 Current food insecure population (October to December 2021)

The population at risk to food insecurity between October and December 2021 is estimated at 658,588 people. This represents 26 percent of the 2021 Namibia estimated total population. The country is in phase 3 of IPC Analysis Phase Classification with variations in phases from 2 to 3 at regional levels. All the regions have food insecure population. The most affected regions are the drought prone areas, and these include Kunene, Erongo, Omusati, Omaheke and //Kharas.

Table 13.1: Current food insecure population (October to December 2021)

Level 2 Name	Area Phase		Phase 1		Phase 2		Phase 3		Phase 4		Phase 5		Level 3 or higher#	Level 3 or higher%
		Total # (pp)	Phase 1#	Phase 1%	Phase 2#	Phase 2%	Phase 3#	Phase 3%	Phase 4#	Phase 4%	Phase 5#	Phase 5%		
Erongo	3	215 700	86280	40	75495	35	43140	20	10785	5	0	0	53925	25
Hardap	2	95049	47525	50	33267	35	14257	15	0	0	0	0	14257	15
Kavango East	3	160 670	40168	25	56235	35	56235	35	8034	5	0	0	64268	40
Kavango west	3	92 239	36896	40	27672	30	23060	25	4612	5	0	0	27672	30
//Kharas	3	94294	37718	40	33003	35	14144	15	9429	10	0	0	23574	25
Khomas Region	3	496546	173791	35	198618	40	99309	20	24827	5	0	0	124137	25
Kunene	3	109672	43869	40	32902	30	27418	25	5484	5	0	0	32902	30
Ohangwena	3	267 835	80351	30	80351	30	93742	35	13392	5	0	0	107134	40
Omaheke	3	77212	38606	50	19303	25	15442	20	3861	5	0	0	19303	25
Omusati	3	257874	128937	50	77362	30	51575	20	0	0	0	0	51575	20
Oshana	2	202656	81062	40	101328	50	20266	10	0	0	0	0	20266	10
Oshikoto	3	209270	83708	40	62781	30	52318	25	10464	5	0	0	62781	30
Otjozondjupa	2	163 776	73699	45	65510	40	24566	15	0	0	0	0	24566	15
Zambezi	3	107433	42973	40	32230	30	21487	20	10743	10	0	0	32230	30
Grand Total		2 550 226	995581	39	896056	35	556958	22	101630	4	0	0	658588	26

At regional level, the affected population range from 10 percent in Oshana to 40 percent in Kavango East and Ohangwena. Map 1 in appendix 1 provides special distribution of the food insecurity phases.

13.2 Projected food insecure population (January to March 2022)

The food insecure population is projected to increase between January and March 2022 to 750,313 people representing 30 percent of the 2021 Namibia estimated population. The projected period is the lean period for Namibia. During this period prices of most food commodities are high due to limited supply and scarcity in some markets. Map 2 in appendix 1 provides special distribution of the food insecurity phases.

The situation will be exacerbated by the current prevailing impacts of COVID-19 pandemic of which it might take time for people and the economy in general to recover from. However, if the current rainfall prediction of normal to above normal holds for the 2021/22 rainfall season then both crop and livestock production will improve and might have a positive impact on the consumption period from April 2022 to March 2023. Table 13.2 below indicates the population breakdown in the projected period.

Table 13.2: Projected population (January to March 2022)

Level 2 Name	Area Phase		Phase 1		Phase 2		Phase 3		Phase 4		Phase 5		Level 3 or	Level 3 or higher%
		Total # (pp)	Phase 1#	Phase 1%	Phase 2#	Phase 2%	Phase 3#	Phase 3%	Phase 4#	Phase 4%	Phase 5#	Phase 5%		
Erongo	3	215 700	86280	40	75495	35	43140	20	10785	5	0	0	53925	25
Hardap	3	95049	42772	45	33267	35	19010	20	0	0	0	0	19010	20
Kavango East	3	160 670	32134	20	48201	30	64268	40	16067	10	0	0	80335	50
Kavango west	3	92 239	36896	40	27672	30	23060	25	4612	5	0	0	27672	30
//Kharas	3	94294	37718	40	28288	30	18859	20	9429	10	0	0	28288	30
Khomas Region	3	496546	148964	30	223446	45	99309	20	24827	5	0	0	124137	25
Kunene	3	109672	32902	30	38385	35	32902	30	5484	5	0	0	38385	35
Ohangwena	3	267 835	80351	30	53567	20	120526	45	13392	5	0	0	133918	50
Omaheke	3	77212	38606	50	15442	20	15442	20	7721	10	0	0	23164	30
Omusati	3	257874	116043	45	77362	30	64469	25	0	0	0	0	64469	25
Oshana	3	202656	121594	60	40531	20	40531	20	0	0	0	0	40531	20
Oshikoto	3	209270	73245	35	62781	30	52318	25	20927	10	0	0	73245	35
Otjozondjupa	2	163 776	73699	45	73699	45	16378	10	0	0	0	0	16378	10
Zambezi	3	107433	42973	40	37602	35	21487	20	5372	5	0	0	26858	25
Grand Total		2 550 226	964175	38	835739	33	631697	25	118616	5	0	0	750313	30

13.3 Key assumptions for the assessment findings

The assessment findings are valid based on several assumptions. Any changes to the situation or assumptions will warrant a revision to both current and projected food insecure population. The assumptions are as follows:

a) Implementation of existing safety nets will continue.
b) The current food and non-food prices will remain the same between October 2021 through March 2022. Any price increase in food commodities will further reduce the purchasing power of the already vulnerable groups and may lead to an increase in the numbers of people requiring assistance.
c) The Government will ensure food availability in the market to meet the national cereal food requirement.
d) The current situation on COVID-19 pandemic will remain stable with low cases for both current and projected periods.
e) Livestock diseases will be under control to stabilize incomes of livestock farmers and those groups of people who rely on livestock products sales as a livelihood.
f) Livestock grazing fields will not be affected by wildfires.

14.0 Conclusions

The assessment findings indicate that the population at risk to food insecurity between October and December 2021 is estimated at 658,588 people. This represents 26 percent of the 2021 Namibia estimated total population. The food insecure population is projected to increase between January and March 2022 to 750,313 people representing 30 percent of the 2021 Namibia estimated population. The country is in phase 3 of IPC Analysis Phase Classification with variations in phases from 2 to 3 at regional levels. All the regions have food insecure population. The most affected regions are the drought prone areas, and these include Kunene, Erongo, Omusati, Omaheke and //Kharas.

Although levels of acute malnutrition in children 6 to 59 months are relatively low, children under the age of 2years are more malnourished that children over the age of 2years. Universal salt iodisation is a goal yet to be achieved for Namibia. Locally pearl millet has higher levels of iron than other (imported) commonly consumed cereals and flours. Two thirds of households in Namibia consume oils that are not fortified with Vitamin A.

Out of the total population currently facing food insecurity, 101,630 people are those experience chronic vulnerability (poverty) requiring implementation of long-term developmental programmes, projects and interventions.

It is worth noting that if the key assumptions (best case scenario) for the assessment finding are not realised, an estimated number of 750,313 people will be facing food insecurity during the months of January to March 2021. This include 118,616 people who are chronically poor.

15.0 Recommendations

The Government of Namibia and its stakeholders, therefore, is being advised to continue with the implementation of 2020/2021 lifesaving interventions. In addition, OMAs are required to

continue implementing the medium to long term interventions as per **Cabinet Decision NO. 19TH /01.12.20/002)** indicated below**.**

Strategies	**Implementing Institution**
Reduce chronic vulnerability (poverty) through financial support to community-based income generating project	MGEPESW, NPC, MIT
Intensify research in drought tolerant crop and livestock	MAWLR, MHETI (Institutes of high learning
Finalise the development of an integrated early warning system	OPM, MWT, MAWLR, MEFT
Develop and implement cost effective livestock feed production scheme	MAWLR
Provide favourable agricultural loans to households/farmers for optimal production (The current system of their service is not accessible to the majority (poor and middle-class citizens) of the population	Agribank, Development Bank of Namibia
Develop and implement water management strategies that include irrigation and livestock support to subsistence farmers with little available resources	MAWLR, MURD (RCs)
Introduce disaster risk management through asset creation (including land management through work for agricultural assets program)	MWALR, MURD (RCs)
Create strategies that preserve the arable land and effectively manage land use pressures to reduce land degradation and desertification	MEFT, MAWLR
Create resilience strategies that will enable households to be able to produce food during flooding/drought periods	MAWLR, MURD
Ensure access to social protection to enhance resilience through provision of national documents and review of admission criteria into these available grants	MGEPESW, MHASS
Promote, optimal feeding (exclusive breastfeeding for the first six months, and continued breastfeeding with age-appropriate complementary foods), during the first 1000 days of a child's life	MHSS, OPM, MGEPESW
Strengthen regulations and monitoring of salt iodisation, and vitamin A fortification to ensure that more households are utilising iodised salt.	MHSS, OPM, MAWLR
Advocate and invest more on risk reduction and community empowerment projects	OMAs, Private Sector, Civic Organizations, Development Partners, Traditional Authorities

Build capacity to all Government and community levels to ensure that risk and vulnerabilities are identified, mapped and mitigation measures are implemented	OPM

Meanwhile, the continuous monitoring of the food security and nutrition situation is required to ensure prompt action when required.

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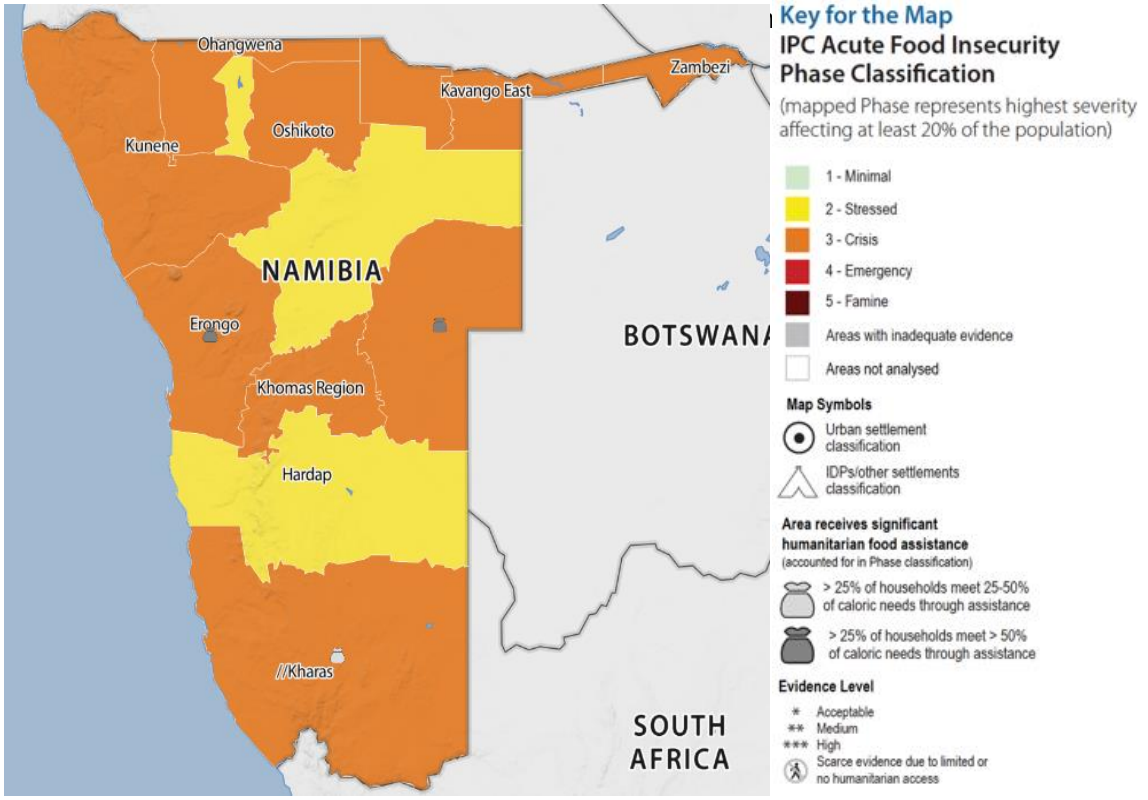
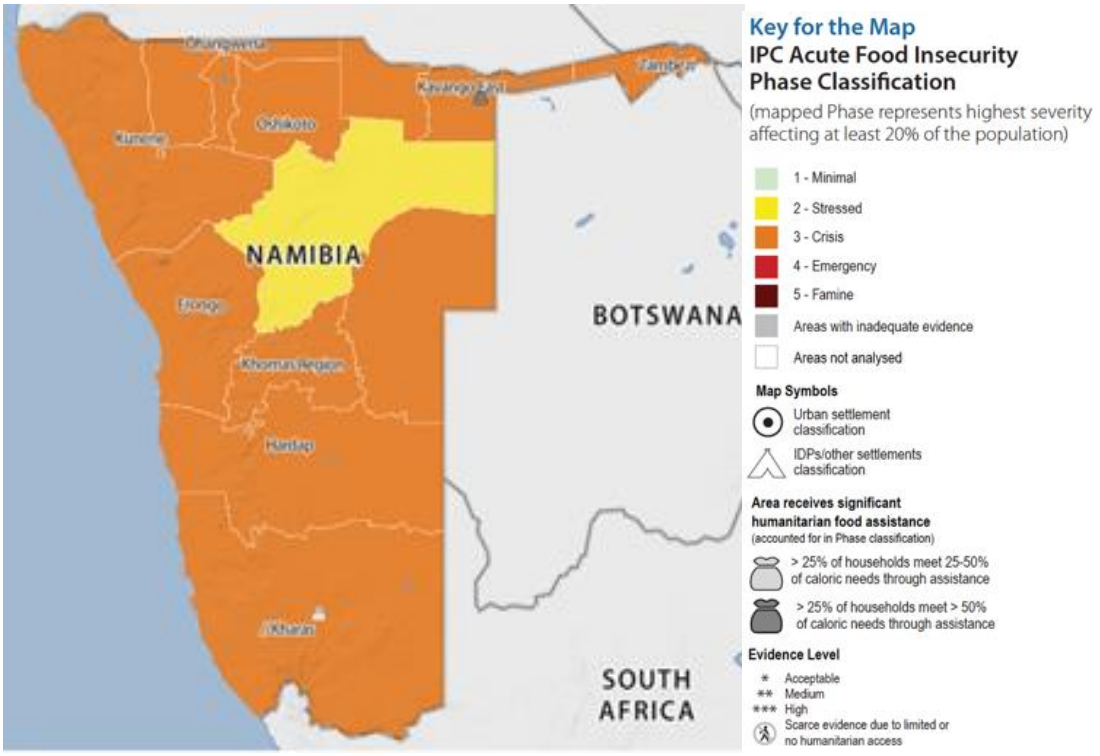
Appendices

Appendix 1: Maps displaying phase classification for food insecure population



Map 2: Projected Food Insecure Population (January – March 2022)



Appendix 2: The Data Analysis Workshop in pictures

Appendix 3: List of participants on the Vulnerability Assessment and Analysis Exercise

Name	Profile	Institution
Mr Masozi Kachale	SADC RVAA Analyst	SADC RVAA
Mr Fred Alumasa	Consultant	UNICEF
Ms Gloria Kamwi	Deputy Head of Program	WFP
Mr Obert Mutabani	Monitoring and Evaluation Officer	WFP
Prof Jane Misihairabgwi	Associate Professor	University of Namibia
Dr Anthony Ishola	Senior Lecturer	University of Namibia
Caroline Hungwe	Communication and Advocacy	SADC RVAA
Tebogo Ngoma	Monitoring and Evaluation	SADC RVAA
Prosper Chopera	Consultant	WFP
Simon Muhindi	Consultant	IPC (Virtual)
Kudzayi Kariri	Consultant	IPC (Virtual)
Peter Mbangu	Regional NAMVAC Member	Kavango West RC
Mukoya E. Mashako	Regional NAMVAC Member	Kavango West RC
Beatus Monchwe	Regional NAMVAC Member	Omaheke RC
Hilde Hikuama	Regional NAMVAC Member	Omaheke RC
Yvonne Kavezepa	Regional NAMVAC Member	Gobabis Municipality
Collin Ekandjo	Regional NAMVAC Member	Oshana RC
Hilkka Nailenge	Regional NAMVAC Member	Oshana RC
Anna Amwaama	Regional NAMVAC Member	Omusati RC
Sakaria Namwandi	Regional NAMVAC Member	Omusati RC
Gabriel Geigub	Regional NAMVAC Member	Otjozondjupa RC
Veronica Richter	Regional NAMVAC Member	Otjozondjupa RC
Sara Jacobs	Regional NAMVAC Member	//Kharas RC
George Seister	Regional NAMVAC Member	//Kharas RC
Gideon Mulenga	Regional NAMVAC Member	Oshikoto RC
Amalia Muhongo	Regional NAMVAC Member	Oshikoto RC
Peyavali Mushelenga	Regional NAMVAC Member	Ohangwena RC
Klaudia Nangobe	Regional NAMVAC Member	Ohangwena RC
Mclean N. Liyali	Regional NAMVAC Member	Zambezi RC
Dust Kachaka	Regional NAMVAC Member	Zambezi RC
Stanley Tjikundi	Regional NAMVAC Member	Khomas RC
Gabriel Namagumbo	Regional NAMVAC Member	Khomas RC
Bernadus Hoeb	Regional NAMVAC Member	Kunene RC
Tuyakula Kaudinge	Regional NAMVAC Member	Kunene RC
Jason Amukwa	Regional NAMVAC Member	Erongo RC
Monaliza Gomes	Regional NAMVAC Member	Erongo RC
Johanna Nekaro	Regional NAMVAC Member	Kavango East RC
Jacob Ulanda	Regional NAMVAC Member	Kavango East RC
Naomi Tjitaura	Regional NAMVAC Member	Hardap RC
Edwin Swartz	Regional NAMVAC Member	Hardap RC
Michael Kalumba	Logistics	OPM/DDRM
Anna Dumeni	Early Warning, Monitoring and R/Assessment	OPM/DDRM
Anastasia Amunyela	Policy and Coordination	OPM/DDRM