Comprehensive Food Security and Vulnerability Analysis (CFSVA)

The Gambia

December 2016
Data Collected in April 2016

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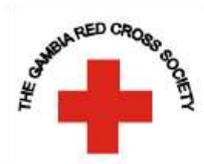
Foreword

The Gambia faces a number of development challenges including high food insecurity. The country is highly dependent on imports of staple food supplies (60% of its needs are imported), and the rise and fluctuation of food prices which make households vulnerable. This study was commissioned to understand the extent of the plight of the people in need and the implications.

With the majority of the population being classified as living below the poverty level, it is clear that many people are seriously affected even when small shocks occur. Which groups were hit the hardest, which ones were more affected and less likely to have diversified income or support systems, and which shocks and combinations hurt which people the most. These are questions that require a systematic understanding in order to devise effective and well targeted strategies to minimize the impact of shocks and strengthen resilience. Who were the most vulnerable and how did people across the country cope were critical questions as well. A critical part of this process has been The Gambia Comprehensive Food Security and Vulnerability Analysis (CFSVA) which WFP in collaboration with partners undertook in April 2016.

The purpose was to determine what the key factors were for the population in meeting their family's food requirements and devising coping strategies in the event of sudden shocks. In addition, the process was designed to be a collaborative approach and was used to continue building capacities within the key intuitional structures in the country. All of the key stakeholders were involved from the outset to support the study, to determine what the relevant food security indicators are and what the coping factors might be, and to undertake the survey using innovative methods such as the utilization of tablets for data collection.

The results of the survey highlight how people cope at a particular point in time, which was a relatively food abundant period - at the end of the harvests. It is expected that the findings of this study will guide a better coordinated, more comprehensive and strategic response to address the needs of vulnerable communities.

Representative and Country Director

World Food Programme
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The Gambia Comprehensive and Vulnerability Analysis Report July 2016.

Data were collected in April 2016.

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Acknowledgments

WFP Gambia wishes to first acknowledge the cooperation of all the household heads, community leaders and local authorities who took the time to respond to questions posed by our team of enumerators. This report would not have been possible without their full participation. We would like to thank all the families and communities who took their time to receive the survey teams and answer questions, allowing us to better understand their lives and livelihoods. This report is dedicated to them and all of the vulnerable households and communities in The Gambia who are in need of support in overcoming present and future food security challenges.

An assessment of this nature and magnitude is never successfully accomplished by a single organization or agency, and for that reason WFP country office would like to recognize the immeasurable contribution of its partners. These include The Gambia Bureau of Statistics (GBOS), Planning Service Unit of Ministry of Agriculture (MoA), Ministry of Health and Social Welfare (MoHSW), National Nutrition Agency (NaNA), National Disaster Management Agency (NDMA), The Gambia Red Cross Society (GRCS), FAO, UNICEF, and UNDP. Over the course of the assessment, these partners shared their expertise, invaluable knowledge, experience, records, manpower, logistics and other resources to make this exercise possible. We also acknowledge the commitment and enthusiasm of the data collectors, who demonstrated professionalism during the entire data collection process.

The support of the WFP Regional Bureau in Dakar was also crucial during all the stages of the assessment, particularly the Vulnerability Analysis and Mapping (VAM) unit.

At Gambia country office, we would like to thank the country office staff for their efforts. We would also like to thank the dedicated GBoS staff, for their tireless efforts and professionalism in bringing the 2016 CFSVA to fruition.

While we cannot name all those who contributed to this report, we express and extend our deepest gratitude to everyone who contributed towards the success of this assessment.

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Abbreviations and list of Acronyms

BCC: Banjul City Council

BSF: Blanket Supplementary Feeding

CARI: Consolidated Approach for Reporting Indicators

CFSVA: Comprehensive Food Security and Vulnerability Analysis

CRRN: Central River Region North

CRRS: Central River Region South

CS: Coping Strategy

CSI: Coping Strategy Index

DDS: Dietary Diversity Score

EAs: Enumeration Areas

FCS: Food Consumption Score

GBoS: Gambia Bureau of Statistics

GDP: Gross Domestic Product

GMD: Gambian Dalasi

HH: Household

IOM: International Organization for Migration

IPCC: International Panel on Climate Change

KMC: Kanifing Municipal Council

LGA: Local Government Area

LRR: Lower River Region

MICS: Multi Indicator Cluster Survey

MT: Metric Ton

NBR: North Bank Region

PRRO: Protracted Relief and Recovery Operation

TSF: Targeted Supplementary Feeding

URR: Upper River Region

WCR: West Coast Region

WFP: World Food Programme

Currency Equivalents

Currency Unit = Dalasi (GMD)

US$1 = GMD 42 (as of 1 April 2016)

Executive Summary

The 2016 Comprehensive Food Security and Vulnerability Analysis (CFSVA) is based on a nationally representative sample survey to update the knowledge base on food security and vulnerability at the household level in The Gambia. It covers both urban and rural areas and takes into account the recent natural and economic shocks experienced by the population.

A total of 2,557 households were interviewed in urban and rural settlements across five administrative regions and two municipalities. 18 percent of the households interviewed were headed by females. Households were asked questions regarding food consumption (frequency and dietary diversity); income and expenditure; coping strategies; assets and livelihoods; seasonality of food insecurity, employment and migration patterns. In addition, community interviews were carried out in twenty randomly selected communities to obtain contextual information about access to health and sanitation services, infrastructure, shelter, roads, markets and recent shocks and coping mechanisms.

The 2016 CFSVA found that at the national level, about 148,458 persons are food insecure or vulnerable to food insecurity representing approximately 8% of the total population (of which 0.6% are severely food insecure) of the 2015 projected population[1] of The Gambia. This represents an increase in the proportion of the food insecure population from 5.6% in the 2011 CFSVA. 29.1 percent of the households interviewed were found to be marginally food insecure. Food insecurity disproportionately affects households residing in predominantly rural areas. Basse, Kuntaur, Janjangbureh and Mansakonko were found to have the highest number of food insecure households in the country. In these four LGAs, the number of food insecure households range between 12 percent and 18 percent. Households headed by non-literate (read or write) are four times more likely to be food insecure than households headed by literate. The results of the survey also indicate that households having access to improved water and sanitation facilities are at least twice less likely to be food insecure.

The majority of Gambian households do not earn more than 20,500 Dalasis annually and monthly household expenditure is approximately 10,643 Dalasi. Average household expenditure on food accounts for approximately 52 percent of the total expenditure. Gambian households largely rely on purchase of food for consumption, have family members who work away from home for more than six months during the year, and depend on informal credit sources (e.g. neighbors, relatives, traders) when borrowing money. Rising food prices and natural disasters are the most prominent factors that have negatively impacted Gambian households' food access and put them at risk of becoming food insecure in recent years.

The 2016 CFSVA was conducted during the period of the year when food is generally more available and there are less access constraints at household level. Thus the number of food insecure households will increase as the lean season approaches. Compared to the results of the 2011 CFSVA, the food security situation in the country has not improved.

To address the main food security challenges facing the households as the results have shown above, interventions that specifically build resilience to future shocks and disasters should be prioritized. Specifically, the following short, medium and long term measures are recommended (for the government and food security partners) to protect and strengthen livelihoods of the food insecure and vulnerable households:

1. Support farmers with inputs to improve yields and expand the area of land put under cultivation.
2. Encourage the development of fruit tree farms.
3. Promote commercialization of agricultural activities.
4. Expand the policy to promote the consumption of other local products in addition to rice.

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1 World Bank http://data.worldbank.org/country/gambia-the

5. Promote diet diversification and the production of crops like cassava, beans to reduce the demand on rice.
6. Promote the establishment of small business enterprises (entrepreneurship) focusing on value addition and value chains.
7. Provide opportunities for training and skills development in diverse livelihood areas such as fishing, and technical skills for the youth.
8. Revitalization of seed and cereal banking schemes to build resilience.
9. Social Behavior Change Communication on the important of consuming nutritious food.
10. Establish an integrated food security monitoring and early warning system.

1. Background

1.1 Country overview

Located in West Africa, neighboring Senegal and the Atlantic Ocean, The Gambia, with a population of over 1.85 million, remains one of the least developed, low income and food-deficit countries in the world. With a total land area of 10,689 square kilometers, the country extends about 500 km inland and its width varies from 24 to 28 km. Subsistence, rural and rain fed agriculture is one of the major drivers of The Gambia's economy and is also the main source of livelihood of the majority of the rural population. The GDP per capita of income of The Gambia was reported at around USD 440[2] in 2014. Domestic cereal production accounts for only up to 60 percent of annual consumption requirements and the country relies heavily on food imports. Foreign exchange earnings are based primarily on groundnut exports, tourism and remittances. The relatively undiversified economy makes The Gambia highly vulnerable to external shocks which put the country's food security at risk.

The country ranked 172nd of the 188 countries and territories in the 2015 UNDP Human Development Report. The Human Development Index for The Gambia increased from 0.272 in 1980 to 0.441 in 2014, but it is below the regional average of 0.505 for Sub-Saharan Africa during the same period. The 2015 Human Development Report also ranks The Gambia 143 out of 155 countries on the gender inequality index. 17 percent of adult females have attained secondary school education compared to 31 percent of their male counterparts. Female participation in the labour market is 72 percent compared to 82 for males. Poverty levels remain high with 48 percent[3] of the population living below the income poverty line ($1.25/daily) and at least 5.1 percent of the population considered food insecure. According to the 2015 Standardized Monitoring and Assessment of Relief and Transitions (SMART) survey the prevalence of global acute malnutrition (GAM) increased to 10.4 percent, up from 9.9 percent in the 2012 SMART survey. Four out of eight local government areas (LGAs) registered GAM rates above the national average. National stunting rates were recorded at a critical 24.9 percent. Kerewan, Basse, Kuntaur, Janjanbureh LGAs all recorded stunting rates above the national average.

The Gambia is divided into 48 districts in 5 administrative regions and 2 municipalities: Banjul, Kanifing, West Coast Region (WCR), North Bank Region (NBR), Lower River Region (LRR), Central River Region (CRR) and Upper River Region (URR). The districts within the regions and municipalities are further clustered into local government areas (LGAs): Banjul City Council (BCC), Kanifing Municipal Council (KMC), Brikama Area Council, Mansakonko Area Council, Kerewan Area Council, Janjangbureh Area Council, Kuntaur Area Council and Basse Area Council.

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2 World Bank http://data.worldbank.org/country/gambia-the
3 2010 Integrated Household Survey, GBoS.

Map 1-1: Map of The Gambia

1.2 CFSVA Objectives

The overarching objective of the 2016 Comprehensive Food Security and Vulnerability Analysis (CFSVA) is to update the food security and vulnerability situation in The Gambia and also provide comparative data to enable trend analysis over the past five years. The CFSVA aims to provide the government and humanitarian partners with information on the areas and population groups that are most food insecure and malnourished. It also aims to understand why they are food insecure, and how food or other assistance can make a difference in reducing hunger and supporting their livelihoods and if possible, recommend targeting criteria for the different socio-economic groups. Specifically the 2016 CFSVA identifies:

> (a) Food security profiles and socio-economic characteristics of sampled households;
> (b) Household food consumption (frequency, diversity, and source);
> (c) Access to health, water, sanitation and education;
> (d) Household exposure and response to risk, including coping strategies;
> (e) Assets and livelihoods (e.g. income/livelihood sources, livestock, ownership of physical assets such as land, etc.); and
> (f) Access to and market functionality

1.3 Methodology of the Survey

The CFSVA was carried out based on a nationally representative sample survey covering both urban and rural areas. Interviews were conducted at the household level through household questionnaires, focus group discussions and key informant interviews.

Literature Review

An in-depth review of existing literature and information on the food security and nutrition situation of the country was conducted. These include previous surveys (CFSVA, PRRO Baseline and Follow up reports), SMART and nutrition surveillance reports by the National Nutrition Agency, crop assessments, agricultural sample surveys, market price monitoring reports, early warning reports, recent demographic and health surveys, the Integrated Household Survey (2010), MICS (2010), etc.

Sampling (two stage clustering)

After consultations and reviews with partners (especially Gambia Bureau of Statistics), a stratification procedure was used similar to the one which was adopted during the 2011 CFSVA: a total of 48 districts were regrouped into 16 strata taking the urban/rural nature of the area and geographic proximity as the two main criteria. Furthermore, similarity in homogeneity in terms of economic activities, livelihood etc. were used in determining the are clustered of the stratas. Subsequently, a two stage sample design was adopted. The first stage was the selection of Enumeration Areas (EAs) from each of the 16 strata based on probability proportional to (population) size and the second stage was the random selection of households within each EA. EAs were selected from the sample frame provided by GBOS developed for the Population and Housing Census 2013. Households were selected following simple random sampling or systematic sampling if constructing a sampling frame of all households within each EA.

Data Collection

Based on this sampling frame (with 95% level of confidence and a design effect of 1.6 or precision 10%), a total of 2,694 households were selected to be interviewed in 121 EAs. Data collection took place during 14 – 30th April 2016. Households were asked questions regarding food consumption (frequency and dietary diversity); income and expenditure; coping strategies; assets and livelihoods; seasonality of food insecurity, employment and migration patterns.

In addition to interviewing households, community interviews were carried out in twenty randomly selected rural and urban communities to obtain contextual information about access to health and sanitation services, infrastructure, shelter, roads, markets and recent shocks and coping mechanisms. The data from community questionnaires was used to complement the findings of the household survey.

The final analysis is a result of triangulating the available secondary and primary data collected through the survey using WFP's Food and Nutrition Security Conceptual Framework (2009) and Consolidated Approach to Reporting Indicators (CARI) console. In particular, the level of food security was determined by taking into account household's food consumption (dietary diversity and frequency) and ability to access food (physical and economic access). The Food Consumption Score (FCS), a commonly used proxy indicator to describe the current food security situation was cross tabulated with food access indicators relevant for the Gambian context to determine four food security categories – food secure, mildly, moderately or severely food insecure. More details on the Food and Nutrition Security Conceptual Framework, calculation of the FCS, and the criteria for defining food security categories are provided in the Annexes.

Limitations

One of the key limitations of the study is that the findings are representative at the level of the stratification and local government area and not at individual district level. Such a level of precision would have required a larger sample size. The resources available at the time of the study constrained that possibility. For this same reason, and other methodological guidelines the CFSVA could not also delve into the accessing the impact of past and existing development and food security initiatives. The survey also collected data on the nutrition status of women and children However, the information available is limited to draw or present any conclusions. To make up for this, nutrition information from the 2015 SMART survey has been used in this report as secondary data.

2. 2016 CFSVA FINDINGS

2.1 Prevalence of Food Insecurity and Vulnerability[4]

Out of the 1.85 million people, about 148,458 persons are food insecure or vulnerable to food insecurity. This represents about approximately 8 percent of the total population, of which 0.6 percent is severely food insecure. [5]

Table 2-1a: Prevalence of food insecurity

Strata	Total population	% of households Severely food insecure	Population Severely food insecure	% of households Moderately food insecure	Population Moderately food insecure	% of households food insecure	Total population food insecure
Banjul	31,054	0.0%	-	2.7%	828	2.7%	828
Kanifing	377,134	0.2%	574	3.7%	13,777	3.8%	14,351
Kombos	628,472	0.7%	4,185	8.2%	51,617	8.9%	55,802
Fonis	60,272	0.0%	-	6.3%	3,767	6.3%	3,767
Kiang	30,452	0.0%	-	17.5%	5,329	17.5%	5,329
Jarra West	26,214	0.0%	-	8.1%	2,125	8.1%	2,125
Jarra Central and East	24,376	0.0%	-	5.0%	1,219	5.0%	1,219
Lower Nuimi	57,088	1.7%	968	0.0%	-	1.7%	968
North Bank West	53,192	0.0%	-	0.0%	-	0.0%	-
North Bank East	109,800	0.0%	-	3.0%	3,327	3.0%	3,327
Lower Saloum	15,446	0.0%	-	20.0%	3,089	20.0%	3,089
Central River North	81,257	1.0%	838	21.6%	17,592	22.7%	18,429
Niamina	37,564	5.0%	1,878	5.0%	1,878	10.0%	3,756
Janjanbureh	87,640	3.3%	2,921	20.0%	17,528	23.3%	20,449
URR- South	168,123	0.7%	1,201	6.4%	10,808	7.1%	12,009
Upper River North	69,097	1.7%	1,191	10.3%	7,148	12.1%	8,339
The Gambia	1,857,181	0.6%	11,644	7.4%	136,814	8.0%	148,458.

Source of population figures: GBoS, 2013 Census.

Households with vulnerable traits in socio-demography and sanitation are more likely to be food insecure and/or vulnerable to food insecurity as shown in Table 4-1b: households with illiterate heads, unimproved source of drinking water and poor sanitation facilities are more likely to be vulnerable to food insecurity. The data indicates that female headed households are less vulnerable to food insecurity compared to male headed households. This is a reversal from the 2011 CFSVA. According to the data, the large majority of female head household are found in the urban areas where the vulnerability to food insecurity are lower compared to rural areas. Better economic opportunities for the female headed household and access to improved water sources and sanitation facilities in the rural areas might be the determining factor for the reversal in when vulnerability in 2016. The data below in Map 1-1 shows the level of food insecurity by strata. The data from the 2016 CFSVA shows

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[4] The food insecure groups are defined as having poor food consumption and insufficient food access whereas the vulnerable groups may or may not have poor food consumption but have nevertheless insufficient food access and are therefore most likely to become food insecure in the event of a shock or a crisis. For a more detailed definition and methodology, see Annex-B

[5] The estimates of food insecure or vulnerable to food insecurity are weighted to take into account the relative population size of each stratum. Population estimates are based on 2013 census data.

that the Kiang strata has the highest percentage of households that were found to be food insecure when compared to other stratas. Previous surveys and studies have shown that vulnerability high levels in and around Kiang. An in depth review of available development interventions targeting Kiang may provide answers to the elevated vulnerability levels indicated in the data.

Map 2-1a: Proportion of food insecure households at strata level
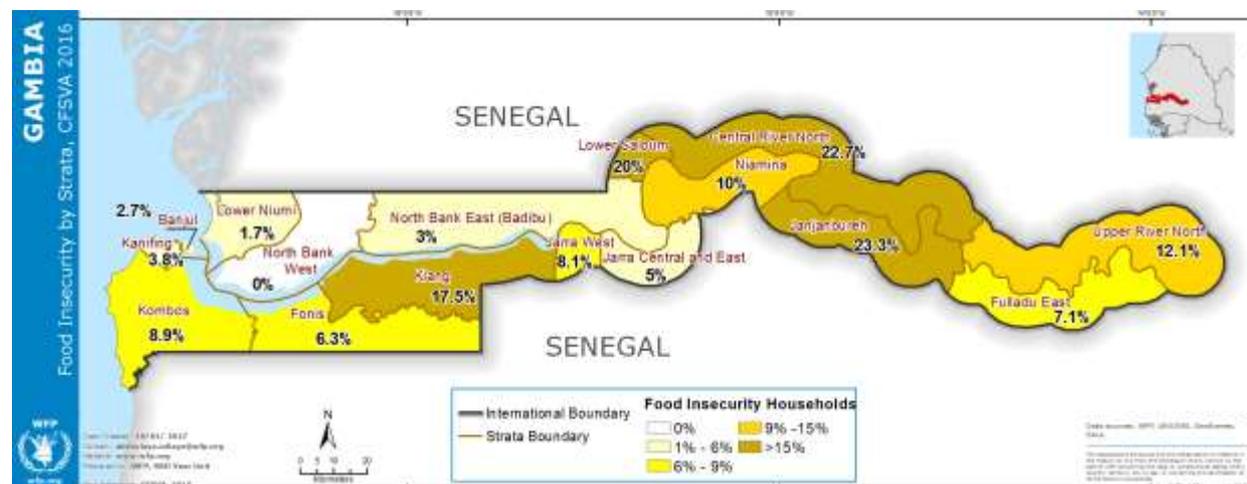
Table 2-1b: Household food security status by vulnerability criteria

		Severely Food insecure	Moderately Food Insecure	Marginally Food Secure	Food secure
		%	%	%	%
Gender of household head	Male	0.8	7.1	30.5	61.7
	Female	0	8.7	22.7	68.7
Literacy of household head (read)	Illiterate	1.1	11.4	38.1	49.4
	Literate	0.3	5.1	24.1	70.5
Literacy of household head (write)	Illiterate	1	11.3	37.2	50.4
	Literate	0.3	4.8	23.9	70.9
Source of drinking water	Unimproved	2.3	12.2	42.3	43.2
	Improved	0.5	6.9	27.8	64.8
Sanitation facility	Unimproved	1.3	14.8	40.6	43.3
	Improved	0.3	4.2	24.3	71.1

Source: 2016 CFSVA The Gambia

Map 2-1b: Proportion of vulnerable households at strata level

2.2 Where are the food insecure households?

According to the CARI methodology, 0.6 percent of Gambian HH were severely food insecure, 7.4 percent were moderately food insecure, 29.1 percent were marginally food secure and 62.8 percent were food secure. The majority of the food insecure households are mainly found in the rural areas of Central River, Upper River, North Bank and Lower River regions.

Map 2-2: Where are the food insecure households in The Gambia?

Socio-demographic profile of food insecure households

Food insecurity affects different household differently across geographical regions, gender of the household head, educational attained by the head of the household, major assets held (wealth group) and livelihood activity that households engage in, the type of support available to the household and the constraints that household face. The results of the 2016 CFSVA have shown that food insecurity levels are higher in households that mainly depend on agriculture as their main source of livelihood.

Poor households are the most affected by food insecurity

There is a strong correlation between food insecurity and poverty. The food insecure households are concentrated in the poorest wealth quintile. In the poorest wealth quintile, we find the households that are most severely affected by food insecurity. The wealthier the household the more likely it is to be food secure.

2.3 Food Consumption Score

The food consumption score (FCS) is derived by combining the number of days each food group is consumed and the relative importance of different food groups. It divides households into three groups: poor (FCS of 28 or less), borderline (FCS between 28 and 42) and acceptable (FCS higher than 42) food consumption. Inadequate consumption is the combination of poor and borderline i.e., less than 42.

FCS is a composite score based on the dietary diversity and food frequency, and relative nutritional importance of the various food groups consumed. The higher the FCS, the higher the dietary diversity and frequency of food consumption. High FCS increases the possibility that a household achieves nutrient adequacy.

The distribution of FCS by strata shows that Kiang, Lower Saloum, Upper River Region North and Central River Region- North, are the regions with the highest proportions of HH having a poor and borderline food consumption. The regions that are mostly in rural areas showed less favorable FCS. The results show that there are more households with acceptable diets in urban regions such as Banjul, KMC and Kombos than households in the rural areas such as- the Kiangs, Fonis, Saloum, Wuli etc.

Table 2-3: Distribution of FCS by Strata

	FCS (Poor Borderline Acceptable)		
	Poor	**Borderline**	**Acceptable**
Banjul	0.00%	0.00%	100.00%
KMC	1.10%	1.70%	97.30%
Kombos	0.40%	1.70%	97.90%
Fonis	2.50%	5.00%	92.50%
Kiangs	2.50%	20.00%	77.50%
Jarra West	0.00%	2.70%	97.30%
Jarra	0.00%	12.50%	87.50%
Lower Niumi	0.00%	3.40%	96.60%
North Bank West	0.00%	3.90%	96.10%
Badibu	0.00%	5.30%	94.70%
Lower Saloum	7.10%	14.30%	78.60%
Central River Region- North	3.10%	14.40%	82.50%
Niamina	2.50%	10.00%	87.50%
Janjanbureh	4.40%	7.80%	87.80%
Upper River Region- South	1.40%	10.00%	88.60%
Upper River Region- North	10.20%	11.90%	78.00%
Total	1.20%	4.00%	94.80%

2.4 Dietary Diversity

More than 50 percent of Gambian households eat cereals, vegetables, meat and sugar daily. Cereals are the most frequently consumed food, with 99 percent of the households responding that they eat it seven days a week. Only 15 percent of the household that were survey responded that they eat vegetables on a daily basis during the week. Poorer households were found to, less likely eat meat, fruit, and dairy.

Almost two in every three households (64.2 percent) in The Gambia have a high dietary diversity. The predominantly urban stratas have a more diverse diet compared to their counterparts in the rural stratas. The number of household with low dietary diversity scores (DDS) is highest around Upper River Region North and Central River Region North stratas. Kiang and Foni stratas have the lowest number of households with high dietary diversity at 15 percent and 25 percent respectively.

Graph 2-4: Dietary Diversity
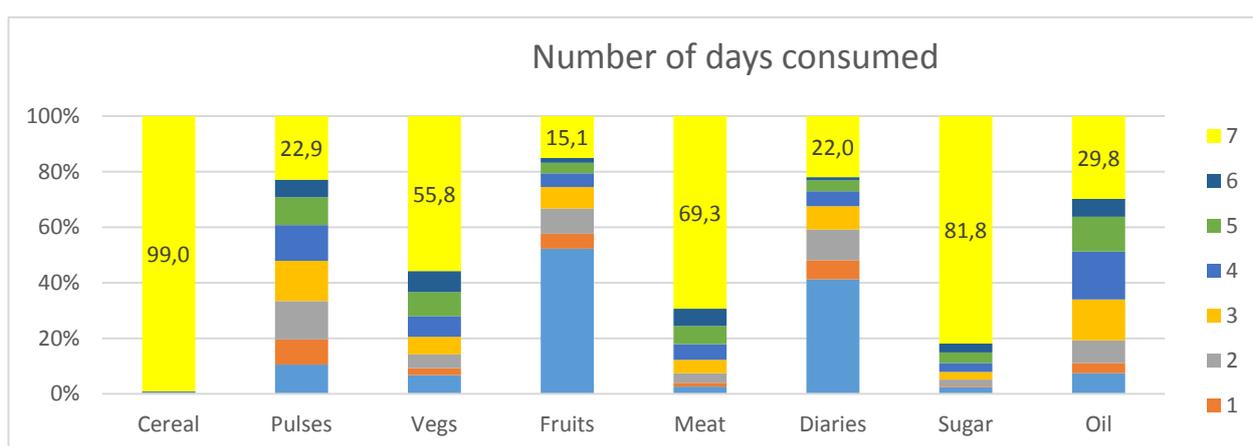
Table 2-4: Dietary Diversity by Strata

	Dietary Diversity Group		
	Low	**Medium**	**High**
Banjul	0.0%	29.3%	70.7%
KMC	1.1%	34.6%	64.4%
Kombos	.1%	28.2%	71.7%
Fonis	2.5%	62.5%	35.0%
Kiangs	2.5%	82.5%	15.0%
Jarra West	0.0%	56.8%	43.2%
Jarra	0.0%	40.0%	60.0%
Lower Niumi	0.0%	50.8%	49.2%
North Bank West	0.0%	21.6%	78.4%
Badibu	0.0%	18.9%	81.1%
Lower Saloum	8.9%	32.1%	58.9%
Central River Region- North	10.3%	38.1%	51.5%
Niamina	0.0%	42.5%	57.5%
Janjanbureh	2.2%	41.1%	56.7%
Upper River Region- South	4.3%	37.9%	57.9%
Upper River Region- North	11.9%	39.0%	49.2%
Total	**1.6%**	**34.2%**	**64.2%**

2.5 Food Sources

If we analyze the main sources of cereals consumed by Gambian households, regardless of region, rural/urban area and wealth status, results show that rice is the most purchased commodity (98% of the populations consume it on a daily basis). The market is also playing a big role in the access of these cereals as Gambian households depend on it. A very high dependency on the market for rice was reported by respondent across the country as indicated in Table 1-4a below. Households in Mansakonko, Janjangbureh, Kuntaur, Kerewan, Basse LGAs, have access to other cereals mostly through their own production, but are also highly dependent on the markets to meet their other food demands. In the case of meat, Mansakonko has the lowest level of dependency on the markets compared to all 8 LGAs, albeit at high levels of at least 85 percent market dependency.

Table 2-5a: Two main sources of cereals by LGA

		Main source of rice			Main source of other cereals	
		Own production	Gift	Market	Own production	Market
	Banjul	0.0%	13.0%	85.0%	0.0%	92.0%
	KMC	0.0%	4.0%	96.0%	1.0%	92.0%
	Brikama	1.0%	2.0%	97.0%	6.0%	91.0%
	Mansakonko	8.0%	0.0%	92.0%	59.0%	36.0%
LGA	Janjanbureh	4.0%	4.0%	90.0%	43.0%	52.0%
	Kuntaur	3.0%	1.0%	97.0%	67.0%	30.0%
	Kerewan	2.0%	0.0%	98.0%	75.0%	23.0%
	Basse	5.0%	0.0%	95.0%	73.0%	25.0%

Table 2-5b: Distribution of Main Source of Meat by region

		Main source of meat		
		Own production	Gift	Market
	Banjul	2.0%	9.0%	89.0%
	KMC	0.0%	1.0%	99.0%
	Brikama	1.0%	2.0%	97.0%
	Mansakonko	10.0%	5.0%	85.0%
LGA	Janjanbureh	3.0%	0.0%	97.0%
	Kuntaur	5.0%	8.0%	88.0%
	Kerewan	5.0%	2.0%	92.0%
	Basse	3.0%	0.0%	97.0%

2.6 Seasonality of Food Shortages

About 65 % of households indicated that August is the most difficult month.

In The Gambia food shortages are seasonal in both the urban and rural areas. When households were asked which periods/month of the year is the most difficult in terms of getting enough food, the results show that the most difficult times correspond with the lean season period – spanning May to September. During this period households do not have sufficient stocks to rely on. The most difficult month of the year is August, according to 65 percent of the interviewed households. These results confirmed that the

majority of households are subsistence farmers and that a household's food production is too small to cover its needs throughout the year. During the food shortage period, the majority of households rely on markets to access food. During this period, cereals prices are high because demand increases while supply remains low. Hence, households reported that the price hike represents the main constraint to access to food.

Graph 2-6: Seasonality of household food insecurity in the last 12 months
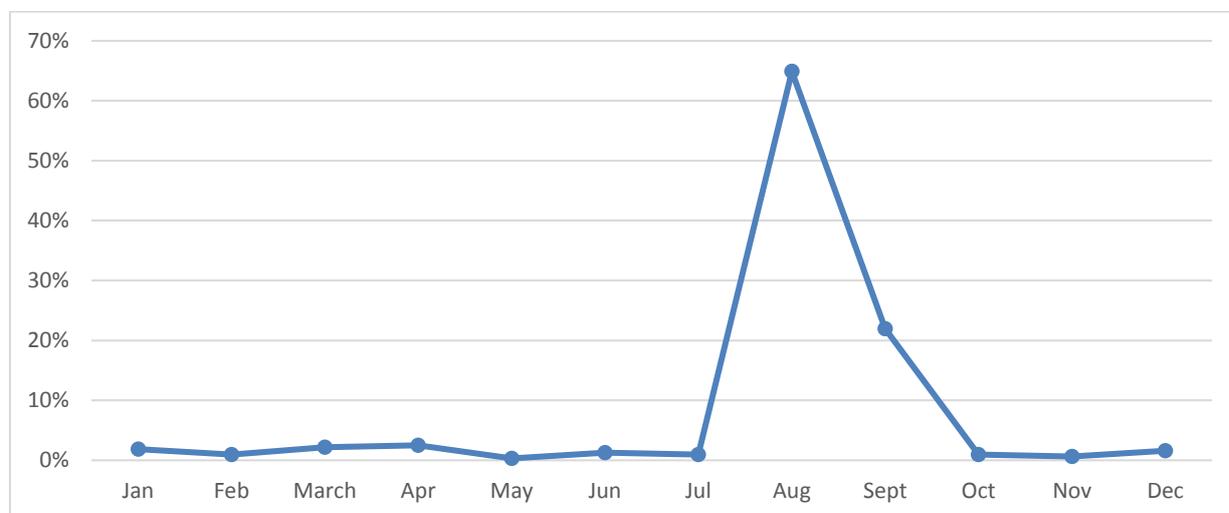
Figure 2-6: Agricultural Calendar
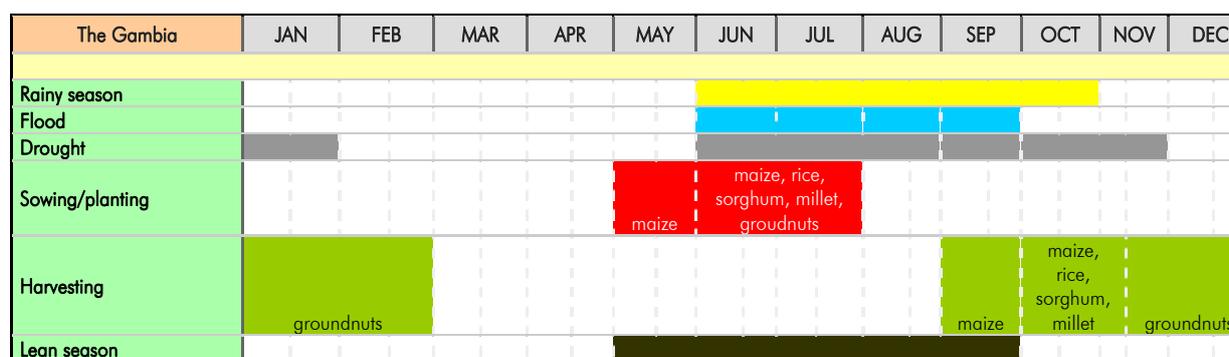
Seasonal calendar source: http://www.hewsweb.org/hazcal/

3. Poverty and Livelihoods

3.1 Livelihoods

Population groups are usually categorized according to livelihoods. A livelihood group is defined as: "a group of people who share similar basic means of livelihood and life styles – the same main subsistence activities, main income activities and social and cultural practices – and face similar risks to food and nutrition insecurity" (WFP Emergency Food Security Assessment Handbook, 2009).

In the 2016 CFSVA, livelihood groups were defined according to their primary productive activity or income. Households were asked to name up to three main sources of income and indicate the relative contribution of each source to the total household income. Based on this information, a cluster analysis was performed which identified eight main livelihood groups. Each livelihood group was named after the

primary source of income which ranged between 60 and 85 percent of the total income (for details on clustering process, see Annex-E). The livelihood groups are as follows:

1. Trading (merchants and petty traders)
2. Livestock rearing and/or selling
3. Production and sale of cash crops
4. Unskilled wage labour - non-agriculture
5. Self - employment – Includes handicrafts/artisan, crafts and other related trades
6. Selling salt
7. Unskilled wage labour - agriculture
8. Production and sale of food crops

At the national level, the four main livelihood groups are trading (54.4 percent), self-employment (12.4 percent), production and sale of cash crops (12.1 percent), and production and sale of food crops (9.5 percent). There is a notable difference between predominantly urban and rural areas: one in three households depend on self-employment related to handicrafts/artisan, crafts and other related trade as primary source of income in the rural strata, whereas the proportion of such households is lower in predominantly urban strata (2.8 percent) where livelihoods are more diversified. This represents an 11 percent increase from the 2011 CFSVA where at least 22 percent of the households in rural areas depended on self-employment for their livelihood. Sale of cash or food crops is still a major livelihood for households living in predominantly urban areas; however, there are a significantly higher proportion of households whose main livelihood is trading (56.9 percent) compared to rural areas (49.2 percent). Overall, trading has become a very important source of livelihood for many Gambian households. Overall, households whose livelihood depended on unskilled agriculture or animal husbandry had a greater chance of being severely food insecure compared to the other livelihood groups.

Graph 3-1a: Proportion of households according to livelihood.

- Trading
- Livestock rearing and/or selling
- Production and sale of cash crops
- Unskilled wage labour - non-agriculture
- Handicrafts/Artisan, crafts and other related trades
- Selling salt
- Unskilled wage labour- agriculture
- Production and sale of food crops

Source: 2016 CFSVA The Gambia

Graph 3-1b:Proportion of households according to livelihood by area of residence.

Source: 2016 CFSVA The Gambia

Graph 3-1c: Food Security and Vulnerability by Livelihoods (CARI).

Source: 2016 CFSVA The Gambia

3-2 Poverty and Wealth

Wealth and household food security are directly linked. Wealthier households not only tend to have the resources to meet daily their food needs, but are also more likely to cope efficiently with unanticipated shocks. The wealth index is generated using household productive and non- productive assets (see Annex-C for a list of household assets).

A number of poverty assessments have already been conducted in The Gambia including the 2010 and 2015 Integrated Household Surveys, but an attempt was made to measure household wealth in the context of the 2016 CFSVA in order to explore the dynamic between poverty and food insecurity. Poverty is a major development challenge in The Gambia where at least 48 percent of the population live below the income poverty line of $1.25 (2010 Integrated Household Survey). At the time of this report, the findings of the 2015 Integrated Household Survey were yet to be published. Poor households are particularly vulnerable to economic shocks such as the rise in food and commodity prices which might erode their purchasing power.

Wealth refers to the value of all natural, physical and financial assets owned by a household and is an important determinant of household's access to food. It is measured by a wealth index which typically includes components such as non-productive assets, access to water and sanitation, household utilities etc. which are not representative of any specific livelihood (i.e. livelihood-neutral). In this CFSVA, the measurement of total annual household income was considered to be robust enough to use as a proxy indicator for wealth based on which five wealth groups were developed – lowest (less than 20,000 Dalasi), low (between 20,000 and 40,000 Dalasi), medium (between 40,000 and 50,000 Dalasi), medium-high (between 50,000 and 80,000 Dalasi), and highest (above 80,000 Dalasi) – and therefore no separate wealth index was created (for a detailed justification, refer to Annex-D). In other to also provide an opportunity to compare the trends as it relates to poverty vis a vis food security the same methodology was used for the latest CFSVA.

At the national level, the lowest and low wealth groups account for 40 percent of the poor. There is a notable variation across strata (see Table 1-8a): Kiang, Central River Region North, Niamina, and North Bank West have the highest proportion of poor households (at least 90 percent) whereas Kanifing and Banjul Strata have the lowest proportion of poor households with less than 11 and 13 percent respectively. The data for Kiang strata is alarming with all of the households falling under the lowest or low wealth groups.

Table 3-2a: Proportion of household wealth groups by strata

	Lowest	Low	Poor (Lowest + Low)	Medium	Medium-high	Highest
Banjul	1.3%	12.0%	**13.3%**	12.0%	36.0%	38.7%
Kanifing	1.2%	9.6%	**10.8%**	18.3%	27.9%	43.1%
Kombos	6.3%	22.6%	**28.9%**	28.7%	22.9%	19.5%
Fonis	23.8%	26.3%	**50.0%**	28.8%	18.8%	2.5%
Kiang	82.5%	17.5%	**100.0%**	0.0%	0.0%	0.0%
Jarra West	48.6%	13.5%	**62.2%**	18.9%	10.8%	8.1%
Jarra Central and East	42.5%	47.5%	**90.0%**	10.0%	0.0%	0.0%
Lower Nuimi	32.2%	39.0%	**71.2%**	11.9%	15.3%	1.7%
North Bank West	45.1%	51.0%	**96.1%**	3.9%	0.0%	0.0%
North Bank East	44.7%	28.8%	**73.5%**	8.3%	13.6%	4.5%
Lower Saloum	60.7%	16.1%	**76.8%**	12.5%	5.4%	5.4%
Central River North	73.2%	18.6%	**91.8%**	5.2%	3.1%	0.0%
Niamina	72.5%	20.0%	**92.5%**	7.5%	0.0%	0.0%
Janjanbureh	57.8%	14.4%	**72.2%**	12.2%	13.3%	2.2%
Fulladu East	20.7%	27.9%	**48.6%**	27.1%	20.0%	4.3%
Upper River North	72.9%	13.6%	**86.4%**	10.2%	3.4%	0.0%
The Gambia	20.0%	20.0%	**40.0%**	20.0%	20.0%	20.0%

Source: 2016 CFSVA The Gambia

Table 3-2b: provides a summary of the estimated poverty rates from the 2016 CFSVA. Compared to the estimated poverty rates from the 2011 CFSVA, it is interesting to note that:

1. Central River Region North appears as the region with the highest estimated poverty rate in all previous four studies. However 2016 CFSVA shows that both CRRN and Lower River Region have the highest poverty rate;
2. North Bank, Central River and Lower River regions have incidences of poverty in 2016 compared to

2011 ; and
3. Poverty rates in Banjul City Council, Kanifing Municipal Council and West Coast Region were markedly higher in the 2011 CFSVA compared to 2016 CFSVA.

Table 3-2c: Historical comparison of poverty rates by LGA

REGION	2003 IHS	2009 World Bank Poverty Report	2010 IHS Report	2011 CFSVA	2016 CFSVA	
Banjul	7.6%	9.3%	16.4%	30.1%	13.3%	
KMC	37.6%	39.2%	26.0%	33.0%	10.8%	
West Coast Region	56.7%	52.8%	54.4%	74.7%	30.6%	
Lower River Region	62.6%	62.5%	57.2%	82.6%	84.6%	
North Bank Region	69.8%	79.6%	60.3%	74.5%	79.2%	
Central River Region North	94.9%	85.6%	79.0%	82.8%	84.6%	Highest
Central River Region South	75.7%	69.7%	73.2%	74.1%	78.5%	Second Highest
Upper River Region	68.0%	74.0%	65.6%	60.1%	59.8%	Third
	58.0%		48.4%	69.7%	40.0%	

Table 3-2d: Proportion of household wealth groups by LGA

	Wealth Groups						
	Poorest	Poorer	Poor (Poorest+ Poorer)	Moderate	Wealthier	Wealthiest	Total
Banjul	1.3%	12.0%	13.3%	12.0%	36.0%	38.7%	100.0%
KMC	1.2%	9.6%	10.8%	18.3%	27.9%	43.1%	100.0%
Brikama	7.7%	22.9%	30.6%	28.7%	22.6%	18.1%	100.0%
Mansakonko	58.1%	26.5%	84.6%	9.4%	3.4%	2.6%	100.0%
Kerewan	44.8%	34.4%	79.2%	7.7%	10.4%	2.7%	100.0%
Kuntaur	66.2%	18.4%	84.6%	8.8%	4.4%	2.2%	100.0%
Janjanbureh	62.3%	16.2%	78.5%	10.8%	9.2%	1.5%	100.0%
Basse	36.2%	23.6%	59.8%	22.1%	15.1%	3.0%	100.0%
Total	20.0%	20.0%	40.0%	20.0%	20.0%	20.0%	100.0%

Source: 2016 CFSVA The Gambia

Furthermore, the 2016 CFSVA found that high concentration trend of poverty in rural and predominantly urban areas remain unchanged from the 2011 CFSVA. Even though the proportion of poor households (when compared to rural/urban) remains higher in the rural areas, approximately one in every five (20.4 percent) household living in predominantly urban strata are poor. As more and more people move from the rural to the urban or the peri urban areas, increasing urbanization, this trend is set to continue. In short, poverty can no longer be viewed as a rural phenomenon only in The Gambia.

Poverty is widespread but there are variations across different livelihoods: poverty levels are highest in the Handicrafts/artisan, crafts and other related trades group (84.2 percent) followed by Livestock Rearing and/or selling (72.3 percent) and unskilled wage labour- non agriculture (65.9 percent). Not all of the poor households are food insecure or vulnerable to food insecurity, but the livelihood groups that have a relatively higher incidence of food insecurity and vulnerability also have above average poverty levels, suggesting the poorer a household, the more food insecure and vulnerable it is and vice versa.

Graph 3-2f: Proportion of poor households (lowest and low wealth group) by livelihood


Livelihood	Percentage
Production and sale of food crops	22,2%
Unskilled wage labour- agriculture	45,8%
Selling salt	21,8%
Handicrafts/Artisan, crafts and other related trades	84,2%
Unskilled wage labour - non-agriculture	65,9%
Production and sale of cash crops	31,6%
Livestock rearing and/or selling	72,3%
Trading	34,2%
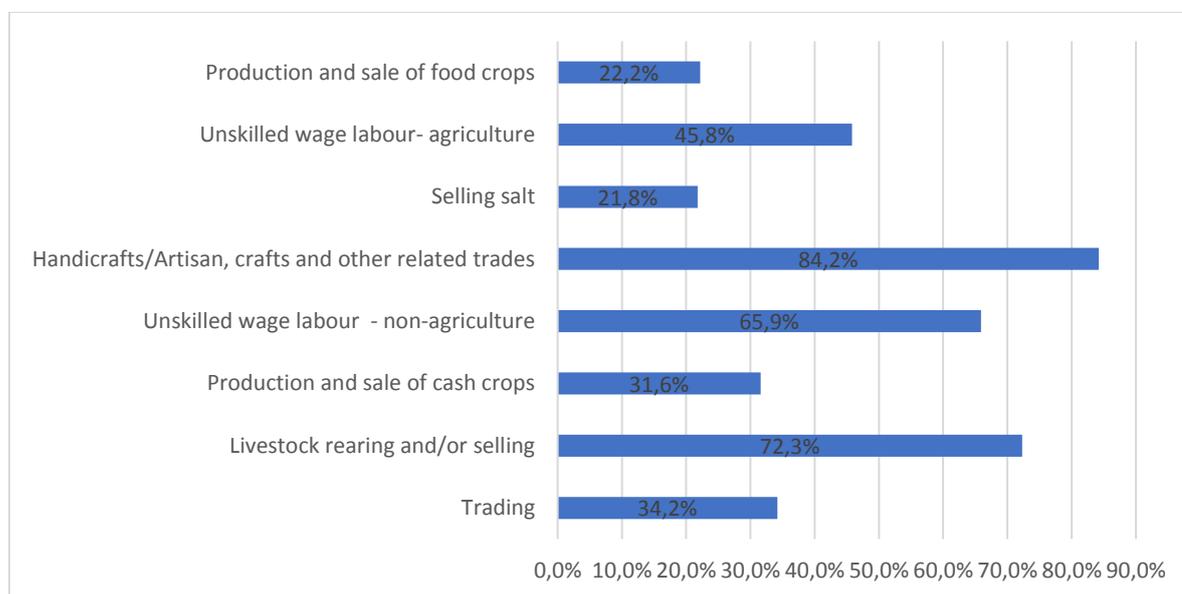
Source: 2016 CFSVA The Gambia

3.3 Income and expenditure

The main income sources reported by the respondents were subsistence agriculture (crops and animal husbandry) (32.5%), salaried employment (26.5%), and petty trading (24.2%). Remittance was also reported by 13 percent of the respondent households. The majority of households that reported subsistence agriculture were mainly found in the rural setting while those reporting salaried employment were found in the Banjul, Kanifing, Brikama and Janjangbureh area. The majority of respondent households that cited remittances as a major source of household can be found in Basse (29.6%), Banjul (26.7%) and Kanifing (17.4%) LGAs.

The majority of Gambian households devote at least 52 percent of their expenditures to food. The food expenditure share measures household's economic vulnerability. It is computed by dividing the total food expenditures by the total cash and non-cash expenditures (food and non-food). This indicator is based on the premise that the higher the food expenses within a household's overall budget (relative to other consumed items/services), the more economically vulnerable the household. A high food expenditure share means that most of the resources available are devoted to food and not enough is invested in agriculture, health, education or savings.

Households in the lowest wealth quintile spend in excess of 64 percent of their income on food. Under the livelihood categories, households that depend on rearing and selling of livestock and unskilled non-agricultural wage labour spend more of their income on food than any other livelihood group at 66 percent and 62 percent respectively.

Graph 3.3: Income Sources by household.

Income Source	Percentage
Others	11,8%
Salaries, Wages (employees, longer-term)	26,5%
Remittances	13,4%
Petty trading	24,2%
Livestock rearing and/or selling	1,3%
Production and sale of cash crops	12,8%
Production and sale of food crops	18,5%
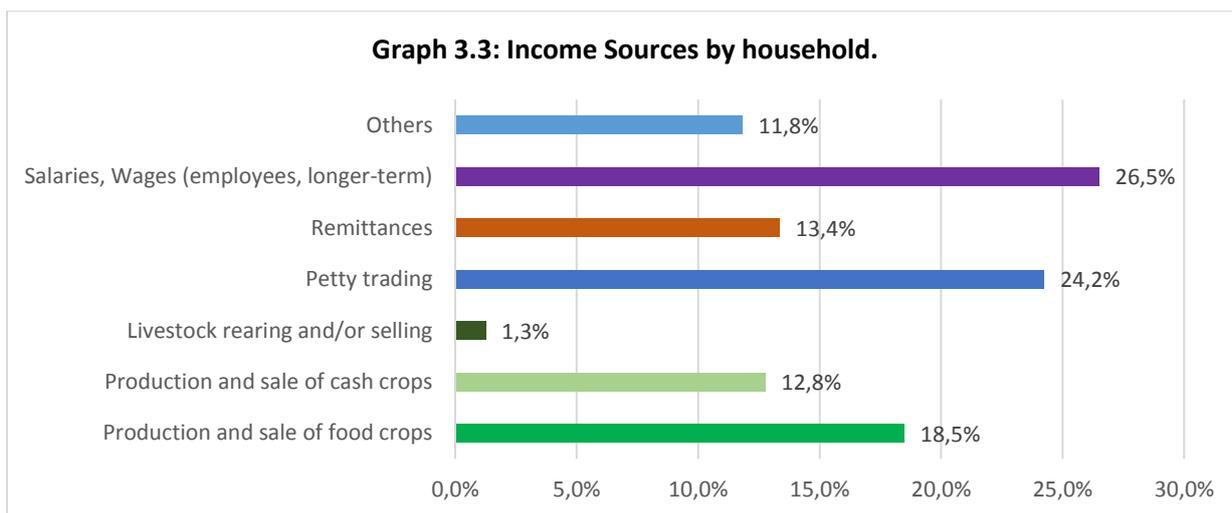
Source: 2016 CFSVA The Gambia

3-4 Community Assets, and Access to Land

At least 61% of households have access to land

Nationally 61 percent of the population reported that they have access to land. In the predominantly rural LGAs, a significant majority of households (range 79%-85%) have access to farming land. However, a majority of the households interviewed in Banjul (99%), Kanifing (94%) and Brikama (71%) said that they do not have access to land for farming. These trends are somewhat very similar to the results of the previous food security assessments conducted between 2011 and 2016.

Graph 3-4a: Access to land.

LGA	No	Yes
Banjul	99%	1%
Kanifing	94%	6%
Brikama	71%	29%
Mansakonko	21%	79%
Kerewan	15%	85%
Kuntaur	15%	85%
Janjanbureh	28%	72%
Basse	19%	81%
Total	61%	39%
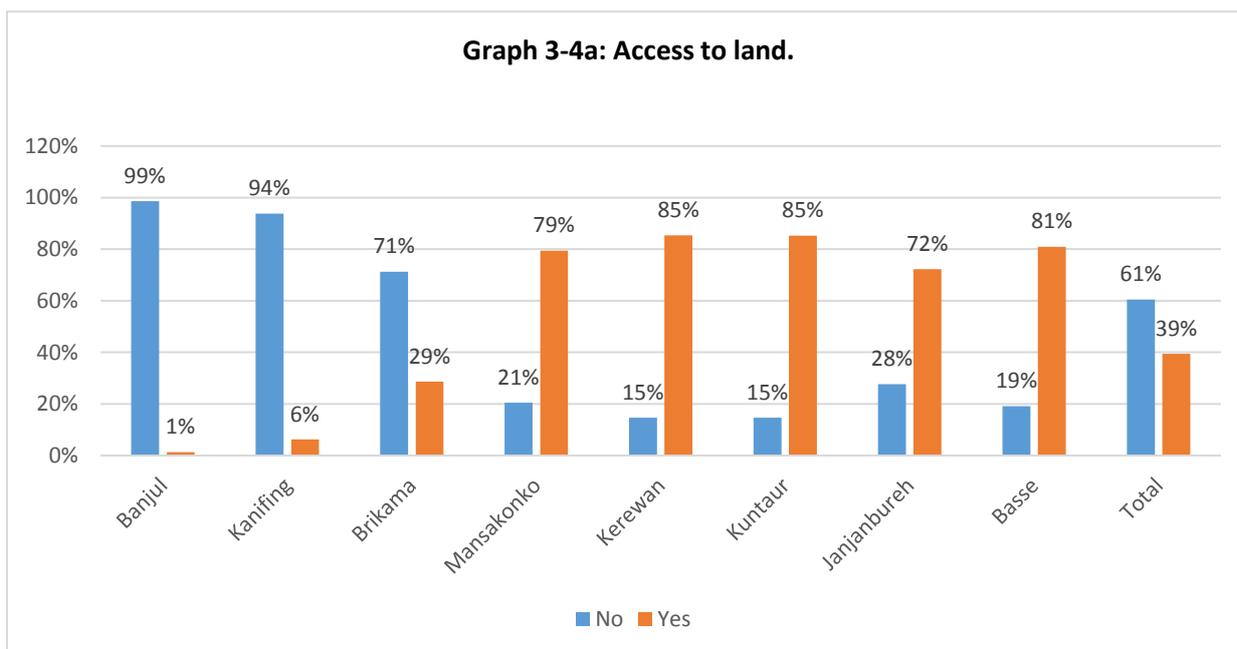
The proportion of households possessing a vegetable garden has reduced further from 37 percent in 2011 to about 25 percent. Increasing urbanization is one possible reason for the decline in the number of vegetable gardens in the case of the urban and per urban areas. In the rural areas, vegetable gardens are usually managed at the community level mostly by women groups (Kafos). Kerewan, Mansakonko and

Janjangbureh lead the country in the number of households owning vegetable plants, albeit, below 50 percent of the households.

Graph 3-4b: Vegetable plot ownership.

A bar chart showing "No" (blue) and "Yes" (orange) percentages by region:

Region	No	Yes
Banjul	100%	0%
Kanifing	91%	9%
Brikama	72%	28%
Mansako...	60%	40%
Kerewan	59%	41%
Kuntaur	74%	26%
Janjanbu...	61%	39%
Basse	69%	31%
Total	75%	25%
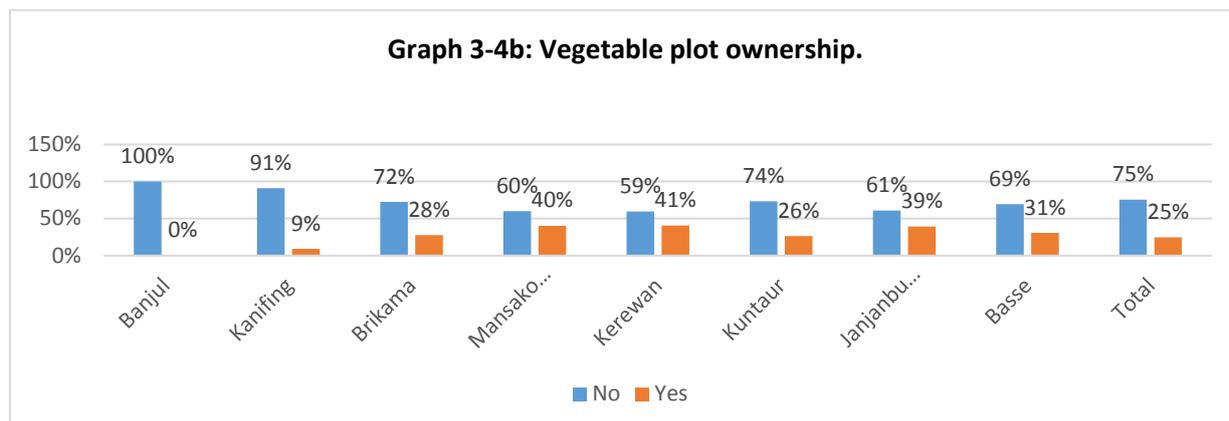
On livestock ownership, at least 44 percent of the households in the country own livestock (sheep, goats, cattle etc). The highest concentration of livestock in The Gambia are in Central River and Upper River regions. These two regions have the highest number of households with livestock followed by Brikama and North Bank.

Graph 3-4c: Livestock ownership

A bar chart showing "No" (blue) and "Yes" (orange) percentages by region:

Region	No	Yes
Banjul	93%	7%
Kanifing	87%	13%
Brikama	56%	44%
Mansakonko	32%	68%
Kerewan	29%	71%
Kuntaur	18%	82%
Janjanbureh	30%	70%
Basse	29%	71%
Total	56%	44%
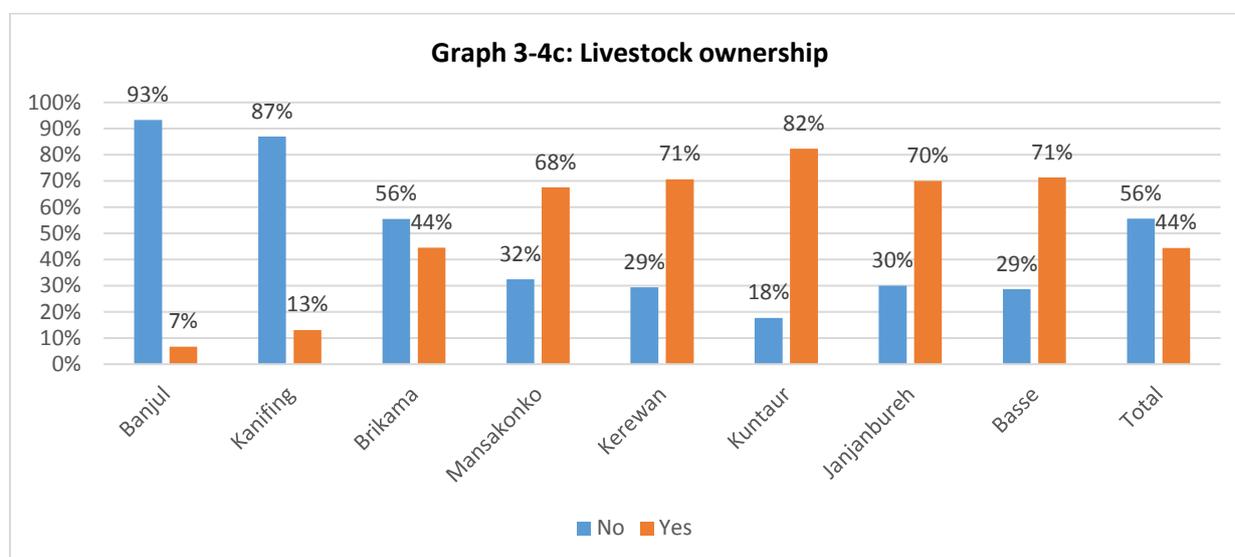
4. Underlying Causes of Food Insecurity

4.1 Agriculture

Agriculture is one of the primary livelihood source for the population in The Gambia. The agricultural sector accounted for about 30 percent of GDP (GoTG, 2015). According to Vision 2016 project document, about 54 percent of Gambia's land (1,036,534 ha) is considered arable at varying degrees. Agricultural production is highly dependent on rainfall.

The agriculture sector is characterized by small-scale and subsistence crop production, traditional livestock rearing, artisanal fisheries and semi-commercial groundnut and horticultural production. The smallholder farmers cultivate less than 3 ha with traditional and rudimentary farming techniques. Crop

yields are generally low, with an average of about 1.5 tonnes/Ha compared to an estimated potential of 3-4 tonnes/Ha for cereals. Access to and the use of farm inputs such as fertilizer and improved agricultural techniques is limited. The level of commercialization of the sector is also low to sustain the food needs of a growing population. In 2013, more than 80 percent of the cereal needs (mainly rice) of the country were imported. The reliance on imports to offset the domestic food production deficit makes the Gambia susceptible to higher food prices.

Moreover, there is limited value addition with stakeholders acutely constrained by inadequate support in value chain management, including inadequate capacity in threshing, milling, packaging and storage. Agricultural production mainly relies on often inadequate and erratic rainfall and this has led to unpredictable and low output over the past decade. Over the past 15 years, there has not been a period when output from agriculture has grown for more than 3 consecutive years.

Crop production is diversified and widespread with no marked geographic concentration of particular crops except for rice which can be either classified as upland rice or lowland rice (irrigated or rain fed swamp). Central River and Upper River Regions, produce the bulk of the rice produced in The Gambia. Coarse grains (millet, sorghum and maize) are also other main food crops produced throughout the country together with groundnuts, the main cash crop.

In order to better understand food production at the household level, the 2016 CFSVA asked households to name three main commodities that they produce ranging from agriculture and livestock to fish produce. About 47 percent of households interviewed reported producing food commodities out of which 20.2 percent produce groundnuts, 13 percent produce maize, 12.4 percent produce millet and 5.7 percent produce rice. A smaller proportion of households reported producing vegetables compared to cereals while the proportion of households with livestock or fish produce was minimal.

4.2 Food Production and Markets

The Gambia has experienced numerous challenges from droughts and a severe crop failure that affect food production to successive flash floods. However, as domestic production even in a good year is not sufficient to cover consumption requirements, the country depends on food imports to make up for the gap which is why international price trends are usually felt in local markets. Despite efforts to diversify The Gambian economy, agriculture still makes up about one third of the GDP[6] while subsistence agricultural activities (mainly livestock, food and cash crop production activities) provide income and livelihood for about 26 percent[7] of the population. Agricultural production in The Gambia remains principally rain-fed and non-mechanized limiting the size of land that a typical agricultural family can cultivate to less than 3 hectares for both household subsistence and income generation purposes. High vulnerability to erratic rainfall, production variability and low yields seriously reduced the income derivable from these activities.

According to figures from the Ministry of Agriculture, only 19 percent of the total rice demands of 219,960 metric tonnes are produced in the country. Over the last five years the trends in cereal production has been fluctuating as the country faced a series of droughts and floods including the 2011/2012 crop failure that led to the declaration of emergency by the government of The Gambia. Over the past five years, coarse grains have accounted for over 70 per cent of total cereal production with millet being the primary crop produced. Rice, however remains the preferred staple food in The Gambia and therefore considered as the most critical crop that determines Gambia's food self-sufficiency. Over the past decades, the government of The Gambia had embarked on several initiatives to boost rice production in the country,

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6 Vision 2015 project document.
7 2016 Comprehensive Food Security and Vulnerability Analysis.

the latest of which is Vision 2016. Vision 2016 is the government's blueprint that maps out the rapid scale up of rice production.

Rice is produced throughout The Gambia, although its cultivation can be classified broadly into two different agro-ecological categories – upland and lowland rice. Upland rice has traditionally been grown mainly in Western Coast Region and to a lesser extent Lower River, North Bank and Upper River Regions. Lowland rice is grown in deep-flooded or inland valley/saline mangrove swamps and under tidal irrigated or pump-irrigated systems.

Groundnut remains the most important cash crop for the Gambia. Over the past five years, the country has on average produced just over 95,000 metric tonnes of groundnut per year. This output level represents a 2 percent decrease when compared to 2009 levels. Multiple years of climate induced low yields and inadequate access to farm inputs are often cited are reasons for the decline in productivity. Groundnuts form the majority of the country's exports. Groundnut is a major contributor to farming household's income and food consumption. In recent years, the Government has undertaken measures and started implementing strategic reforms to revitalize the groundnut sub-sector. These include the formation of the National Food Security Processing and Marketing Corporation to replace the now defunct Gambia Groundnut Corporation. According to the government, the main objective of the corporation is to address challenges faced by farmers, and also reduce post-harvest losses. Overall production levels for major crops grown in the Gambia between 2012 and 2015 have been on the decline or below five year averages.

Graph 4-2: Production levels for selected crops 2010 – 2015 (metric tons).
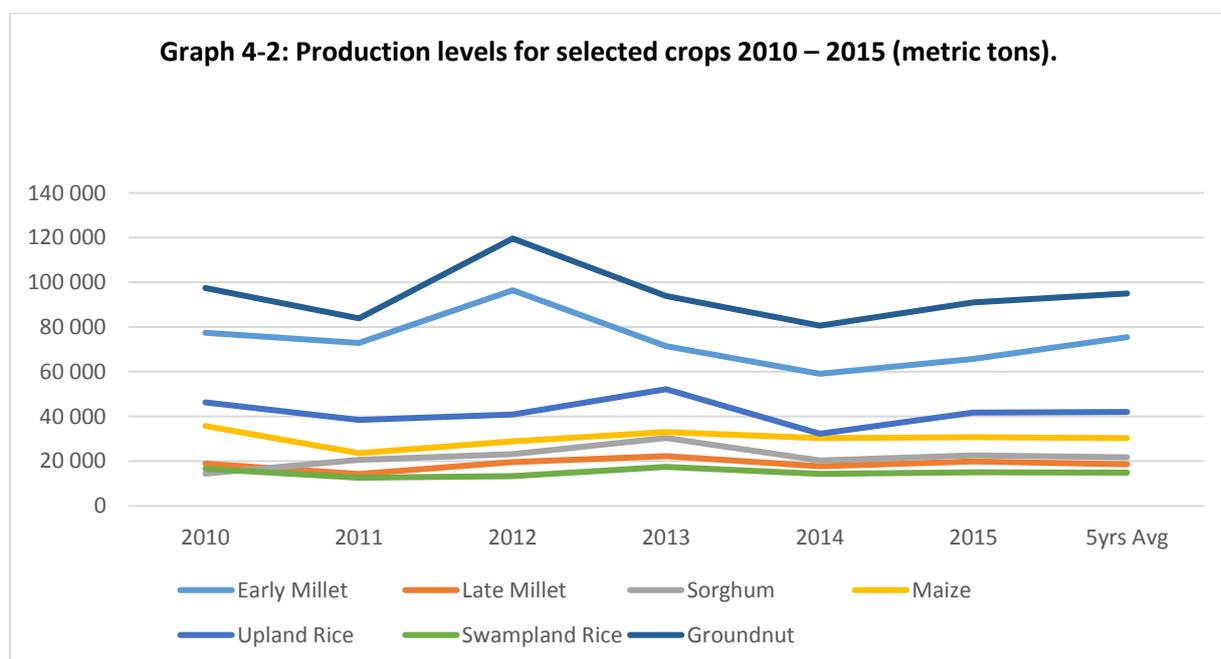
Data source: Planning Services-MoA

4.3 Access to markets and infrastructure

The majority of Gambians depend on the market for their food needs, irrespective of their food security or wealth status: at the national level, 91.4 percent reported purchasing food for consumption. The proportion of such households is higher in predominantly urban areas such as Banjul, Kanifing and Kombos. Even in areas where agriculture is the main source of livelihood (rural areas) a large number of households are also dependent on the markets to make up for food requirements that could not be produced through their own production. The bulk of the imported cereals such as rice comes from the Asian market. However, neighboring countries such as Senegal also contribute vegetables and fruits for the Gambian populace's consumption.

Given the fact that most Gambians are net buyers of food, access to market is a critical factor to consider in determining household's vulnerability to food insecurity. Although markets are mainly concentrated around urban and peri-urban areas, recent WFP studies such as the PRRO 2013 and 2014 surveys found out that market access seems to be very good for the majority of the rural population.

Communities surveyed reported that they have good access to daily markets and weekly markets (lumos) throughout the year and that the availability of main food items in these markets is good. Local products (e.g. vegetables, cereals, groundnuts and cassava) are available depending on the season whereas imported goods such as rice, cooking oil, sugar, onions and potatoes are always available.

At the same time, The Gambia has a relatively good road network connecting the main rural villages and feeder roads that provide access to more remote villages. In short, physical access to markets is not a problem. However, the challenges faced by households – who spend on average 52 percent of their expenditure on food – are associated with the rising and fluctuating food prices which erode purchasing power and therefore access to food.

The inaccessibility either due to maintenance issues or inadequacy of storage facilities to as many Gambian farmers adversely affects their negotiating power when it comes to selling their produce, particularly the highly perishable and nutritious ones such as vegetables. In most cases, farmers are forced to sell their produce often at low prices below optimal market value. As a consequence, farmers and rural households are forced to purchase food during the lean season when prices are the highest once they have depleted their stocks. Structural constraints due to underdeveloped farmer cooperatives, value chain systems, marketing structures/practices, and in-country trading networks are also a major hindrance to a well-developed and viable market system that farmers and those active in the agriculture sector can leverage on.

4.4. Education and unemployment

There is enough evidence to suggest a strong correlation between poverty and household head's level of education. In the context of The Gambia, poverty is one of the contributing factors to food insecurity. Although the 2016 CFSVA and the previous one did not examine the status of household food security according to the level of household head's level of education, we can discern from the level of the analyzed data that households with heads who have a higher level of education are more likely to attain food security. The data as presented earlier in this report shows that more than twice the number of household with heads who are illiterate were found to be food insecure when compared to households headed who are literate. There is a slight difference between female and male headed household. The findings are consistent with the similar studies such as the 2011 CFSVA and the common assumption that households with illiterate heads are more affected by food insecurity than those who are literate.

At the national level, adult literacy rate was estimated at just over 50 percent[8]. Significant efforts by the government and partner agencies have increased primary school net student enrolment from less than 50 percent in 25 years ago to almost 100 percent by 2016. Gender parity in primary school enrolment has also been accomplished. Primary school education completion rate compares were reported at 75.4 percent in 2016. This represents a 5 percentage point increase from 2011. Despite the gains in some of these education indicators (enrolment, gender parity and completion rates) at the primary school level, low performance levels at the secondary and tertiary education levels continue to be a challenge. In 2016, only 3 percent of students who sat the senior secondary school exams obtained at least five credits traditionally required for admission into university.

The latest official figures puts unemployment in The Gambia at 28.9 percent[9]. The unemployment rate amongst the youth (13 to 30 years) who make up 36.7 percent[10] of the population in The Gambia is estimated at 38 percent[11]. As farming becomes increasingly less attractive to the youth population, there is a mass exodus of this group from rural to urban areas and beyond the shores of The Gambia further reducing the critical workforce pool.

The poverty implication of this phenomenon is twofold: first, resource poor rural households are likely to become poorer due to limited agricultural labour availability and there will be a resultant decrease in agricultural production unless initiatives such as intensive mechanization as envisaged in Vision 2016 takes place; second, the youth who migrate to urban areas and beyond seeking for a better future are likely to fall into a poverty trap themselves because many of them lack adequate basic skills and vocational training to find jobs in an increasing competitive job market.

4.5. Migration and remittances

There are two types of migration in The Gambia: seasonal migration within the country from rural to urban areas and overseas migration for a prolonged period of time. More than 86 percent of the households surveyed have reported to have received at least D20, 000 ($476.00) in remittances in 2015. At least one in five (21.9 percent) households reported having family members working away from home. For the past few years, many Gambian youths have embarked on a perilous journey to get to Europe in search of greener pastures. According to official EU reports[12], The Gambia was ranked at 16th in the 2014 list of top 30 citizenships of asylum seekers in the EU-28 member states. The number of Gambian asylum seekers in the EU member states increased by 225% within a year, from 3,545 Gambians in 2013 to 11,515 Gambians in 2014. Most of these migrants are between the ages of 18-35years. In the immediate and long term, this will likely have a negative impact on the labour force of the country.

Having family members as migrant workers has mixed impact on household food security. It may negatively impact the resources of poor rural households due to reduction in labour availability. At the same time, it significantly contributes to household income through remittances which can increase household's purchasing power and therefore food access. Remittances to the Gambia, are almost a fifth of its GDP (22%) according to the latest World Bank figures. The increase in remittances also helps to reduce the impact or use of undesirable coping strategies.

Communities surveyed confirmed that migration is mainly driven by economic motives. The length of time migrants spend away from home was also reported to be getting longer compared to the time

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8 2013 Census.
9 2012 Labour Force Survey, GBoS.
10 2013 Census Report, GBoS.
11 2012 Labour Force Survey, GBoS.
12 Eurostat demographic report, June 2015.

when it was mainly seasonal and to the urban areas during the dry season. As indicated in Graph 2-5 below, the proportion of households receiving remittances were particularly high in Banjul, Lower River Region and Central River Region South. Households in Kanifing reported the highest amounts in remittances, with over 60 percent of the households reporting to have received at least D80, 000 ($1,900) over the past year.

Graph 4-5: Level of remittances received during the past year (2015) at strata level
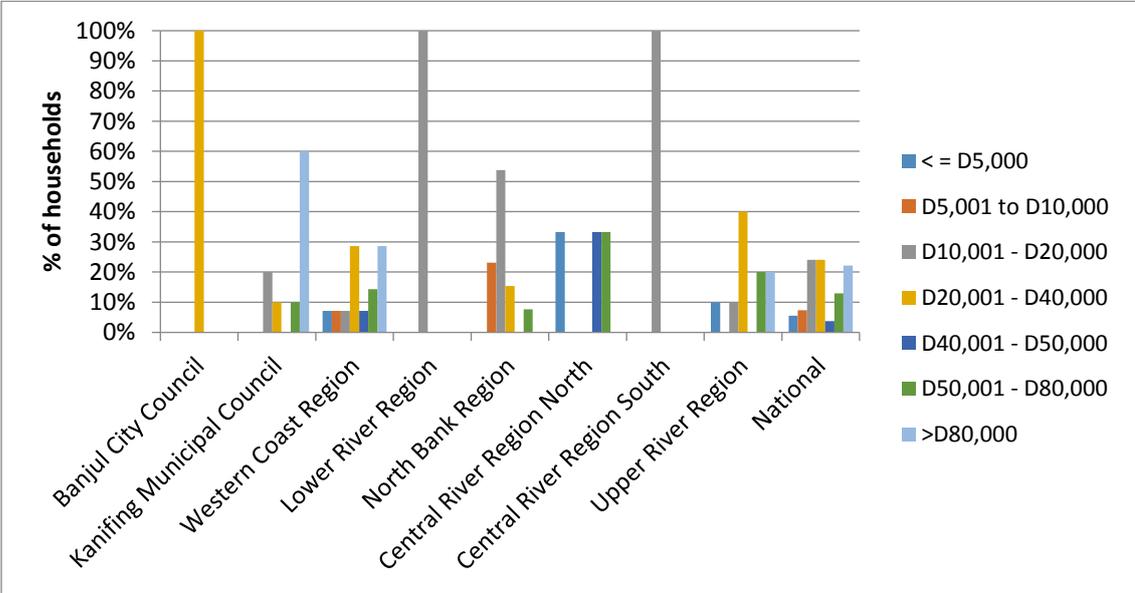
4.6 Borrowing and access to credit

Borrowing money is a common coping practice employed by Gambian households. Communities surveyed reported that borrowing from neighbours, relatives, shopkeepers/ middle traders (*bana banas*) and even formal credit institutions is one of the most common coping strategies they rely on when there is insufficient food. At the national level, 24.3 percent of households borrowed money in the last 6 months and 78.3 percent of them used the credit mainly for food. The next two main reasons for borrowing are to cover health expenses and pay school fees (4 percent and 2.9 percent respectively) and then to pay for ceremonies (2.1 percent of households who borrowed money).

Access to credit during normal times is disproportionate across the country. Nationally, 75 percent of households, up about 30 percent points from the 2011 CFSVA reported having access to credit. 80.3 percent of female household heads reported that they had access to credit while 74.4 percent of male household heads reported having access to credit. At least 80 percent of households in Jarra, Lower Niumi and Kanifing reported as having access to credit. The strata with the lowest proportion of households with is access to credit are Upper River Region North (39 percent) Fulladu East (53 percent) and Lower Saloum (57 percent) (see Graph 5-8a). Overall the results show that access to credit have improved for households over the past five years when compared to the results from the 2011 CFSVA. This could be the result of the proliferation of microfinance and informal banking institutions over the past five years that are attempting to tap into the relatively unexploited area of financial services beyond the formal sector.

Whereas households in urban areas are more dependent on formal credit institutions, those in the rural areas rely on informal means such as traders, family, friends or neighbors.

Graph 4-6a: Proportion of household with access to credit at strata level
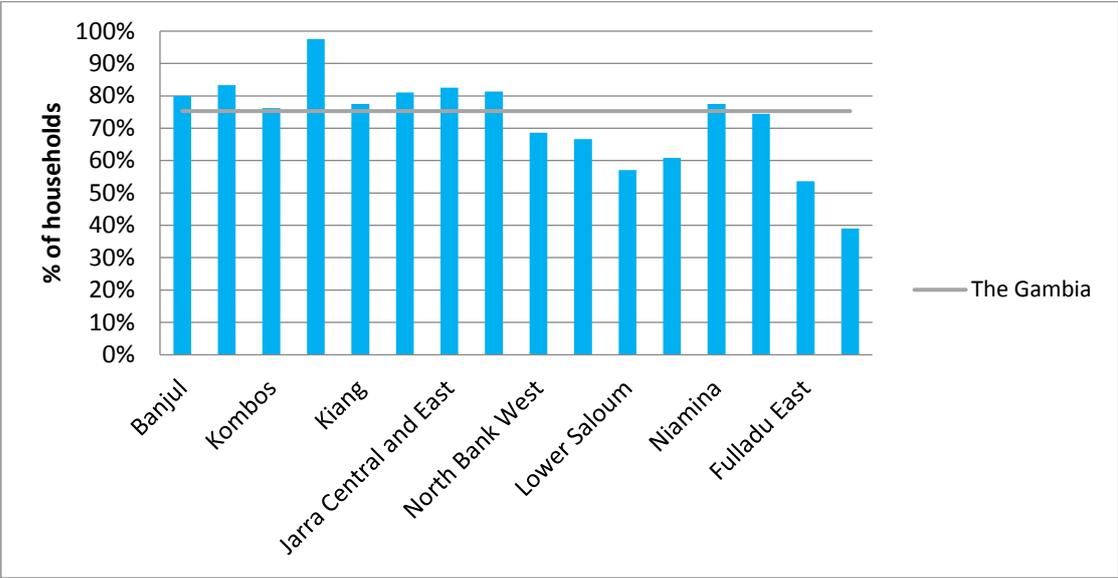
Source: 2016 CFSVA The Gambia

There is a notable difference in access to credits according to household food security status and livelihood. Approximately 78 percent of food secure households have access to credit whereas the proportion is lower for food insecure or vulnerable households at around 55 percent (see Graph 5-8b). When compared to the 2011 CFSVA results the trend has improved significantly for all three classes of food security classification of households.

Graph 4-6b: Access to credit according to household food insecurity status
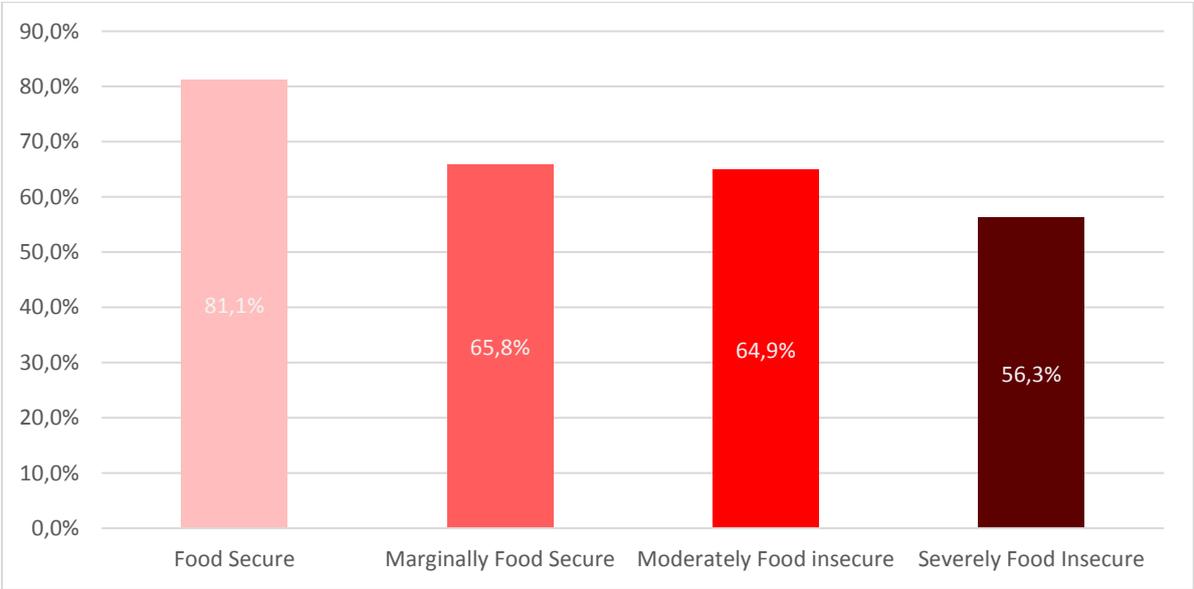
Source: 2016 CFSVA The Gambia

4.7 Demography

Male headed households are slightly more prone to be food insecure in the 2016 CFSVA, a reversal of trend from the 2011 CFSVA: 2 percent of male headed households are found to be food insecure compared to 0.9 percent of female headed households. In 2011, 0.4 percent of female headed households were found to be food insecure as oppose to 0.3 percent of male headed households. Of the households surveyed in 2016, approximately 18 percent of households are headed by women. The proportion of female headed household was highest in Banjul (29.3 percent) and Kanifing (26.1 percent) and lowest in North Bank West (3.9 percent).

Households with a larger number of dependents are more prone to food insecurity. According to the latest population census in 2013, the average household size in The Gambia is 8 with regional disparities. Upper River Region has the highest household average at 15 and Banjul the lowest at 4.7 people per household. Approximately 46 percent of the households surveyed during the 2016 CFSVA were found to have 8 or more household members. Banjul and Kanifing had the lowest proportion of such households (21.3 percent and 29.5 percent respectively) while Basse had the highest proportion at 86.4 percent followed by North Bank West (78.4 percent).

4.8 Water and Sanitation

The majority of Gambian households (91 percent) use an improved source of drinking water, most of them using piped tap (73.5 percent) or tube well/borehole with pump (5.4 percent). However, 9 percent of households rely on unimproved sources of drinking water including open stream, river, and unprotected well. The proportion of such households is markedly high in Jarra West (45.9 percent), North Bank West (21.6 percent), Badibu (20.5 percent), Upper River Region (18.6 percent), Lower Nuimi (16.9 percent) and Lower Saloum (14.3 percent) strata. Food insecure households are more likely to rely on unimproved sources than food secure households: approximately 19.6 percent of food insecure households use an unimproved source of water compared to 7.4 percent of food secure households.

Nevertheless, access to water itself does not seem to be an issue: 43 percent of households reported having the water source at their premise while the average distance to the drinking water sources for the rest of the households was estimated 5 minutes walking distance or approximately 70 meters. However, it should be noted that collecting water is a task mainly (90 percent) performed by women and girls that can take 30 minutes to 2 hours every day.

54 percent of households pay for water and not surprisingly Banjul and Kanifing strata with the most extensive provision of public tap service have the highest proportion of households paying for water (95 percent and 83 percent respectively). However, the payment for water is not a significant economic burden to households; the share of total monthly household expenditure on water is one percent. Rural communities surveyed reported that households usually contribute about 25 Dalasis a month for maintenance of Public standpipes and protected hand pumps and boreholes which are the most common source of drinking water.

Similarly, access to improved sanitation facilities is not a problem for 70 percent of households most of whom use traditional pit latrine with slab (59 percent) or even flush toilet (28 percent). This leaves 30 percent of households at the national level using unimproved sanitation facilities, although the proportion of households is significantly higher in Niamina, Jarra, North Bank West, Lower Saloum, Lower Niumi, Badibu and Janjanbureh strata (more than 50 percent). These strata also have an above average prevalence of food insecurity and vulnerability, suggesting households without access to

adequate sanitation facilities are more likely to be food insecure. This is also proven by the Pearson's correlation test that shows a positive correlation between Food security and sanitation.

5 Risk and Vulnerability Analysis

5.1 Hazards and shocks

There are two prominent factors that have negatively impacted Gambian households' food access and put them at risk of becoming food insecure in recent years: rising food prices and natural disasters (flooding, drought, windstorm etc.).

About 91.4 percent of Gambian households acquire their food through purchases and are therefore highly susceptible to changes in prices which affect their purchasing power. 65 percent of the households interviewed indicated the month of August (height of the rainy season) as the most difficult month (food insecurity) for them. Death (31%), high food prices (16%) and poor harvest (13%) are some of the examples highlighted by households as the major shocks faced in the past two years. 52 percent of the households in Janjangbureh LGA reported to have experienced a major shock which impacted on their food security. The number of households reporting the same in Kuntaur and Basse LGAs are higher at 85 and 69 percent respectively.

**Graph 5-1a: Proportion of HHs that faced shocks in the last 2 years**
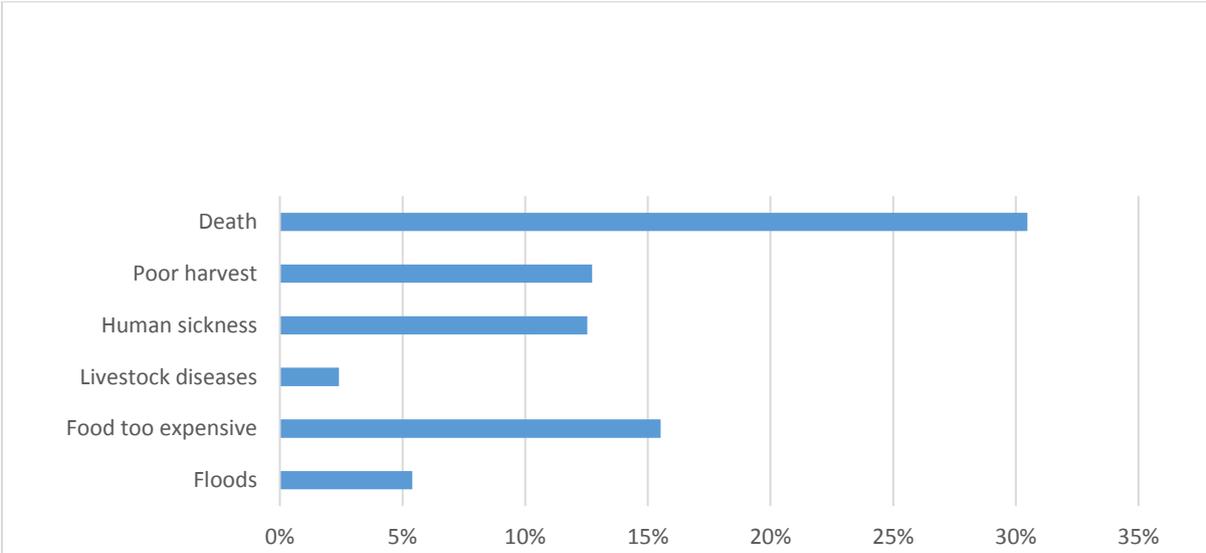
Graph 5-1b: Proportion of HHs that faced shocks in the last 2 years by LGA
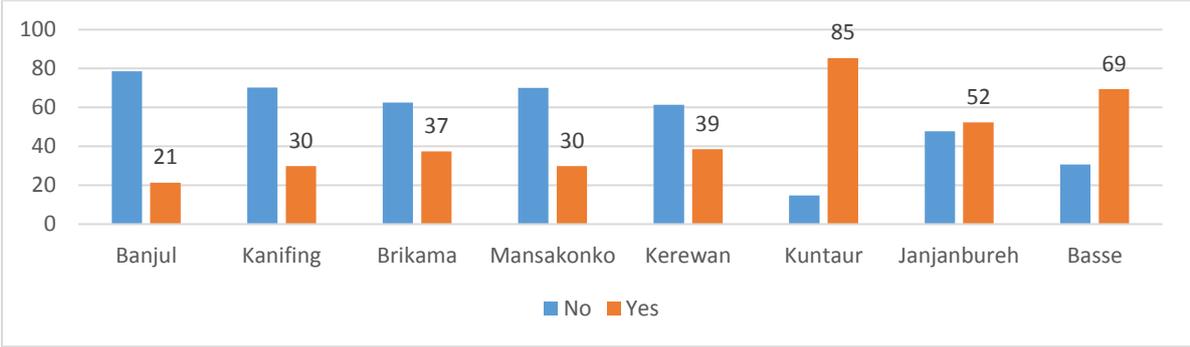
5.2 Disasters and Shocks Faced by Households

Respondents were asked about the main difficulties or shocks they experienced recently. A recall period of two years was used to capture the effects of some emerging issues such as heavy rainfall, floods and windstorms, rising food prices and a decline in remittances that occurred between 2014 and 2016. Major difficulties/shocks reported by the households were death in the family (30%), high food prices (16%), illness (13%) and poor harvests (13%).

Graph 5-2 Proportion of HHs that faced shocks in the last 2 years.
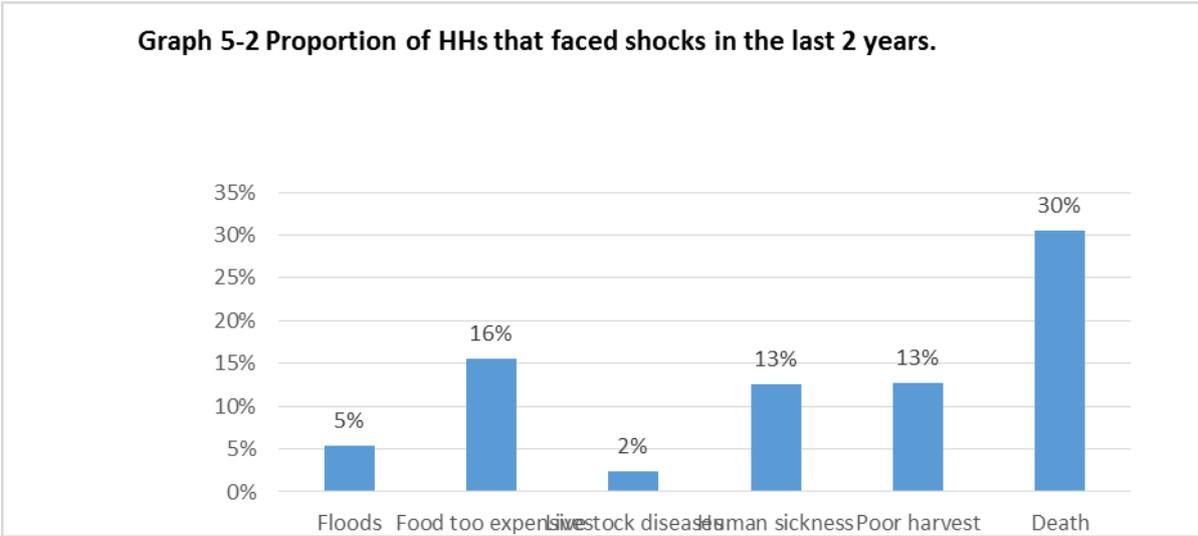
Source: 2016 CFSVA The Gambia

5.3 Coping

In order to better understand how households cope in response to food access constraints, households were asked what type of food-related coping strategies among the following they used in the past seven days:

1. Rely on less preferred/expensive food ;
2. Borrow food or rely on help from friends/relatives ;
3. Limit portion size at meal times ;
4. Restrict consumption by adults for small children to eat
5. Reduce the number of meals in a day.

At the national level, approximately 61 percent of the households, more than 25 percent from the 2011 CFSVA did not employ any coping strategies. The mean Coping Strategy Index nationally was 2 (low coping). High coping was prevalent among food insecure or vulnerable households with 26.1 percent. Among food secure households 3.4 percent used high coping strategies to meet their household food needs. However, at least 34 percent of households reported to rely on less preferred and less expensive food and approximately 13 percent of the households reported to limit portion size at mealtime. The number of household reporting the usage of borrowing food, restricting consumption of adults or reducing the number of meals eaten per day were 7.7 percent, 5.6 percent and 9.7 percent respectively. These reflect an overall reduction in the usage of coping strategies from the 2011 CFSVA.

CRRN and Lower Saloum strata had notably the highest proportion of households reporting to employ food-related coping strategies. The proportion of households that reported to restrict adult consumption in order for children to eat in Kiang and Janjanbureh (17.5 percent and 13.3 percent, respectively) was more than double the national average (5.6 percent, see Table 6-2b). It should be noted that the 2016 CFSVA just like the 2011 version was carried out at a time when household food access is the best during the year. The proportion of households employing food-related coping strategies are mostly higher during the lean season as indicated as evidenced in previous Food Security assessments[13] conducted in The Gambia.

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13 PRRO Baseline and Follow up Surveys (2013/2014).

Table 5-3a: Proportion of HHs who employed different coping classifications in the past seven days

|	No Coping	Low Coping	Medium Coping	High Coping
Banjul	64.0%	25.3%	8.0%	2.7%
Kanifing	65.8%	26.5%	4.9%	2.9%
Kombos	64.3%	22.6%	5.6%	7.4%
Fonis	81.3%	10.0%	3.8%	5.0%
Kiang	67.5%	7.5%	15.0%	10.0%
Jarra West	70.3%	18.9%	5.4%	5.4%
Jarra Central and East	72.5%	22.5%	5.0%	0.0%
Lower Nuimi	76.3%	20.3%	1.7%	1.7%
North Bank West	70.6%	29.4%	0.0%	0.0%
North Bank East	55.3%	39.4%	4.5%	.8%
Lower Saloum	33.9%	48.2%	17.9%	0.0%
Central River North	32.0%	42.3%	11.3%	14.4%
Niamina	65.0%	22.5%	2.5%	10.0%
Janjanbureh	44.4%	25.6%	12.2%	17.8%
Fulladu East	47.9%	40.0%	7.1%	5.0%
Upper River North	37.3%	37.3%	20.3%	5.1%
The Gambia	61.3%	26.6%	6.4%	5.6%

Table 5-3b: Proportion of HHs by food-related coping in the past seven days

	rely on less preferred and less expensive foods	borrow food	limit proportion size	restrict consumption of adults for small children	reduce numbers of meals eaten in a day
Banjul	30.7%	5.30%	8.00%	2.70%	4.00%
Kanifing	31.1%	5.80%	7.50%	3.50%	5.60%
Kombos	31.8%	5.80%	13.30%	7.80%	8.20%
Fonis	11.2%	6.20%	10.00%	7.50%	7.50%
Kiang	27.5%	17.50%	25.00%	17.50%	17.50%
Jarra West	16.2%	5.40%	13.50%	10.80%	13.50%
Jarra Central and East	20.0%	2.50%	12.50%	2.50%	7.50%
Lower Nuimi	18.6%	1.70%	10.20%	0.00%	11.90%
North Bank West	17.6%	5.90%	7.80%	0.00%	7.80%
North Bank East	39.4%	5.30%	22.00%	3.00%	13.60%
Lower Saloum	58.9%	16.10%	28.60%	5.40%	23.20%
Central River North	64.9%	22.70%	22.70%	5.20%	19.60%
Niamina	27.5%	7.50%	17.50%	7.50%	10.00%
Janjanbureh	40.0%	25.60%	32.20%	13.30%	24.40%
Fulladu East	45.0%	10.70%	13.60%	2.90%	15.00%
Upper River North	57.6%	8.50%	11.90%	0.00%	8.50%
The Gambia	33.6%	7.70%	13.40%	5.60%	9.70%

Source: 2016 CFSVA The Gambia

The community interviews reported mixed expectations for food security in the immediate and intermediate future. More than half of the communities (52 percent) reported that they believe the food security prospects will be worst that it was from last year; 23 percent expect it to be better; about 24 percent do not know what will happen for the coming lean season.

Graph 5-3: Household food security status by food-related coping strategies
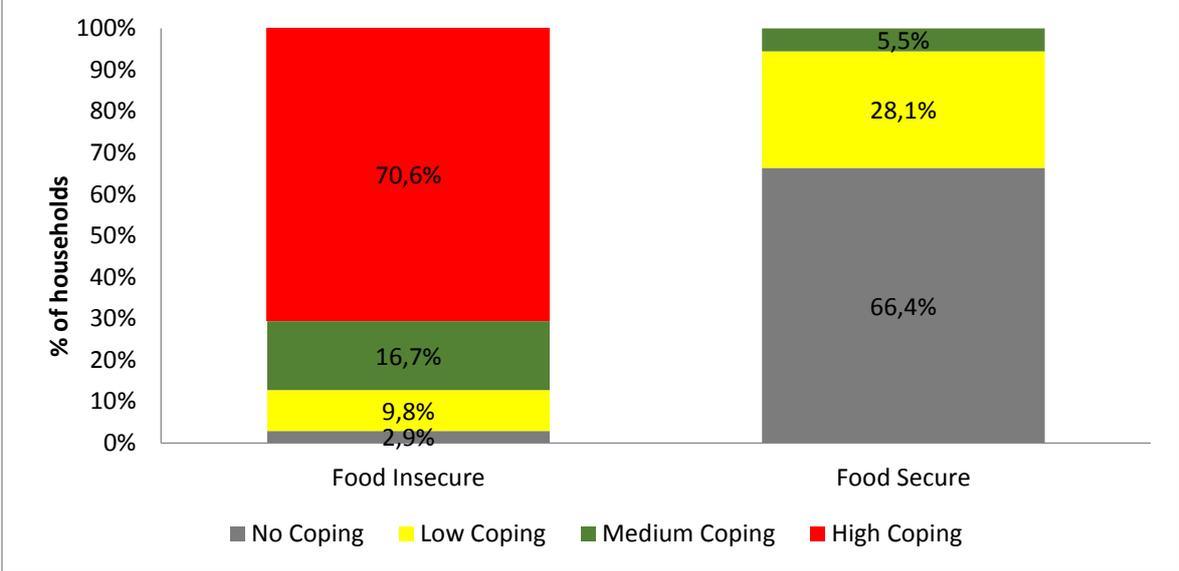
6. Recommendations

Food insecurity is a chronic phenomenon in The Gambia owing to the inability of the agricultural sector to produce enough food to feed the population. For a country that has cereals as its main staple, The Gambia produces 50 to 60 percent of its total cereal requirements. This means that the population has to rely on cereal imports for at least five months on average of the year. Low and inadequate income plus the deterioration of the purchasing power have rendered most households powerless to absorb shocks relating to rising food prices and disasters. While fighting food insecurity may involve extending food assistance in severe cases, gaining any reasonable ground and sustaining such gains would require support to be focused on households' capacity to produce more as well as improve their incomes from production and other main livelihood sources. Along this line the following are recommended:

1. Support farmers with inputs such as improved agricultural techniques and hybrid seeds to improve yields and expand the area of land under cultivation.
2. Encourage the development of fruit tree farms.
3. Promote commercialization of agricultural activities.
4. Expand the policy to promote the consumption of other local products in addition to rice.
5. Promote diet diversification and the production of crops like cassava, beans to reduce the demand on rice.
6. Promote the establishment of small business enterprises (entrepreneurship) focusing on value addition and value chains.
7. Provide opportunities for training and skills development in diverse livelihood areas such as fishing, technical skills for the youth.
8. Revitalization of seed and cereal banking schemes to build resilience.
9. Establish an integrated food security monitoring and early warning system.

7. References

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8. Annex

A.   Food Security and Nutrition Conceptual Framework

Food security exists when all people, at all times, have physical and economic access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life (World Food Summit, 1996)".

There is no single measure to analyze the level of food security of a population, a community or an individual. Food security is highly complex in that it is determined by a range of interrelated agro-environmental, socio-economic and biological factors, all of which must be addressed to ascertain whether or not food security exists. The complexity of food security can be simplified by focusing on three distinct, but also highly interrelated dimensions of food security:

Food availability, concerns the food that is physically present in the area of study, through all forms of domestic production, commercial imports and food aid. This may be aggregated at the regional, national, district or community level.

Food access, concerns a household's ability to regularly acquire adequate amounts of food, through a combination of its own home production and stocks, purchases, barter, gifts, borrowing or food aid.

Food utilization, refers to a household's use of the food to which it has access, and an individual's ability to absorb and metabolize the nutrients, i.e. the conversion efficiency of the body.

The Food and Nutrition Security Conceptual Framework (see Figure 7-1) is a way of visualizing the relationships among the various factors that affect food and nutrition security.

Figure 8-1: Food and Nutrition Security Conceptual Framework
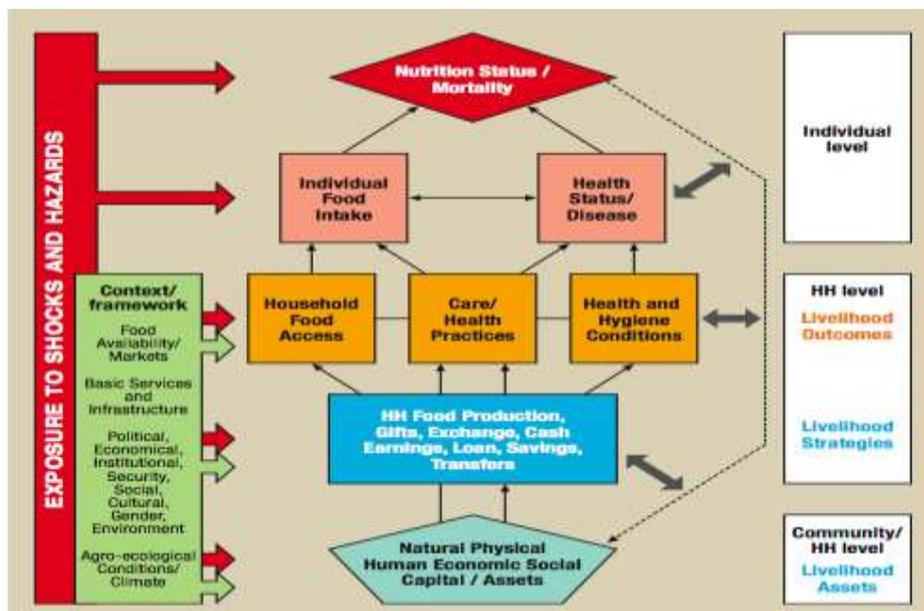
The framework also recognizes that a household's food security situation is subject to change and fluctuates. This can be either in response to specific shocks or as a result of natural seasonality during the course of the year, often reflecting the agricultural cycle of the lean season and, in the case of The Gambia, the peak tourist season. In order to account for the dynamic nature of food security, the CFSVA analyses households' vulnerability to future shocks and problems and determines their capabilities to withstand them. Capacities to withstand shocks such as floods and high food prices

depend on many factors, including a solid asset base, the ease with which households are able to alternate between and rely on the incomes from different livelihoods, the health and physical strength of individual household members etc. By assessing future risks and their potential detrimental impact on household food security, the level of vulnerability of households and individuals is determined.

B.   CARI FOOD SECURITY CLASSIFICATION

The food security classification is the result of a Consolidated Approach for Reporting Indicators of Food Security (CARI). The CARI is a method used for analyzing and reporting the level of food insecurity within a population. It combines a suite of **food security indicators** into a summary indicator which represents the population's *overall food security status.* The console's domains represent two key dimensions of food insecurity. The **current status** domain employs food security indicators which measure the adequacy of households' current food consumption. Specifically, this domain is based on the food consumption score. The coping capacity domain employs indicators which measure households' economic vulnerability and asset depletion. Specifically, this domain is based upon a combination of the livelihood coping strategy indicator and the food expenditure share indicator.

The results show that 8% of Gambian households are food insecure, of which 7.4% are moderately food insecure and 0.6% severely food insecure. According to the CARI methodology 92% of the Gambian population is able to meet essential food and non-food needs without depletion of assets. The situation is most severe in Janjanbureh, CRR- North, URR-North, Lower Saloum and Kiang where 23.3%, 22.6%, 22%, 20% and 17.5% of households are food insecure (severely plus moderately) respectively, using the CARI classification.

Food Security Group	Household Group Condition[14]
Food Secure	Able to meet essential food and non-food needs without depletion of assets
Marginally Food secure	Has minimally adequate food consumption, but unable to afford some essential non-food expenditures without depletion of assets
Moderate Food Insecure	Has food consumption gaps, OR, Marginally able to meet minimum food needs only with accelerated depletion of livelihood assets
Severely Food Insecure	Has large food consumption gaps, OR, Has extreme loss of livelihood assets that will lead to large food consumption gaps, OR worse.

14 Household group conditions are adapted from the International Food Security Phase Classification (IPC) Version 2.0 (IPC Global Support Unit, 2012). See Annex A1 of Design Phase Report for a 'crosswalk' comparison to household conditions in the IPC.

Table 8-2: Prevalence of food insecurity (CARI)

Domain		Indicator	Food Secure (1)	Marginally Food Secure (2)	Moderately Insecure (3)	Severely Insecure (4)
Food Security Classification			62.8	29.1	7.4%	0.6%
Current Status	Food Consumption	Food Consumption Score	94.8 (Acceptable)	-	4.0% (Borderline)	1.2% (Poor)
Coping Capacity	Economic Vulnerability	Food Expenditure Share	43.9% (<50%)	30.5% (50-64%)	13.7% (65-74%)	12% (>75%)
Coping Capacity	Asset Depletion	Livelihoods Coping Strategies	61.3% No coping	26.6% Stress	6.4% Crisis	5.6% Emergency

| Strata	Total population	% of households Severely food insecure	Population Severely food insecure	% of households Moderately food insecure	Population Moderately food insecure	% of households food insecure	Total population food insecure
Banjul	31,054	0.0%	-	2.7%	828	2.7%	828
Kanifing	377,134	0.2%	574	3.7%	13,777	3.8%	14,351
Kombos	628,472	0.7%	4,185	8.2%	51,617	8.9%	55,802
Fonis	60,272	0.0%	-	6.3%	3,767	6.3%	3,767
Kiang	30,452	0.0%	-	17.5%	5,329	17.5%	5,329
Jarra West	26,214	0.0%	-	8.1%	2,125	8.1%	2,125
Jarra Central and East	24,376	0.0%	-	5.0%	1,219	5.0%	1,219
Lower Nuimi	57,088	1.7%	968	0.0%	-	1.7%	968
North Bank West	53,192	0.0%	-	0.0%	-	0.0%	-
North Bank East	109,800	0.0%	-	3.0%	3,327	3.0%	3,327
Lower Saloum	15,446	0.0%	-	20.0%	3,089	20.0%	3,089
Central River North	81,257	1.0%	838	21.6%	17,592	22.7%	18,429
Niamina	37,564	5.0%	1,878	5.0%	1,878	10.0%	3,756
Janjanbureh	87,640	3.3%	2,921	20.0%	17,528	23.3%	20,449
URR- South	168,123	0.7%	1,201	6.4%	10,808	7.1%	12,009
Upper River North	69,097	1.7%	1,191	10.3%	7,148	12.1%	8,339
The Gambia	1,857,181	0.6%	11,644	7.4%	136,814	8.0%	148,458.

Source of population figures: GBoS, 2013 Census.

		Severely Food insecure	Moderately Food Insecure	Marginally Food Secure	Food secure
		Row%	Row%	Row%	Row%
Gender of household head	Male	0.8	7.1	30.5	61.7
	Female	0	8.7	22.7	68.7
Literacy of household head (read)	Illiterate	1.1	11.4	38.1	49.4
	Literate	0.3	5.1	24.1	70.5
Literacy of household head (write)	Illiterate	1	11.3	37.2	50.4
	Literate	0.3	4.8	23.9	70.9
Source of drinking water	Unimproved	2.3	12.2	42.3	43.2
	Improved	0.5	6.9	27.8	64.8
Sanitation facility	Unimproved	1.3	14.8	40.6	43.3
	Improved	0.3	4.2	24.3	71.1

Table 8-3: Household food security status by vulnerability criteria (CARI)

Graph 8-1: Food Security and Vulnerability by Livelihoods (CARI)
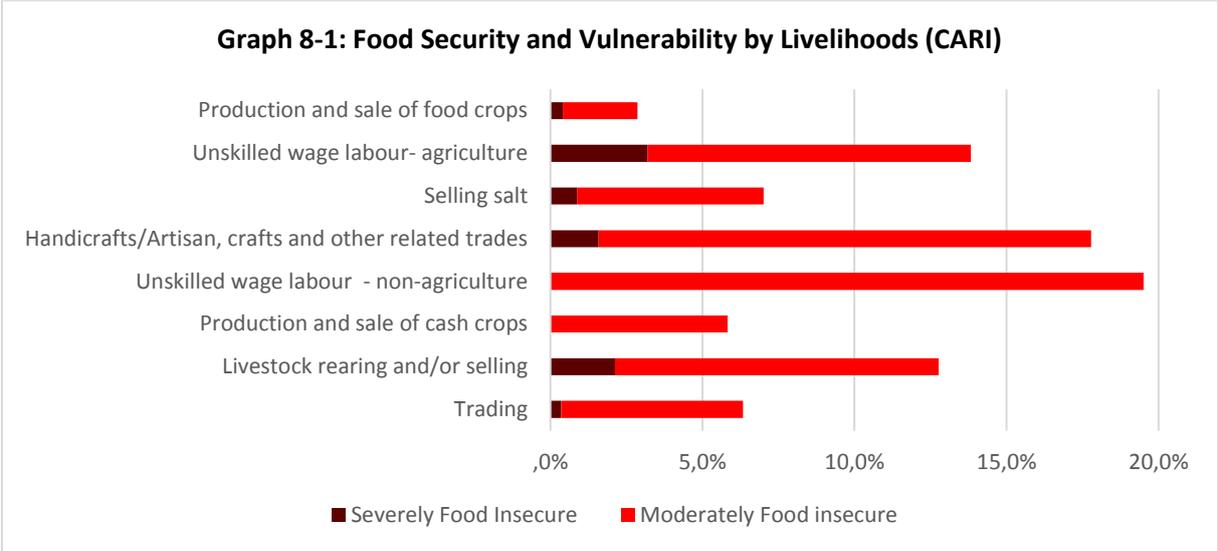
Graph 8-2: Access to credit according to household food insecurity status (CARI)
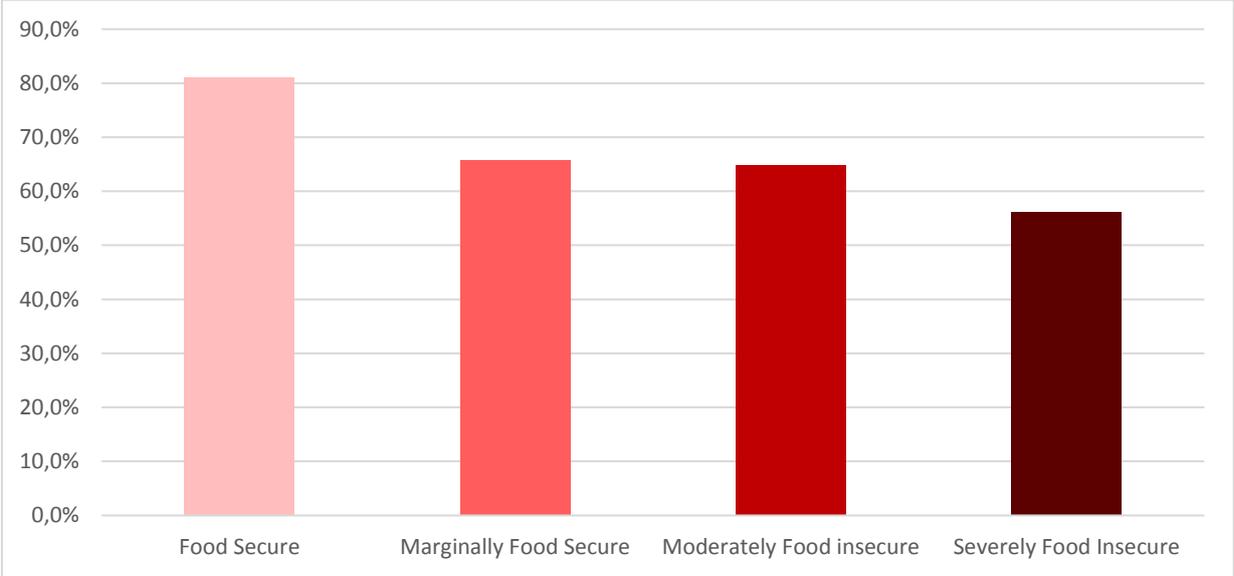
Graph 8-3: Household food security status by food-related coping strategies (CARI)
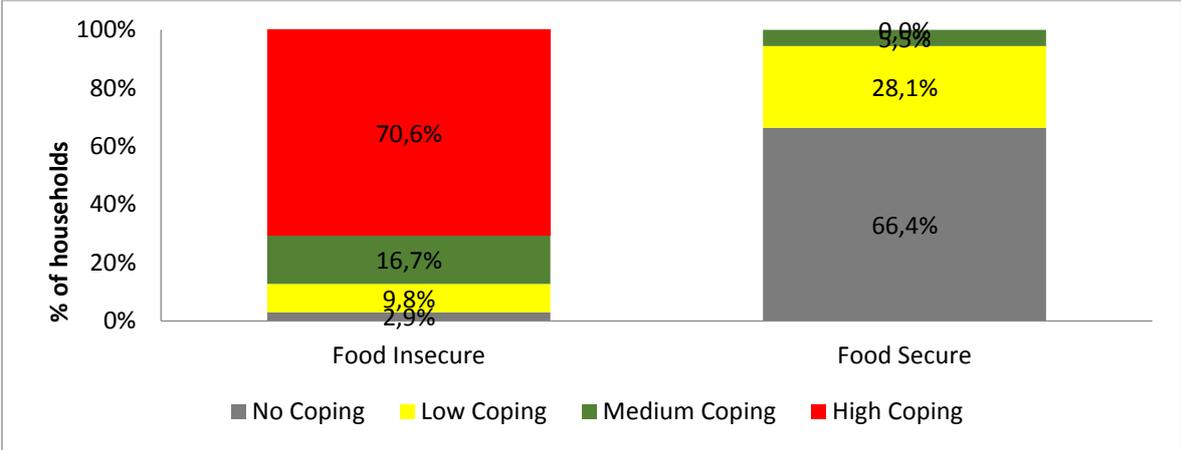
C.   Determining level of household food security using Food Consumption Score (FCS) and food access indicators

In determining the level of household food security, the CFSVA relied on two proxy indicators: the Food Consumption Score (FCS) and the food access index specifically developed for the Gambian context.

Food consumption, according to WFP"s standard methodology, is defined by the diversity of the diet and the frequency with which staple and non-staple foods are consumed. It is used as a proxy indicator of the current food security situation. The most commonly used food consumption indicator in WFP food security surveys is the FCS, which is based on dietary diversity (the number of food groups consumed by a household over a reference period of seven days), food frequency (the number of days each food group is consumed) and the relative nutritional importance of different food groups.

During the survey, households were asked how many of the seven days prior to the data collection they had eaten 15 different food items. The FCS was computed by grouping together the food items into eight standard food groups – such as cereals; tubers and roots; legumes and nuts; meat, fish, poultry and eggs; vegetables (including green leaves); fruits; oils and fats; milk and dairy products; and sugar and sweets. Each food group with the pre-assigned weight according to its nutritional value was then multiplied by the number of days it was consumed and the FCS was calculated by summing up the scores of all food groups into one composite score. The maximum value of the FCS is 112, which implies the household consumed each food group every day for the last seven days (the quantity of food is not considered).

Table 8-4: Example of Food Consumption Score table.

Food item	Food group	Weight (A)	Days eaten in past 7 days (B)	Score A x B
Maize, rice, sorghum, millet, bread and other cereals	Cereals tubers, and root crops	2	7	14
Cassava, potatoes, and sweet potatoes				
Beans, peas, groundnuts, and cashew nuts	Pulses	3	1	3
Vegetables, relish, and leaves	Vegetables	1	2	2
Fruits	Fruit	1	0	0
Beef, goat, poultry, pork, eggs, and fish	Meat and fish	4	0	0
Milk, yoghurt, and other dairy	Milk	4	1	4
Sugar and sugar products	Sugar	0.5	4	2
Oils, fats, and butter	Oil	0.5	2	1
Composite score				26

The household score is compared with pre-established thresholds that indicate the status of the household's food consumption. WFP uses two sets of thresholds, the standard thresholds and the higher score thresholds, whereby the latter is used only if there is a clear justification. Taking into account the high sugar and oil intake in the Gambian diet, the higher score thresholds were used to classify the household according to the following three Food Consumption Score groups:

- Poor food consumption: 0 to 28
- Borderline food consumption: 28 to 42
- Acceptable food consumption: > 42

However, the Food Consumption Score group classification alone cannot adequately reflect the level of household food security as it provides a snapshot of the current food consumption (and therefore current access to food) without sufficiently considering elements related to seasonality or sustainability as well as vulnerability. To overcome this limitation, food access was introduced as a second dimension to consider for the food security classification, taking into account households' ability to access food and potential vulnerability in case of a shock.

Food access was classified using share of food expenditure, coping strategies and access to credit. These indicators were selected as proxies as it is possible through them to have an idea of the food access situation of the household. Furthermore it is possible to assume that if a household spends the majority of its income on food in case of a crisis, it will be more difficult for that household to shift resources from other expenses to purchase food, then it will have to reduce food intake in terms of quality and/or quality. Additionally, lack of access to credit will reduce the ability for a household to cope in the event of a shock

The poorest households in the world spend more than 75 percent of their income on food. Households in the richest countries (e.g. United States and Canada) spend less than 15 percent of their

expenditures on food (COCA 2006; U.S. Department of Labor 2006). The classification used for the 2011 CFSVA followed the IFPRI standards[15] :

- 75%: Very high (i.e. very vulnerable to food insecurity)
- 65%–75%: High
- 50–65%: Medium
- 50%: Low

Starting from this classification of vulnerability of access, the information was cross-tabulated with the coping strategies adopted by households. Coping strategies were classified based on the reduced Coping Strategy Index (CSI) which takes into account the severity of food-related coping strategies employed by households (for more details refer to Annex-D).

The cross-tabulation of share of food expenditure and coping strategies resulted in the flowing categories:

Low or average share of food expenditure and no coping strategies adopted.
High share of food expenditure and low to medium coping strategies.
High share of food expenditure and High coping strategies.
Very high share of food expenditure and high coping strategies score.

Coping Strategies

Rank of Food expenditure	No coping strategies adopted	Low Coping (reduced CSI 1 to 5)	Medium Coping (reduced CSI 6 to 10)	High Coping (reduced CSI > 10)
0 to 50 percent	1	1	2	3
50 to 65 percent	1	2	2	3
65 to 75 percent	2	3	3	4
over 75 percent	3	4	4	4

Successively an additional layer was added to this classification considering if households have access to credit or not; Access to credit was considered as an improving condition as it can be a major resource of coping in the event of a shock, as previously discussed. As a result of this stratification, four FOOD ACCESS group were created as follows:

Food access classification	% of Households
Deficit Food access	9.1
Vulnerable Food access	20.5
Average Food access	25.4
Proper Food access	45.1
Total	100.0

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15 *Measuring food insecurity with Household expenditure survey* Lisa Smith_Ali Subandoro 2007.

These Food Access groups were then cross-tabulated with the Food Consumption Score Groups as follows:

Food Access Groups	Food Consumption Score Groups		
	poor	borderline	acceptable
Deficit Food access	1	1	2
Vulnerable Food access	1	2	3
Average Food access	1	2	3
Proper Food access	2	3	3

Households with poor consumption are considered as being food insecure, except in the case with proper food access which is classified as vulnerable to food insecurity. Households with borderline consumption and a deficit food access are also considered as food insecure. Households with borderline consumption and vulnerable food access are considered as vulnerable to food insecurity meaning that an external shock or a difficulty (income reduction or price increase for example) can put them into a food insecurity situation. Households with acceptable food consumption and proper or average food access are considered as food secure. As a result of this classification, the population can be classified into the following food security groups:

Food Security Group	% of households
Food Insecure	0.6
Vulnerable to food insecurity	7.4
Food Secure	92.0
Total	100.0

D. Total annual household income as a proxy indicator for wealth

Households were asked how much their total annual income was in the past year, whereby answers were recorded as predetermined income ranges instead of absolute values in order to minimize errors and ensure data quality. The ranges were determined by taking the mean annual household income values according to wealth quintiles as estimated by the National Planning Commission's 2009 Poverty and Social Impact Analysis: 1 = D0 – D20,000; 2 = D20,001 – D40,000; 3 = D40,001 – D50,001; 4 = D50,001 – D80,000; 5 = D80,001 – D170,000; and 6 = > D170,000.

Table 8-5: Monthly household expenditure by wealth and livelihood groups

		Total expenditure (Dalasi)	Per capita expenditure (Dalasi)	% of expenditure on food	Food expenditure (Dalasi)
Wealth Group	Lowest	5207	673	64.7	3168
	Low	7376	1399	54.5	2995
	Medium	7766	1327	53.6	4051
	Medium-high	14165	2275	46.5	7687
	Highest	18710	3182	40.3	6209
Livelihood Group	Trading	13003	2112	50.1	5684
	Livestock rearing and/or selling	6879	1074	66.4	4358
	Production and sale of cash crops	7559	1620	50.5	3588
	Unskilled wage labour - non-agriculture	5674	891	62.2	3380
	Handicrafts/Artisan, crafts and other related trades	6471	650	61.9	3733
	Selling salt	9090	1702	50.5	3998
	Unskilled wage labour- agriculture	5912	1210	53.3	3081
	Production and sale of food crops	10645	2000	46.6	4282
	Total	**GMD10,643**	**GMD1,771**	**52%**	**GMD4,822**

Source: 2016 CFSVA The Gambia

Statistical tests (i.e. correlation and comparing means) were conducted to explore the relationship between the total annual income variable and other variables that reflect a household's wealth status such as (non -productive) asset ownership, access to improved source of water and toilet facilities, improved housing material (window and wall), and food expenditure (also share of total), and finally verify if the total annual income variable can be used as a proxy indicator for household wealth.

Tests results confirmed a statistically significant correlation between the total annual income variable and other wealth related variables:

Pearson Correlation						
	how much was the total annual	improved roof material	improved wall material	improved windows	improved toilet	improved source of water
how much was the total annual income?	1	.176**	.375**	.345**	.400**	.075**
improved roof material	.176**	1	.317**	.278**	.202**	.167**
improved wall material	.375**	.317**	1	.596**	.493**	.189**
improved windows	.345**	.278**	.596**	1	.456**	.167**
improved toilet	.400**	.202**	.493**	.456**	1	.156**
improved source of water	.075**	.167**	.189**	.167**	.156**	1

**. Correlation is significant at the 0.01 level (2-tailed).

Also, the distribution of households across income groups confirm that households that own assets[16] , have housing with improved material and access to improved water sources and toilet facilities are more likely to belong to higher income groups.
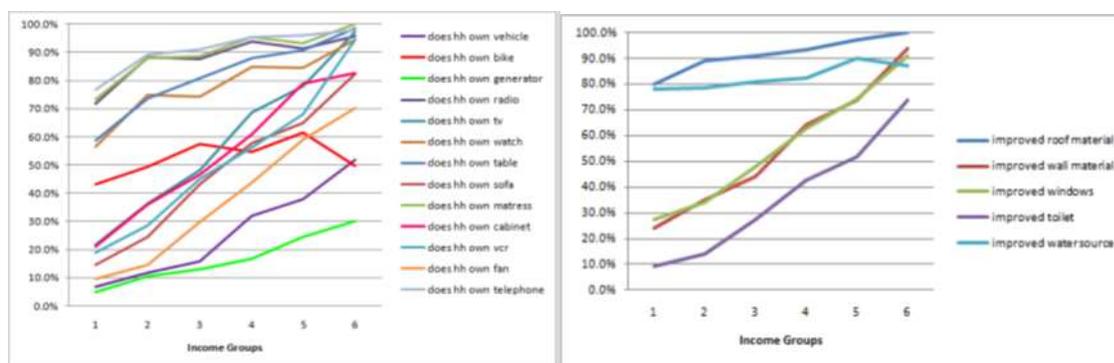
In a similar vein, the expenditure patterns across different income groups demonstrate that households belonging to the higher income group are more likely to spend more in total and less on food. Share of food expenditure is indeed inversely proportional to income.
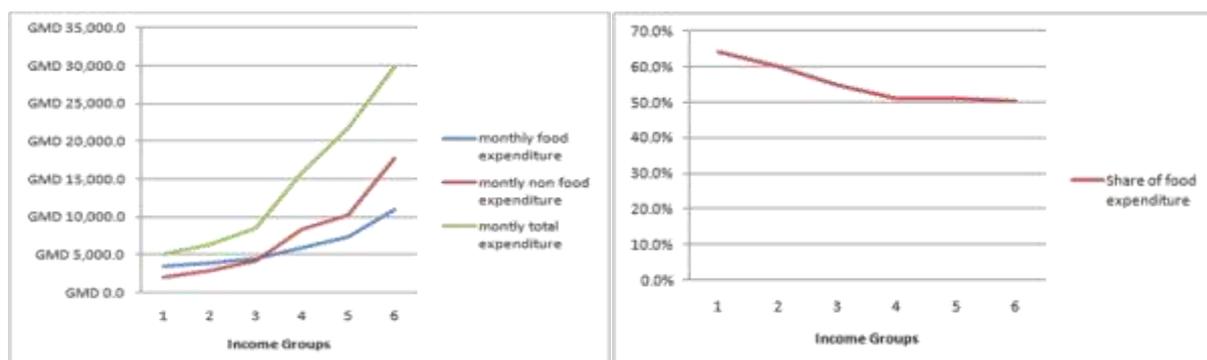
Given all of the above, the total annual household income variable was taken as a proxy indicator for household's wealth status and five wealth groups were developed by merging households belonging to income groups 5 and 6 into the highest wealth group (representing 7.6 percent of the total number

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16 Note that the trend for bicycle ownership is reverse, which is unsurprising, given the fact that the wealthier a household the more likely it will rely on motorized vehicle.

of valid cases) while taking the rest of the income groups as lowest (group 1), low (group 2), medium (group 3) and medium-high (group 4) according to the order of hierarchy.

Table 8-6: Households assets used for the calculation of wealth index.

Hoe	Radio
Axe	Television
Sickle	Watch/clock
Animal draft (ploughs, seeders)	Table
Animal drawn carts (donkey, horse)	chair
Wheelbarrow	Sofa
Solar panel	Mattress
Car	Bed
Motorbike	Cabinet/wardrobe
Bicycle	DVD player
Electric Generator	Fan
Satellite dish	Camera
Livestock	Mobile phone
Storage silo	

E. Reduced Coping Strategy Index (CSI)

The reduced Coping Strategies Index (CSI) was used as a proxy indicator of household food security in order to better understand how Gambian households cope in response to food access constraints. Households were asked how often they used a list of five coping strategies in the seven days prior to the survey:

- Rely on less preferred and less expensive food;
- Borrow food, or rely on help from friends/relatives;
- Limit portion size at meal times;
- Restrict consumption by adults in order for small children to eat; reduce number of meals eaten in a day.
- Similar to the calculation of the FCS, the reduced CSI is computed by adding the scores for each strategy: the weight (reflecting their severity) multiplied by the frequency (i.e. number of days employed).

Table 8-7: Example of reduced Coping Strategy Index table

In the past seven days, how many days did your household have to	Number of days (A)	Severity weight (B)	Score (A*B)
1. Rely on less preferred/expensive foods	5	1	5
2. Borrow food or rely on help from friends/relatives	2	2	4
3. Limit portion size at meal times	7	7	7
4. Restrict consumption by adults in order for small children to eat	2	3	6
5. Reduce the number of meals eaten in a day	5	1	5
Total household score (reduced CSI)			**27**

After exploring the distribution of the reduced CSI variable, the following CSI categories were developed:

- No coping: Households that did not employ any food-related coping strategies with reduced CSI score = 0 (representing 35.1 percent of total sample);
- Low coping: Households with reduced CSI score between 1 and 5 including those that rely on less preferred/expensive foods up to three days and limit portion size up to two days during the week (representing 34.2 percent of total sample);
- Medium coping: Households with reduced CSI score between 6 and 10 including those that borrow food and restrict consumption by adults at least once during the week in addition to relying on less preferred/expensive foods (representing 13.9 percent of total sample); and
- High coping: Households with reduced CSI score > 10 including those that employ several food-related coping strategies more frequently (representing 16.7 percent of total sample).

F. Livelihood groups clustering

The clustering process regroups the households based on their primary productive activity or income. For each group there is a clear main source of income accounting for 60-85 percent of the total income while the rest of the income may come from multiple sources without any consistent pattern. In the questionnaire, households were asked to choose up to three main income sources from the following list of activities:

1 = Sale of food crops production (including garden produce)
2 = Sale of cash crops (e.g. groundnuts)
3 = Sale of animals / livestock, animal produce
4 = Fishing
5 = Agricultural wage labour (paid in-kind)

6 = Non agriculture wage labour (e.g. construction workers)
7 = Self-employed services (e.g. taxi, carpenter, crafts)
8 = Self-employed shopkeepers, traders
9 = Self-employed street vendors
10 = Salaried employee – NGO / private
11 = Salaried employee – Public
12 = Business / entrepreneur
13 = Pensions / allowances
14 = Remittances
15 = Credit / loan
16 = Other (e.g. aid, gift, rent)

ADDATI was used to perform the clustering which first resulted in eight categories:

CATEGORIES	WEIGHT	COMPOSITION
Cash Crop	36.9%	78% from cash crops
Self-Employment	19.5%	84,5% from Self Employment
Salaries	13%	80,3% from salaries
Livestock and Fishing	3.5%	69. 3% from livestock & fishing and 17.8% from cash crop
Remittances	8.9%	74.2% from remittances
Non Ag Wages	7.2%	73.4% from non-agricultural labour
Food Crop	10.7%	65.8% from food crops
Other	0.4%	79.5% from others and 12% from Self Employment

The categories "livestock and fishing" and "other" however had a very small population weight and were ruled out from being considered as distinct livelihood groups. The second biggest income source was explored for both categories and finally, "Livestock and Fishing" was merged with "Cash Crop" and "Other" with "Self-Employment" respectively.

 The final cluster results for the livelihood groups are as follows:

1.   **Cash crop** – including households whose secondary income sources are livestock rearing and/or fishing;
2.   **Self-employment** – including households whose secondary income sources are aid, gift, rent amongst others;
3.   **Salaries** – including households who primarily rely on salaried employment in private or public sectors;
4.   **Remittances** – including households who primarily rely on remittances;
5.   **Non agricultural wages** – including households whose secondary income sources are sale of firewood and informal sales (i.e. street vendors);
6.   **Food crop** – including households who primarily rely on sale of food crops.

G.   Sampling design

A two-stage cluster sampling approach was adopted for the CFSVA. The first stage was the selection of Enumeration Areas (EAs) from the stratified sampling frame (i.e. 39 districts regrouped into 16 strata, see Table 8-8) based on probability proportional to (population) size.

Table 8-8: Stratified sampling frame – 2016 CFSVA The Gambia

Region	Region Name	Municipality/LGA	Districts	Strata
Region 1	Greater Banjul Area	**Banjul**	Banjul South	Banjul
			Banjul Central	
			Banjul North	
Region 1	Kanifing Municipality	**Kanifing**	KUDC	KUDC
Region 2	Western Coast Region	**Brikama**	Kombo North	Kombos
			Kombo South	
			Kombo Central	
			Kombo East	
			Foni Berefet	Fonis
			Foni Bintang	
			Foni Kansala	
			Foni Bondali	
			Foni Jarrol	
Region 4	Lower River Region	**Mansakonko**	Kiang West	Kiang
			Kiang Central	
			Kiang East	
			Jarra West	Jarra West
			Jarra Central	Jarra
			Jarra East	
Region 3	North Bank Region	**Kerewan**	Lower Nuimi	Lower Nuimi
			Upper Nuimi	North Bank West
			Jokadu	
			Lower Baddibu	Baddibu
			Central Baddibu	
			Sabach Sanjal	
			Illiassa	
Region 5	Central River Region - North	**Kuntaur**	Lower Saloum	Lower Saloum
			Upper Saloum	Central River North
			Nianija	
			Niani	
			Sami	
Region 5	Central River Region - South	**Janjanbureh**	Niamina Dankunku	Niamina
			Niamina West	
			Niamina East	
			Lower Fulladu West	Janjanbureh
			Upper Fulladu West	
			Janjanbureh	
Region 6	Upper River Region	**Basse**	Fulladu East	Fulladu East
			Jimara	
			Tumana	
			Kantora	Upper River North
			Wulli East	
			Wuli West	
			Sandu	

N.B. Districts highlighted in yellow are predominantly urban or include major urban settlements according to GBOS.

The second stage was the random selection of households within each EA. For each stratum, 21 EAs were selected. The EAs were randomly selected from the sample frame provided by GBOS developed for the 2013 Population and Housing Census. Once the data collection team arrives in the enumerated areas, a listing of all the households is done and 8 households randomly selected from the list. Households were asked questions regarding demographic composition of household, migration, housing facilities and assets owned, agriculture and access to markets, income sources and access to credit, expenditures, food consumption and sources of food, and shocks, risk and coping. All in all, data for 2,557 households have been collected and analyzed.

The sample size calculation was based on the following parameters:

Prevalence	50%
Precision	10%
Level of confidence	95%
Design effect	1.6
Expected response rate	95%
Number of households per stratum	168
Number of strata	16
Total number or households	2,694

H. Maps

Map 7-1: Proportion of food insecure households at strata level
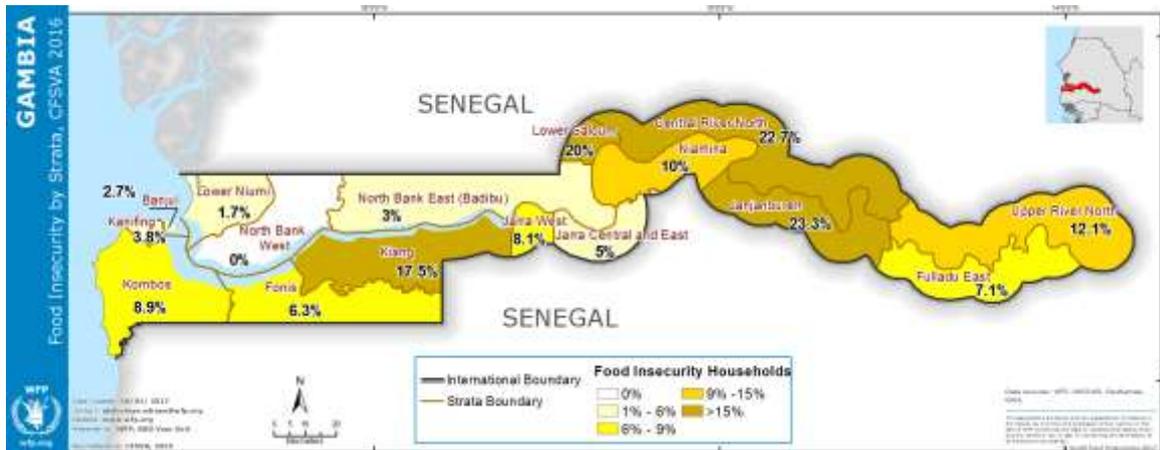
Map 7-2: Proportion of vulnerable households at strata level

Map 7-3: Where are the food insecure households in The Gambia?