



# HEA Outcome Analysis Technical Report

**COUNTRY :**

**Nigeria**

**Date of the analysis:** 20 - 23 October 2015

**Period covered by the analysis :** October 2015 – September 2016

## SUMMARY

The consumption year covered by the current analysis is **September 2015 – August 2016** for the seven livelihood zones, detailed below. Official data monitoring on crop production and prices was used for the definition of the current year problem. Assumptions for changes in production and prices were made in consensus amongst the workshop participants, based on their field experience.

HEA Outcome Analysis (OA) was conducted by the Nigeria HEA Working Group (WG) on 20-23 March, 2015 in Katsina State for seven rural livelihood zones of Northern Nigeria. There were participants from Government Institutions and NGOs under the technical lead of Save the Children. The October/November 2015 analysis aims to understand the changes in household economy during harvest period. Seven livelihood zones were analyzed by the team; (NW Millet & Sesame LZ (MAS), NW Cotton, Groundnuts & mixed Cereals LZ (CGC), Hadejia Valley Mixed Economy LZ (HVM)), NW Sorghum, Cowpeas and Groundnuts LZ (SCG), NW Millet, Cowpeas and Groundnuts LZ (MCG), NC Maize, Sorghum and Cotton LZ (MSC) and NE Millet, Cowpeas and Sesame LZ (MCS).

*The analysis shows that the very poor households in the CGC LZ will likely face deficit on their livelihood protection threshold, meaning that this wealth group within CGC would likely need assistance to sustain or live within their protection threshold. No other wealth group across the seven livelihood zones will likely face any deficit. Households in these zones, except the very poor in the CGC LZ, will be able to access food and income to live above the survival and livelihood protection thresholds for the projected period.*

### Summary of Outcome Analysis Results: Wealth Groups/Livelihood Zones Facing Deficits

	MAS	CGC	HVM	SCG	MCG	MSC	MCS
<b>Very Poor</b>	No deficits	Deficits=11%	No deficit	No deficits	No deficits	No deficits	No deficits
<b>Poor</b>	No deficits	No deficits	No deficits	No deficits	No deficits	No deficits	No deficits
<b>Middle</b>	No deficits	No deficits	No deficits	No deficits	No deficits	No deficits	No deficits
<b>Better Off</b>	No deficits	No deficits	No deficits	No deficits	No deficits	No deficits	No deficits

## I. LIVELIHOOD ZONES DESCRIPTION

The seven livelihood zones are primarily agricultural based and a variety of rain-fed crops suited to drylands areas including millet, sorghum, maize, rice, cowpeas, groundnuts, sesame, cotton as well as soybeans are grown. Rain-fed agriculture is carried out during the single rainy season which runs from April/May to October. The peak months of rainfall are June to August. In the dry season, food crops and market vegetables are grown on low lying river flood plains (or *fadama*) either through irrigation or flood retreated agriculture. The main period of harvest is from September to November. The dry-season harvest is March. In all the zones, livestock production supplements agriculture.

The Northwest region accommodates two wide belts of dominant staple cereals, millet and sorghum. The other common associated cash crops that further distinguish the local economy are cowpeas, which are grown in surplus; groundnuts; cotton; and sesame. The North West **Millet, Cowpeas and Groundnuts LZ (MCG)** and the North West **Sorghum, Cowpeas and Groundnuts LZ (SCG)** are a mix of food and cash crops, with associated husbandry of sheep, goats, and cattle. These areas are at the heart of the groundnut cultivation for which northern Nigeria is particularly known. The longstanding cash crops of the North West **Cotton, Groundnuts, and Mixed Cereals LZ (CGC)** are groundnuts, cotton and soya beans. All are Rain-fed.

In the **Hadejia Valley Mixed Economy LZ (HVM)** a variety of crops is grown in drylands as well as the irrigated areas. Rainy season cultivation of drylands centers on maize, millet, rice, sorghum, and cowpeas, while irrigation or residual moisture in the dry season allow extended cultivation of food crops such as rice, maize and valuable market vegetables like peppers, onions and tomatoes on low lying river flood plains (i.e., *fadama*). Fishing which happens throughout the year in the Hadejia Valley is a significant source of cash income.

The far northern zone of North West **Millet & Sesame LZ (MAS)**, in the Sahel savanna ecological belt, generally features good conditions for millet and sorghum, as in the Sudan savanna belt. In this relatively dry ecosystem, yields tend to be lower than further south. Cowpeas are important, and sesame is a successful cash crop, although many farmers cultivate groundnuts more. Unlike other livelihood zone, there is very little *fadama* land here, and vegetables are not common cash earners.

The Nigerian side of the Lake Chad within which the North East **Millet, Cowpeas and Sesame LZ (MCS)** is located is a semiarid zone but particularly well suited to millet and cowpeas production, the cropping season involves irrigation and rain fed agriculture. Although livestock production is an important secondary activity in this zone, small ruminants are relatively more important here than cattle.

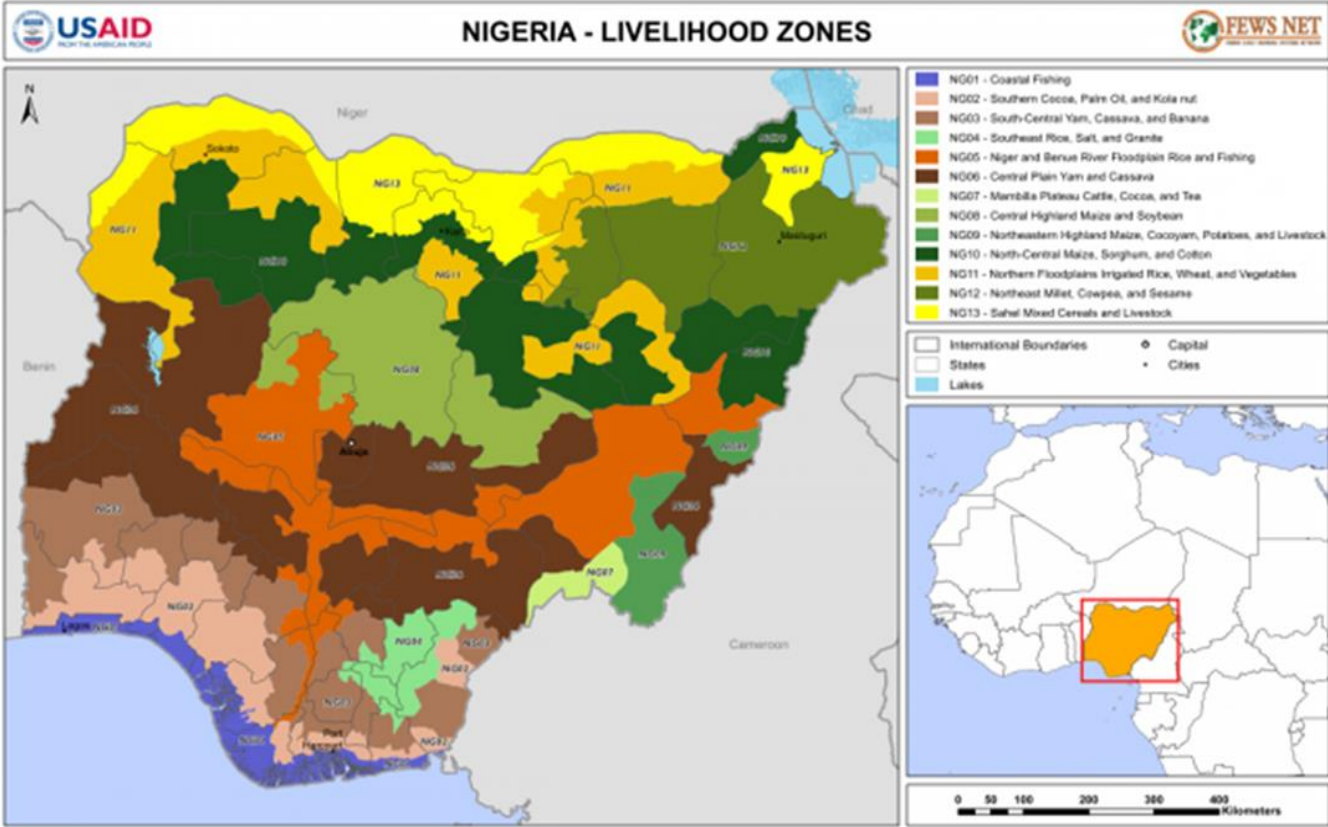
The North Central **Maize, sorghum and Cotton LZ (MSC)**, generally provides a good condition for maize, sorghum and cotton. Rice and cowpeas can be considered as cash crops in this zone, but dry season rice and vegetables are mainly grown for cash.

*The reference year was not the same for all the livelihood baselines as outlined in the table below:*

Livelihood Baseline	Reference Year
Millet & Sesame LZ (MAS)	Sept 2009 – August 2010
Cotton, Groundnuts & mixed Cereals LZ (CGC)	Sept 2011 – August 2012
Hadejia Valley Mixed Economy LZ (HVM)	Sept 2010 – August 2011
Sorghum, Cowpeas and Groundnuts LZ (SCG)	Sept 2012 – August 2013

Millet, Cowpeas and Groundnuts LZ (MCG)	Sept 2012 – August 2013
Millet, Cowpeas and Sesame LZ (MCS)	Sept 2012 – August 2013
Maize, Sorghum and Cotton LZ (MSC)	Sept 2012 – August 2013

Refer to seasonal calendars in baseline reports for further details on seasonality.



## II SCENARIO DEVELOPMENT/ PROBLEM SPECIFICATION

A problem specification is the translation of a shock or other change into economic consequences at household level. It allows one to mathematically link the change (positive or negative) to each relevant livelihood strategy. The process of developing problem specifications is one of critically examining the effects of each type of change on each source of food, income and expenditure. There can be quite a large number of these sources, not all of which are equally important, and it is therefore useful to identify the key sources for each wealth group and each livelihood zone. A key source (or ‘key parameter’) is defined as one that contributes significantly to total food or cash income<sup>1</sup>, such that a reduction in access to that one source may have a significant effect on total access.

The scenario developed uses official government monitoring data on crop production and prices for the definition of the

<sup>1</sup> A key parameter is here defined as a source of food or income that contributes at least 10% of one wealth group’s total food or income or at least 5% for each of two wealth groups’ total food or income.

current year problem specification. Where official data was not available, assumptions have been made based on a consensus amongst the workshop participants and their field experience. As part of the scenario in the livelihood zones, it has been assumed that the 2016 rainy season will be normal and that agricultural labor opportunities for land preparation, planting and weeding will be stable for the remaining months of this year. The scenario developed is based on problem specification of key parameter data collected in the seven zones. All coping strategies are excluded from the scenario. Each element of the scenario analyzed can be monitored and revised as additional information becomes available. In addition, other scenarios can be analyzed if decision makers would like to understand vulnerability to different types of shock. For more details on the key parameters and their changes since the reference years, see the key parameter problem specification table at the bottom of the report.

### III- PROJECTED FOOD SECURITY PROSPECTS

Crop	CGC	HVM	MAS	MCG	SCG	MSC	MCS
Maize	96%	100%		100%	100%	130%	130%
Millet	98%	99%	106%	99%	102%	115%	115%
Rice	102%	103%		103%	117%	117%	117%
Rice 2 <sup>nd</sup> Sea		100%					
Sorghum	103%	99%	104%	99%	104%	119%	119%
Wheat		100%					
Cowpeas	97%	101%	112%	101%	96%	113%	113%
Soya beans	104%					128%	
Groundnuts	102%			105%	112%	116%	116%
Sesame			116%				
Pepper		100%		100%	100%	112%	
Onion		101%			100%	131%	131%
Tomato		100%				114%	
Cotton	101%						

Decrease	Increase	Not Important	Not Available
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#### 3.1- Period covered by the analysis

The period covered by the analysis is the current consumption year which is **September 2015 – August 2016** as projected. The analysis was done on 20-23 March, 2016.

The Outcome Analysis started off with a training (refresher) session on key parameter data collection, review of the data collection tool was done as well. The training was followed by 4 days field exercise on key parameter data collection across

the seven livelihood zones, information were gotten from both Agricultural Development Project (crop production figures and market prices) and FEWSNET (crop prices). Market assessment was also conducted by the enumerators.

### **3.2 Projected Outcomes by Livelihood Zone and by District**

The results of the OA are presented in this section. These illustrate how scenario development and problem specification are expected to impact total income for households in different wealth groups in the seven livelihoods zones. The graphs presented below show the results of the scenario development/problem specifications for very poor and poor households for one district within each livelihood zone.

#### **I- NG08: NW Cotton, Groundnuts and Mixed Cereals Livelihood Zone**

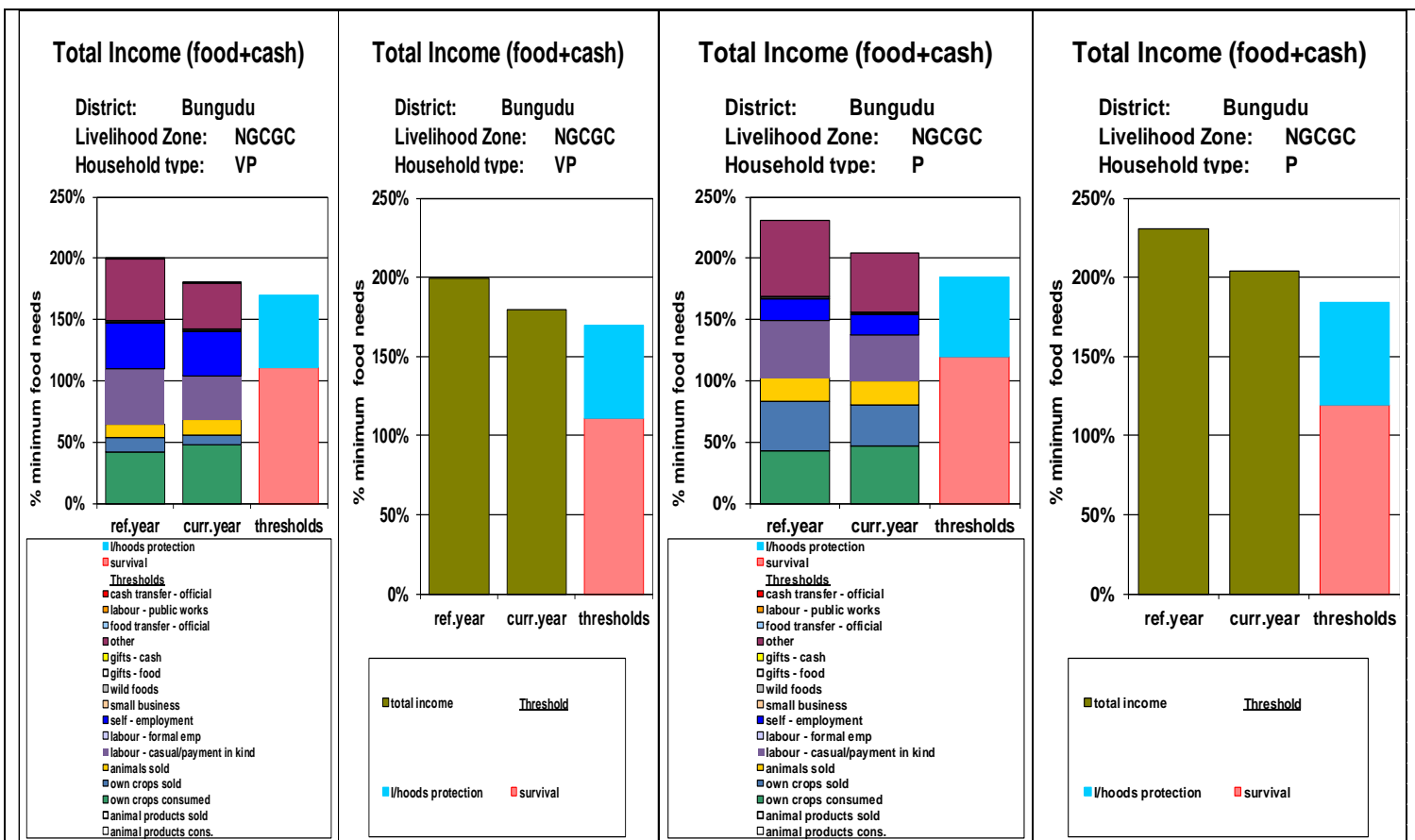
**The results for the OA show that the very poor wealth group in CGC LZ will likely face deficit on their livelihood protection threshold, whereas there will be no survival and livelihood protection deficit for the other groups within this zone.** There has been an increase in crop production, except for maize, millet and cowpeas which reduced slightly when compared with the reference year. There is also a decrease in livestock production especially for cattle mostly due to the rustling activities in the zone. There has also been an increase in staple food and livestock prices, the increase in price of livestock was due to animal rustling causing artificial shortages and low supply in the market and hence the increase in selling price. Wage rates; construction and agricultural labor has slightly reduced when compared to the reference year, (see annex).

The impact is more on the very poor and poor households.

The very poor household have reduced income from sales of own crop largely due to decrease in production of crops like millet and maize. Decrease in livestock resulted in reduced income from livestock sale when compared to the reference year. Income from casual labour and self-employment reduced as well with respect to the reference year. This resulted in reduced income and hence the deficit.

The current scenario, when compared with the reference year shows that the current year total income is lower than the reference year total income though it's still above the livelihoods protection threshold for other wealth groups with the exception of the very poor.

In the graph below Bungudu LGA was used but represents other LGAs (Bungudu, Gusau, Maru and Tsafe) in the Cotton, Groundnuts and Mixed Cereals Livelihood zone.

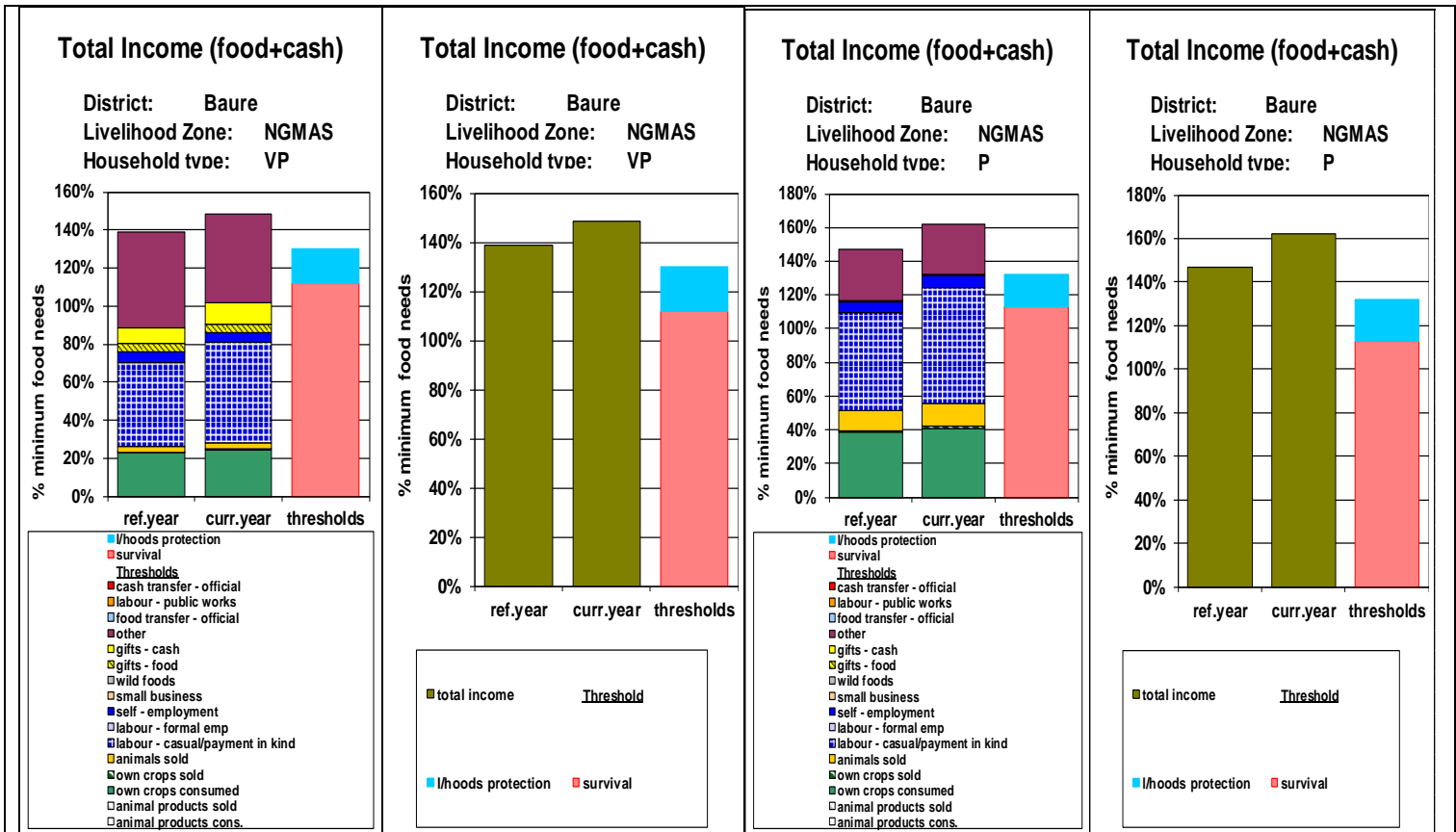


## 2- NG04: NW Millet & Sesame Livelihood Zone

The results for the OA show that households will not require emergency food or livelihood protection aid this year. There is an increase in crop production in the MAS LZ. The selling price of the principal cash crop- sesame is 156% due to increase demand for the crop. In addition, there is improvement in the income generated from agricultural labor, firewood sales and self-employment, which will allow households to contain the moderate increase of the staple food price – millet which increase to 110% with production at 106%. The increase in price of the millet is normal when the lean season approaches.

The current year scenario as compared to the reference shows a significant increase in the overall economic activity of the very poor and the poor households though still a little above that of the reference year. Consumption of own crop by the very poor and the poor slightly increased and also demand for casual labor, which is an important income source for poor and very poor.

In the graph below Baure LGA was used but represents other LGAs (Baure, Dutsi, Daura, Mashi, Zango and Sandamu) in the Millet and Sesame Livelihood zone.

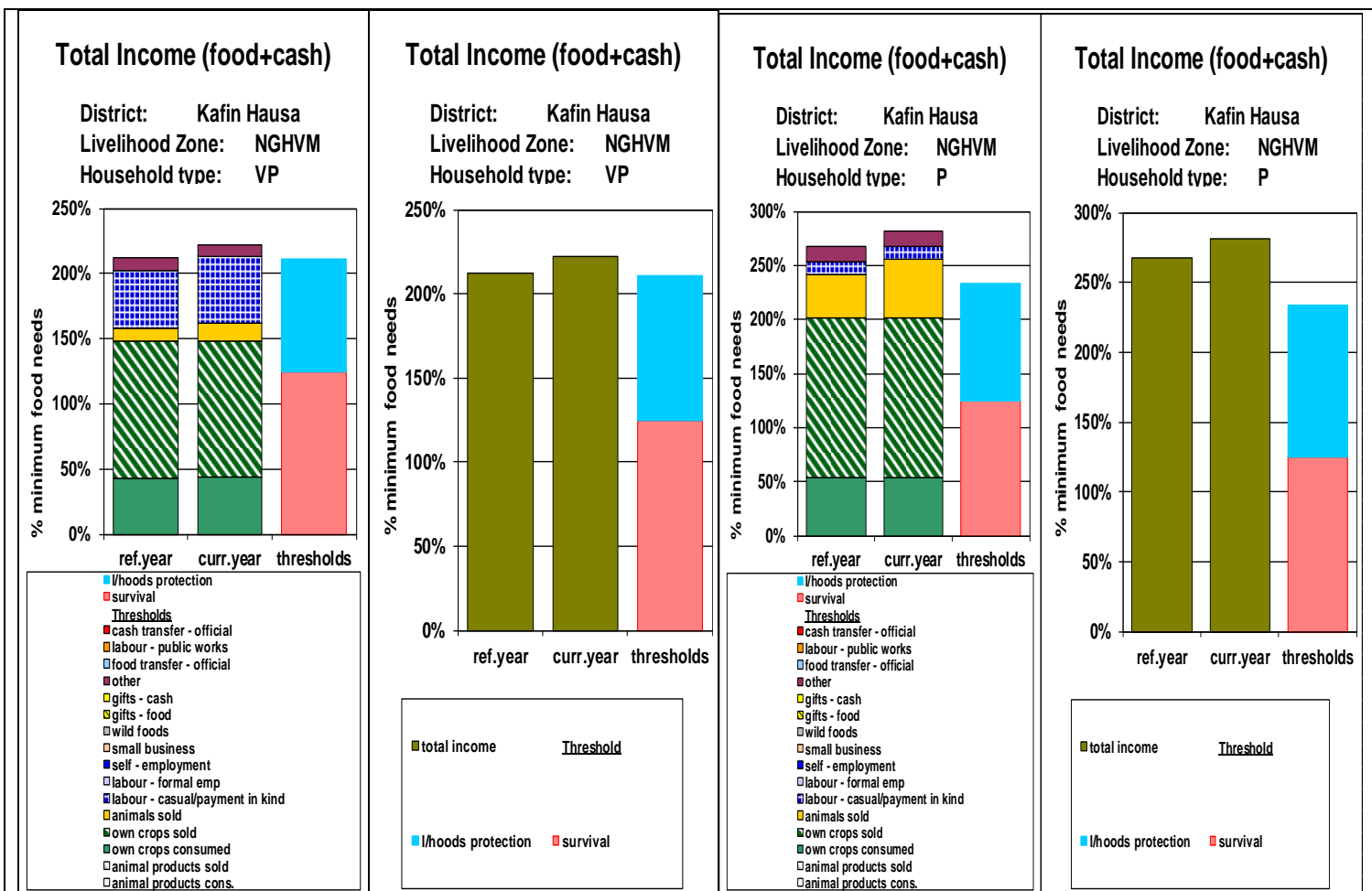


### 3- NGI I: Hadejia Valley Mixed Economy Livelihood Zone

The results for the outcome analysis (OA) show that very poor and poor households in the Hadejia Valley Mixed Economy LZ will face no deficit: crop production was generally higher than the reference year and prices are fairly stable and slightly higher demand for labour. There is an increase in crop production in HVM LZ, with the exception of millet and sorghum which reduced slightly to 99% in the current year. Staple food price increased significantly.

The current year production activity for the poor and the very poor is better than the reference year analysis. Households can meet their basic staple food needs and can save money for social obligations, but will likely not have enough to invest in income generation.

In the graph below Kafin Hausa LGA was used but represents other LGAs (Kafin Hausa, Auyo, Guri, Kiri Kassama, Malam Madori and Kaugama) in the Hadejia Valley Mixed Economy Livelihood zone.



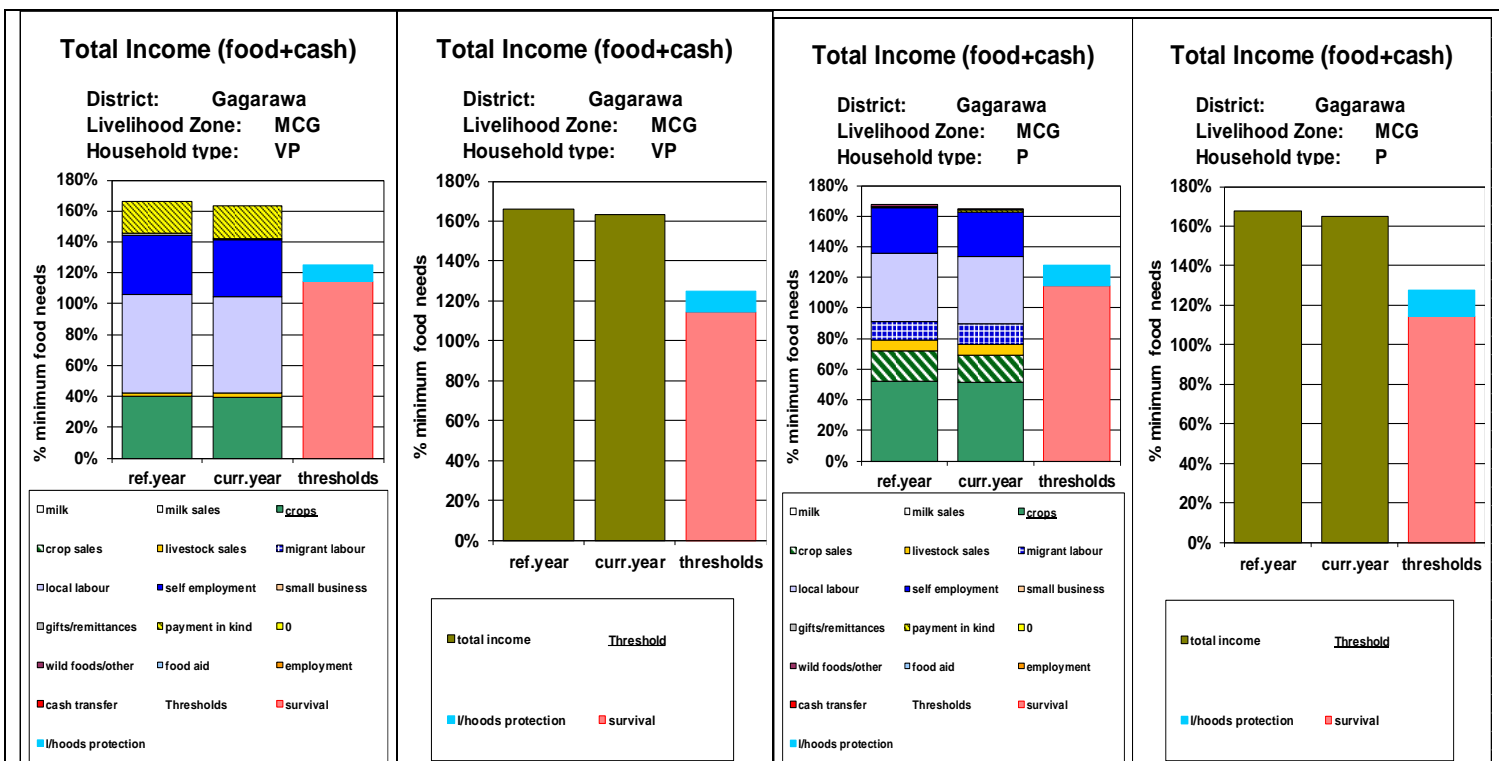
#### 4- NG03: NW Millet, Cowpeas and Groundnuts Livelihood Zone

The results for the outcome analysis (OA) show that there will be no survival and livelihood protection deficits for any wealth group. There is little increase in crop production in the current year with respect to the reference year. Though consumption of food from own crops slightly reduced as well as income from crop sales, the households are still able to sustain both their survival and livelihood needs.

The result as compared to the reference year shows a very little increase in crop production while income from both crop sales and labour reduced slightly. However, the households in this livelihood zone would be able to sustain both their survival and livelihood needs.

In the graph below Gagarawa LGA was used but represents other LGAs (Gagarawa, Buji, Jahun, Birnin Kudu, Kiyawa, Dutse, Miga and Taura) in the Millet, Cowpeas and Groundnuts Livelihood zone.



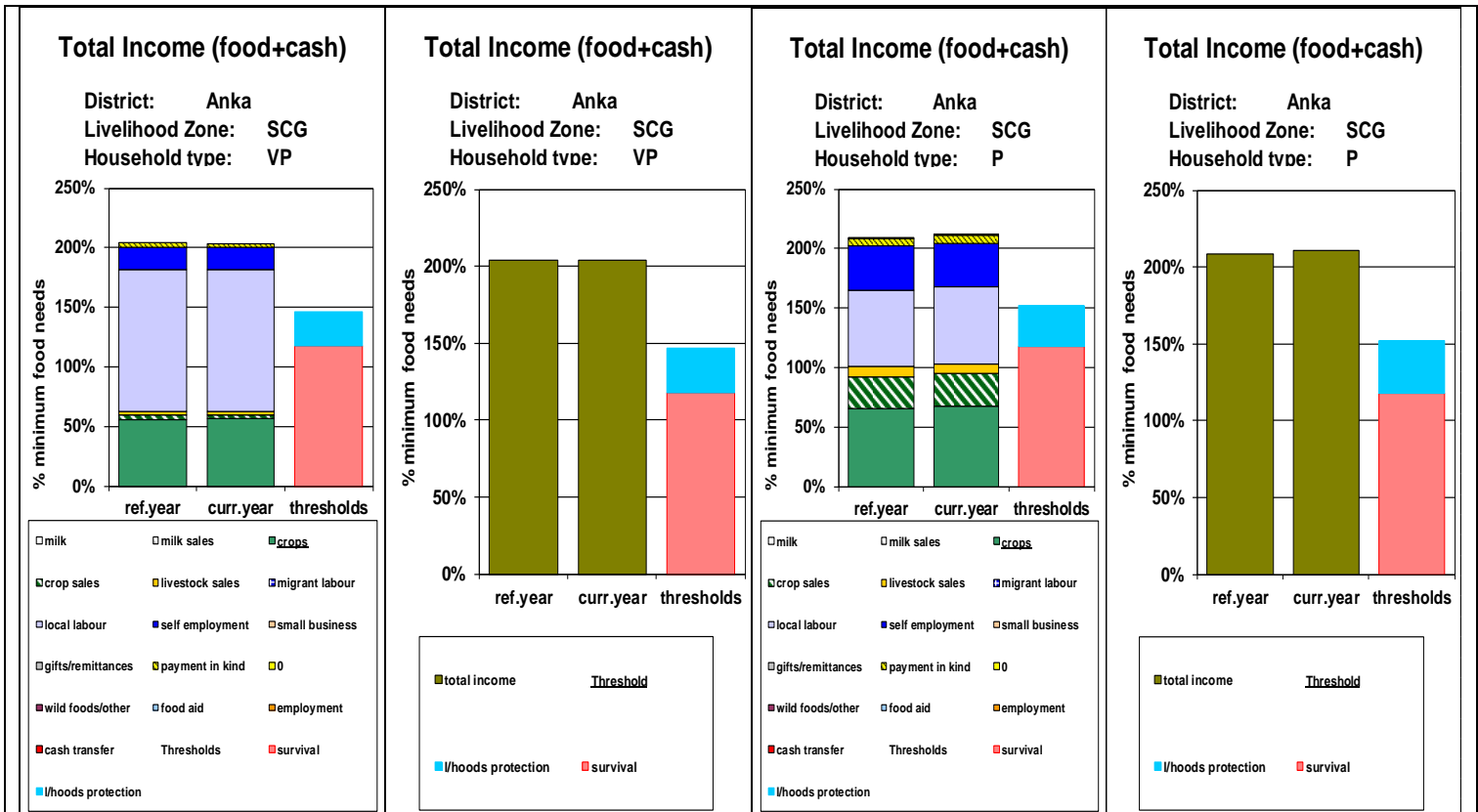


### 5-NG06: NW Sorghum, Cowpeas and Groundnuts Livelihood Zone

The results for the scenario analysis show that there will be no survival and livelihood protection deficits for any wealth group, and it is projected that for all wealth groups, total food and income access will be above the threshold. In the reference year, very poor households obtained their income and food from local labor and crop sales and to a lesser extent from payment in kind. This is similar to the current year with a slight increase in food consumption from own crops with respect to the reference year.

Cattle production is at 73%, goats and sheep at 93%. The price for cow milk increased to 155% of the reference year value due to high demand and low supply during the dry season. The overall price of grains and staple crops remain stable on average in this zone.

In the graph below Anka LGA was used but represents other LGAs (Anka, Bukkuyum and Gumi) in the Sorghum, Cowpeas and Groundnuts Livelihood zone.

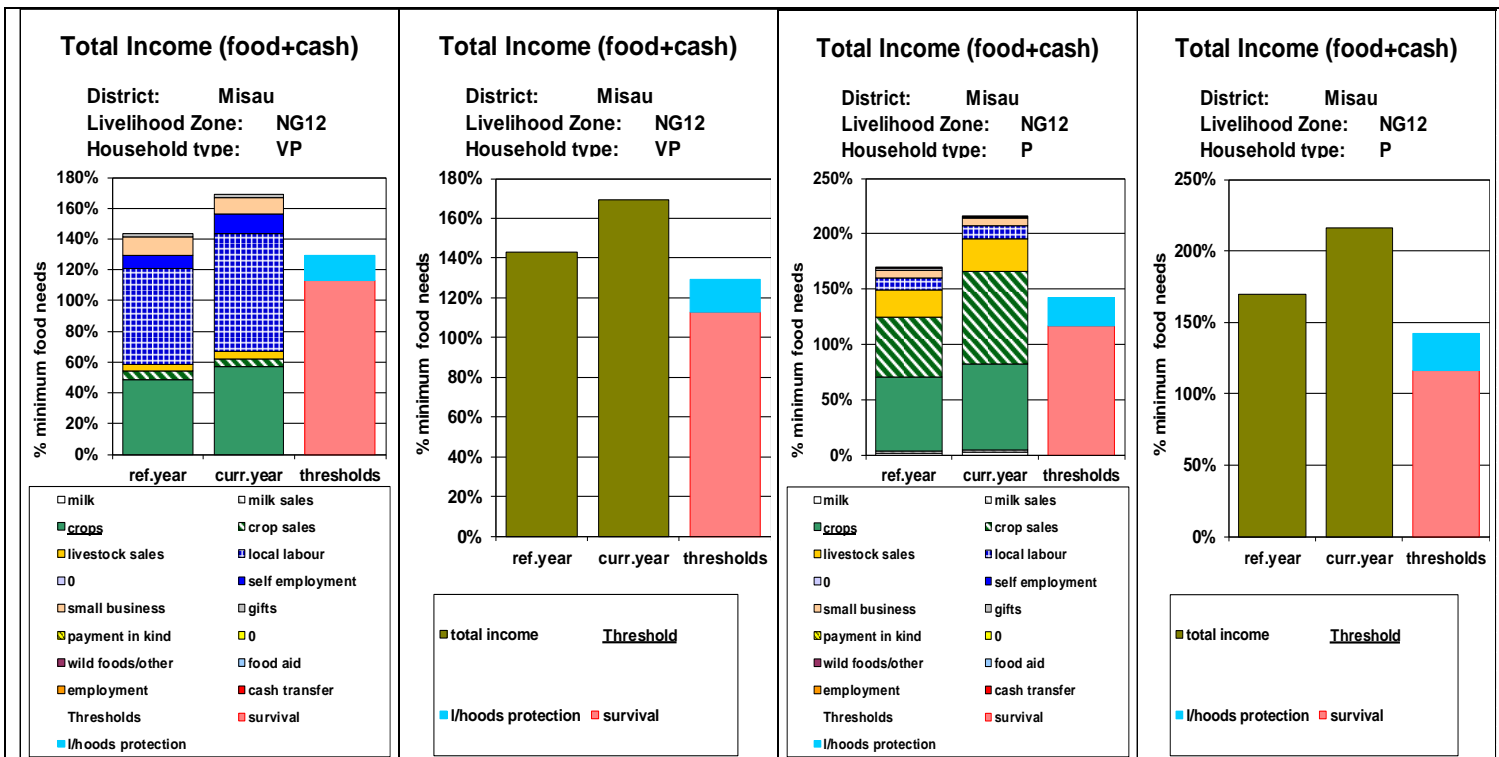


### 6-NGI2: NE Millet, Cowpeas and Sesame Livelihood Zone

The results for the outcome analysis (OA) show that there will be no survival and livelihood protection deficits for any wealth group.

There is an increase in crop production in the current year, hence the general increase in total income for both the very poor and poor households in this zone when compared to the reference year. The very poor household's major source of income which is local labour increased slightly expanding their income. There is again slightly more food available for consumption given the increase in crop production with respect to the reference year.

In the graph below Misau LGA was used but represents other LGAs (Misau, Katagum, Gaide, Gamawa, Darazo and Damban) in the Millet, Cowpeas and Sesame Livelihood zone.



## 7-NGI0: NC Maize, Sorghum and Cotton Livelihood Zone

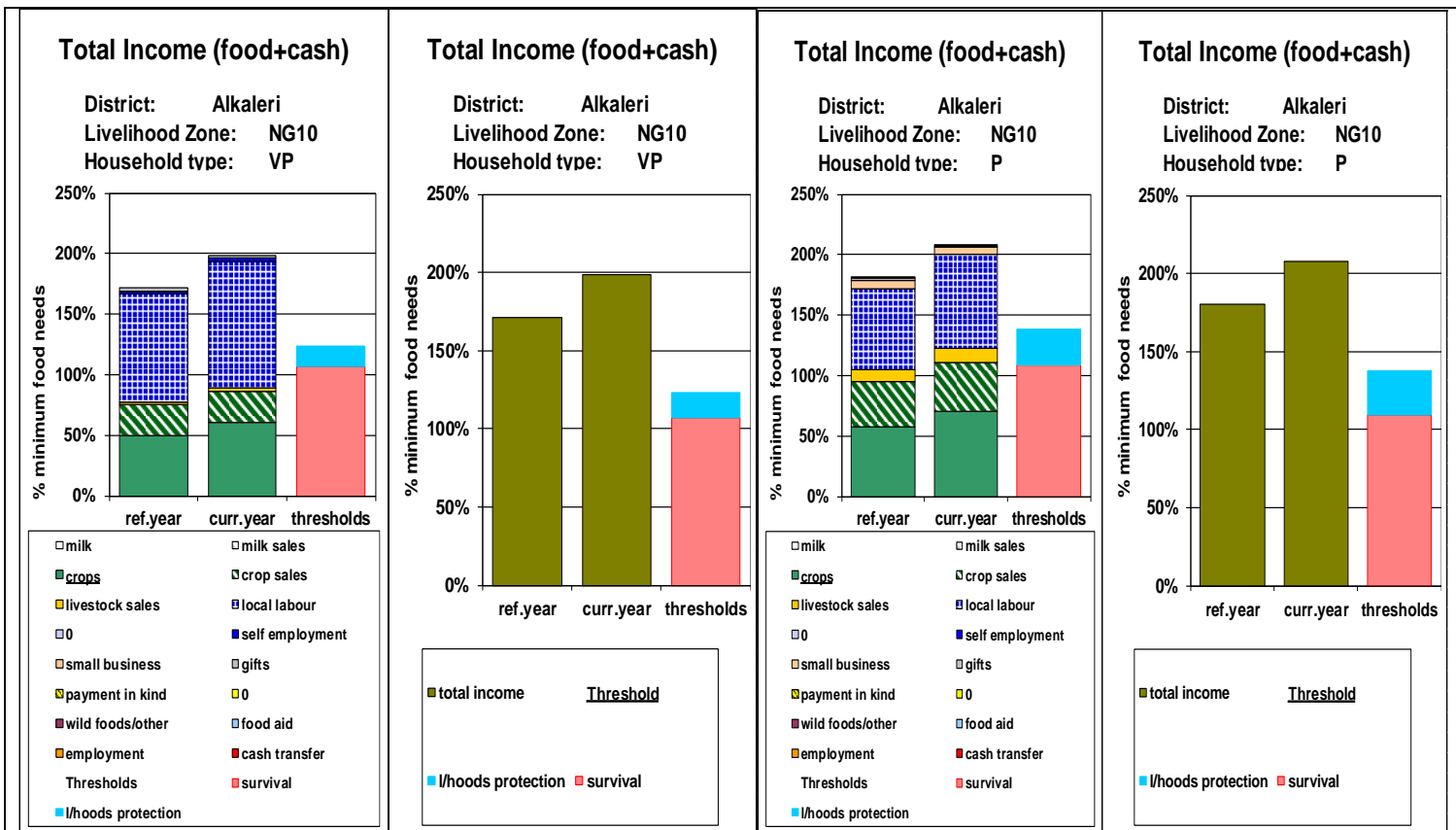
The Outcome Analysis for North Central Maize, Sorghum and Cotton Livelihood Zone shows no deficit in both survival and livelihood protection threshold, hence no emergency food aid or livelihood support is needed in this zone.

There is quite an increase in crop production in MSC LZ as compared to the reference year most especially for staple foods like Maize and sorghum with an increase of 30% and 19% respectively. Cash crops like groundnut, cowpeas and rice also increased by 16%, 13% and 17% respectively.

The very poor increased both cash and food income through the increase in the local labour with respect to the reference year. Again, with an increase in crop production, food consumption from own crop also increased from 50% to 61% for the very poor when compared to the reference year.

Similar to the very poor, the poor also had an increase in local labour income, crop and livestock sales as well as food consumption from own crop.

In the graph below Alkaleri LGA was used but represents other LGAs (Alkaleri, Bogoro, Dass, Gamjuwa, Ningi, Toro and Tafawa Balewa) in the Maize, Sorghum and Cotton Livelihood zone.



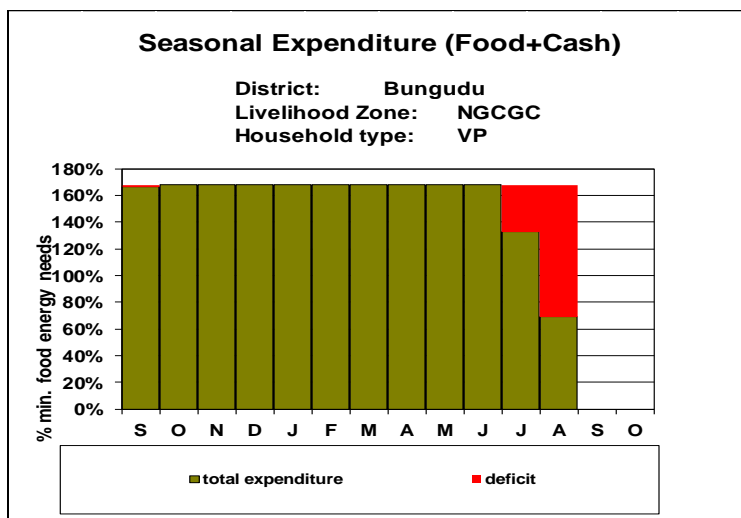
#### IV- SUMMARY OF THE RESULTS COMPARED WITH THE TWO THRESHOLDS

The analysis projects that the very poor households in the CGC LZ will likely face deficit on their livelihood protection threshold, meaning that this wealth group within CGC would likely need assistance to sustain or live within their protection threshold. No other wealth group across the seven livelihood zones will likely face any deficit. Households in these zones will be able to secure sufficient food and income to live above the basic survival and livelihood protection thresholds for the projected period.

Summary of Outcome Analysis Results: Wealth Groups/Livelihood Zones Facing Deficits							
	MAS	CGC	HVM	SCG	MCG	MSC	MCS
<b>Very Poor</b>	No deficits	Deficits=11%	No deficit	No deficits	No deficits	No deficits	No deficits
<b>Poor</b>	No deficits	No deficits	No deficits	No deficits	No deficits	No deficits	No deficits
<b>Middle</b>	No deficits	No deficits	No deficits	No deficits	No deficits	No deficits	No deficits
<b>Better Off</b>	No deficits	No deficits	No deficits	No deficits	No deficits	No deficits	No deficits

## V- SEASONALITY

By combining information on total income with seasonal calendar data showing when different sources of food and cash become available, it is possible to generate projected pattern of consumption/ expenditure, by month, from **September 2015 – August 2016 as projected**. The period when households are unlikely to be able to cover their livelihood protection needs is shown in red on a seasonal expenditure graph, and based on the analysis above and the presented graph below, the very poor wealth group in the CGC livelihood zone will likely have livelihood protection deficit within the month of July/August, 2016.



The seasonal expenditure graph depicts the month and timing for any form of intervention that the very poor and poor households might likely require; which is significant enough to have direct impact on their livelihood protection.

## VI- RESPONSE OPTIONS AND RECOMMENDATIONS

- Livestock protection program as well as improvement in the security situation especially within CGC livelihood zone to avert rustling and support the very poor households in sustaining their livelihood protection
- Government support in establishing food preservation programs especially vegetables.
- A joint assessment with partners is being encouraged.
- Secondary data should be sourced from all relevant agencies and a more reliable data is used for analysis.
- All production and price data should be stored in a data base based on year and monthly collection for easy analysis by the Agriculture Development program (ADP) and co-managed by Save the Children.
- OA result should be presented into food and cash equivalent; the gap and the target population should be defined for easy programming.

## **CONCLUSION**

The analysis shows that the very poor households in the CGC LZ will likely face deficit on their livelihood protection threshold, meaning that this wealth group within CGC would likely need assistance to sustain or live within their protection threshold. No other wealth group across the seven livelihood zones will likely face any deficit. Households in these zones, except the very poor in the CGC LZ, will be able to access food and income to live above the survival and livelihood protection thresholds for the projected period.

In the longer term, development efforts should continue to focus on assisting the very poor and the poor to secure more stable sources of income to complement crop and livestock farming.

## VII- ANNEX

### 7.1- Table summarizing key parameters figures (problem specification)

#### NG08: NW Cotton, Groundnuts and Mixed Cereals Livelihood Zone

<b>Problem Specification for NW Cotton, Groundnuts and Mixed Cereals Livelihood Zone</b>		
<b>Key parameter</b>	<b>Production Problem</b>	<b>Price Problem</b>
Cattle	73%	108%
Goats	93%	108%
Sheep	93%	109%
Cow's Milk	100%	
Maize	96%	115%
Millet	98%	98%
Rice	102%	105%
Cowpeas	97%	88%
Soya beans	104%	111%
Sorghum	103%	111%
Groundnuts	102%	96%
Cotton	101%	108%
Agricultural labor	100%	94%
Construction	100%	90%
Fetching water	100%	76%
Firewood sales	100%	100%
Credit	100%	100%
Self-employment	100%	90%
<b>Components of the Livelihood Protection Basket (LPB)</b>		
Fertilizer: Urea		115%
<b>Staple Food (Sorghum)</b>		<b>122%</b>
<b>Inflation</b>		<b>127%</b>

**Legend:** ---- means that price problem specification for those items was left blank in the LIAS because data were not available during the analysis. In such cases, the spreadsheet will apply automatically the problem specification for inflation (127%) to those items.

## NG04: NW Millet & Sesame Livelihood Zone

Problem Specification for NW Millet & Sesame Livelihood Zone		
Key parameter	Production Problem	Price Problem
Cattle	120%	114%
Goats	110%	109%
Sheep	110%	116%
Cow's Milk	100%	104%
Millet	106%	
Cowpeas	112%	
Sorghum	104%	
Sesame	116%	156%
Agricultural labor	100%	121%
Construction	100%	156%
Firewood sales	100%	100%
Self-employment	100%	100%
Components of the Livelihood Protection Basket (LPB)		
Fertilizer: Urea		
<b>Staple Food (Millet)</b>		<b>110%</b>
<b>Inflation</b>		<b>148%</b>

**Legend:** ---- means that price problem specification for those items was left blank in the LIAS because data were not available during the analysis. In such cases, the spreadsheet will apply automatically the problem specification for inflation (148%) to those items.



## NGI I: Hadejia Valley Mixed Economy Livelihood Zone

Problem Specification for Hadejia Valley Mixed Economy Livelihood Zone		
Key parameter	Production Problem	Price Problem
Cattle	115%	126%
Goats	125%	122%
Sheep	125%	129%
Cow's Milk	100%	109%
Maize	100%	119%
Millet	99%	105%
Rice	103%	110%
Wheat	100%	100%
Cowpeas	101%	100%
Sorghum	99%	87%
Rice irrigated	100%	100%
Pepper	100%	100%
Onions	101%	116%
Tomatoes	100%	100%
Agricultural labor	100%	100%
Construction	100%	133%
Fish sales	100%	104%
Self-employment	100%	100%
Components of the Livelihood Protection Basket (LPB)		
Fertilizer		115%
<b>Staple Food (Maize)</b>		<b>109%</b>
<b>Inflation</b>		<b>137%</b>

**Legend:** ---- means that price problem specification for those items was left blank in the LIAS because data were not available during the analysis. In such cases, the spreadsheet will apply automatically the problem specification for inflation (137%) to those items.

### NG03: NW Millet, Cowpeas and Groundnuts Livelihood Zone

Problem Specification for NW Millet, Cowpeas and Groundnuts Livelihood Zone		
Key parameter	Production Problem	Price Problem
Cattle	105%	86%
Goats	120%	100%
Sheep	120%	100%
Cow's Milk	100%	107%
Sorghum	99%	68%
Millet	99%	68%
Rice	103%	95%
Cowpeas	101%	60%
Maize	100%	73%
Groundnuts	105%	144%
Pepper	100%	100%
Agricultural labor: pre-harvest	100%	100%
Construction	100%	100%
Firewood & Charcoal sales	100%	100%
Trade: livestock & dry goods	100%	100%
Components of the Livelihood Protection Basket (LPB)		
Fertilizer		120%
Labor		100%
Animal drugs		100%
Ploughing/Land rental		100%
Transport		100%
Education		100%
Medicine		100%
Tax		100%
<b>Staple Food (Millet)</b>		<b>103%</b>
<b>Inflation</b>		<b>117%</b>

**Legend:** ---- means that price problem specification for those items was left blank in the LIAS because data were not available during the analysis. In such cases, the spreadsheet will apply automatically the problem specification for inflation (117%) to those items.

## NG06: NW Sorghum, Cowpeas and Groundnuts Livelihood Zone

Problem Specification for NW Sorghum , Cowpeas and Groundnuts Livelihood Zone		
Key parameter	Production Problem	Price Problem
Cattle	73%	86%
Goats	93%	100%
Sheep	93%	155%
Cow's Milk	100%	147%
Sorghum	104%	147%
Millet	102%	74%
Rice	117%	70%
Cowpeas	96%	68%
Maize	100%	73%
Groundnuts	112%	121%
Pepper	100%	100%
Onions	100%	100%
Agricultural labor: pre-harvest	100%	100%
Construction	100%	100%
Fetching Water	100%	100%
Firewood & Charcoal sales	100%	100%
Trade: livestock & dry goods	100%	100%
Components of the Livelihood Protection Basket (LPB)		
Fertilizer		125%
Labor		100%
Animal drugs		100%
Ploughing/Land rental		100%
Transport		100%
Education		100%
Medicine		100%
Tax		
<b>Staple Food (Sorghum)</b>		<b>100%</b>
<b>Inflation</b>		<b>117%</b>

**Legend:** ---- means that price problem specification for those items was left blank in the LIAS because data were not available during the analysis. In such cases, the spreadsheet will apply automatically the problem specification for inflation (117%) to those items.

## NGI0: NC Maize, Sorghum and Cotton Livelihood Zone

Problem Specification for NW Sorghum , Cowpeas and Groundnuts Livelihood Zone		
Key parameter	Production Problem	Price Problem
Cattle	110%	113%
Goats	115%	106%
Sheep	115%	100%
Cow's Milk	100%	100%
Maize	130%	74%
Sorghum	119%	83%
Rice	117%	125%
Millet	115%	89%
Cowpeas	113%	80%
Soya beans	128%	100%
Groundnuts	116%	93%
Onions	131%	150%
Tomatoes	114%	100%
Pepper	112%	100%
Agricultural labor: cultivation	100%	140%
Construction	100%	100%
Domestic Labor	100%	140%
Other self-employment	100%	125%
Components of the Livelihood Protection Basket (LPB)		
Fertilizer		100%
Pesticide		100%
Land rental		100%
School		100%
Medicine		100%
Animal Drugs		100%
<b>Staple Food (Sorghum)</b>		100%
<b>Staple Food (Maize)</b>		100%
<b>Inflation</b>		<b>110%</b>

**Legend:** ---- means that price problem specification for those items was left blank in the LIAS because data were not available during the analysis. In such cases, the spreadsheet will apply automatically the problem specification for inflation (110%) to those items.

## NG12: NE Millet, Cowpeas and Sesame Livelihood Zone

Problem Specification for NW Sorghum , Cowpeas and Groundnuts Livelihood Zone		
Key parameter	Production Problem	Price Problem
Cattle	110%	13%
Goats	115%	106%
Sheep	115%	100%
Cow's Milk	100%	100%
Maize	130%	
Sorghum	119%	83%
Rice	117%	
Millet	115%	89%
Cowpeas	113%	80%
Groundnuts	116%	93%
Onions	131%	150%
Agricultural labor: cultivation	100%	140%
Construction	100%	100%
Components of the Livelihood Protection Basket (LPB)		
Fertilizer		100%
School		100%
<b>Staple Food (Maize)</b>		100%
<b>Inflation</b>		<b>110%</b>

**Legend:** ---- means that price problem specification for those items was left blank in the LIAS because data were not available during the analysis. In such cases, the spreadsheet will apply automatically the problem specification for inflation (110%) to those items.

## 7.2 Table summarizing the Outcome Analysis results

Country	LZ Baseline Code	LZ Name	Wealth Group	% Pop	Timing of Deficit	Survival Deficit	Livelihood Protection Deficit (%Kcal)
Nigeria (Northern)	<b>HVM</b>	NG11: Hadejia Valley Mixed Economy	V. Poor	53%	----	----	----
			Poor	23%	----	----	----
			Middle	15%	----	----	----
			B/Off	9%	----	----	----
	<b>CGC</b>	NG08: North West Cotton, Groundnuts & mixed Cereals	V. Poor	40%	----	----	----
			Poor	28%	----	----	----
			Middle	20%	----	----	----
			B/Off	12%	----	----	----
	<b>MAS</b>	NG04: North West Millet & Sesame	V. Poor	47%	----	----	----
			Poor	31%	----	----	----
			Middle	14%	----	----	----
			B/Off	8%	----	----	----
	<b>MCG</b>	North West Millet, Cowpeas, Groundnuts and Cotton	V. Poor	52%	----	----	----
			Poor	22%	----	----	----
			Middle	14%	----	----	----
			B/Off	12%	----	----	----
	<b>SCG</b>	North West Sorghum, Cowpeas and Groundnuts	V. Poor	50%	----	----	----
			Poor	23%	----	----	----
			Middle	17%	----	----	----
			B/Off	10%	----	----	----
	<b>MSC</b>	North Central Maize, Sorghum and Cotton	V. Poor	47%	----	----	----
			Poor	26%	----	----	----
			Middle	16%	----	----	----
			B/Off	11%	----	----	----
	<b>MCS</b>	North East Millet, Cowpeas and Sesame	V. Poor	47%	----	----	----
			Poor	27%	----	----	----
			Middle	17%	----	----	----
			B/Off	9%	----	----	----

**Legend:** ---- means that there is no deficit

### 7.3 List of participants

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