

HEA Outcome Analysis Technical Report

COUNTRY:

Nigeria

Date of the analysis: 18 – 20 November 2014

Period covered by the analysis: October 2014 – September 2015

SUMMARY

This report presents the results of monthly monitoring of key parameter data as represented on the livelihood zones that have been analyzed. HEA Outcome Analysis (OA) was conducted by the Nigeria HEA Working Group (HEA WG) in November 2014 in Abuja for five rural livelihood zones in Northern Nigeria. Participants from Government (Federal Ministry of Agriculture through the Agricultural Development Program, Department for Food Security), NGOs (Save the Children) and other agencies participated, under the technical lead and guidance of Save the Children. The November analysis is aimed at understanding the changes in household economy during harvest period. The five livelihood zones that were analyzed by the WG are: NW Millet & Sesame (MAS); NW Cotton, Groundnut and Mixed Cereals (CGC); NW Hadejia Valley Mixed Economy (HVM); NW Sorghum, Cowpeas and Groundnuts (SCG); and NW Millet, Cowpeas and Groundnuts (MCG).

The period covered by the current analysis is the consumption year, which runs from **September 2014 – August 2015.** Official monitoring data on crop production and prices were used for the definition of the current year problem. Where official information was not available (production data) assumptions were made based on a consensus amongst the workshop participants and their field experience.

The analysis shows that no wealth group will likely face any deficit in the five livelihood zones (MAS, CGC, SCG, HVM & MCG) meaning that households in these five zones will be able to secure sufficient food and income to live above the basic survival and livelihood protection thresholds.

Summary of Outcome Analysis Results: Wealth Groups/Livelihood Zones Facing Deficits							
	MAS	CGC	HVM	SCG	MCG		
Very Poor	No deficits	No deficits	No deficit	No deficits	No deficits		
Poor	No deficits	No deficits	No deficits	No deficits	No deficits		
Middle	Middle No deficits No deficits No deficits No deficits						
Better Off	No deficits	No deficits	No deficits	No deficits	No deficits		

I. LIVELIHOOD ZONES DESCRIPTION

The five livelihood zones are primarily agricultural-based supporting a wide variety of rain-fed crops suited to drylands areas including millet, sorghum, maize, rice, cowpeas, groundnuts, sesame, cotton as well as (increasingly) soybeans. 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 (i.e., fadama) either through irrigation or flood retreat agriculture. The main period of harvest is from September to November. The dry-season harvest is March. In all five zones, livestock production supplements agriculture.

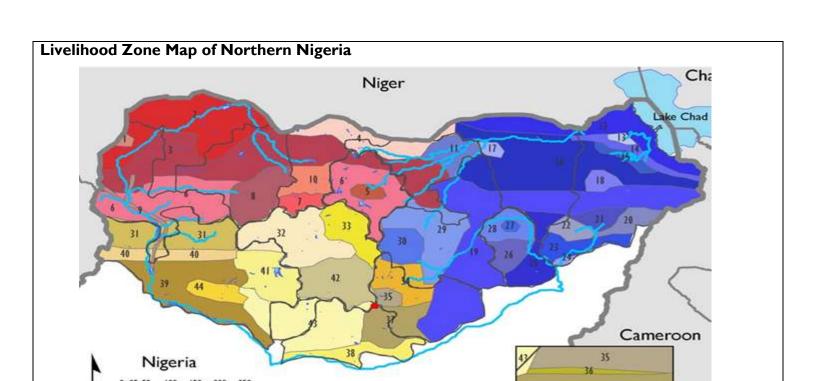
The Northwest region accommodates two wide belts of dominant staple cereals, millet and sorghum, that grade into each other via varying mixes. The other common associated cash crops that further distinguish the local economy are cowpeas, which are grown in surplus; groundnuts; cotton; and sesame. The **NW Millet, Cowpeas and Groundnuts LZ (MCG)** and the **NW Sorghum, Cowpeas and Groundnuts LZ (SCG)** are a very general 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 used to be particularly known. The longstanding cash crops of the **NW Cotton, Groundnuts, and Mixed Cereals LZ (CGC)** are groundnuts, cotton and soya beans. Rain-fed crops are sorghum, millet, rice and maize.

In the **Hadejia Valley Mixed Economy LZ (HVM)** a variety of crops are 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 crops (rice and maize) and valuable market vegetables (peppers, onions and tomatoes) on low lying river flood plains (i.e., *fadama*). Fishing in the Hadejia Valley is a significant source of cash income.

The far northern zone of **NW 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 universally important, and sesame is an especially successful cash crop, although many farms cultivate groundnuts more. Unlike many sorghum-based areas, there is very little *fadama* land here, and vegetables are not common cash earners.

The reference year was not the same for the five 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



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 here defined as one that contributes significantly to total food or cash income¹, so that a reduction in access to that one source may have a significant effect on total access. The following table lists all the food and income sources that are found in the three different livelihood zones. Those that are key parameters for a particular zone are shaded grey and marked with an 'x'.

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The scenario uses official monitoring data on crop production and prices for the definition of the 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 five livelihood zones, it has been assumed that the 2014 rainy season will be normal and that agricultural labor opportunities for weeding will be normal for the remaining months of the rainy season. 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.

¹ 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.

III- PROJECTED FOOD SECURITY PROSPECTS

3.1- Period covered by the analysis

The period covered during the analysis is the current consumption year which is **September 2015 – August 2015** for five as projected for the three livelihood zones. For agricultural areas, the consumption year runs for the beginning of one harvest until the start of the following year's harvest.

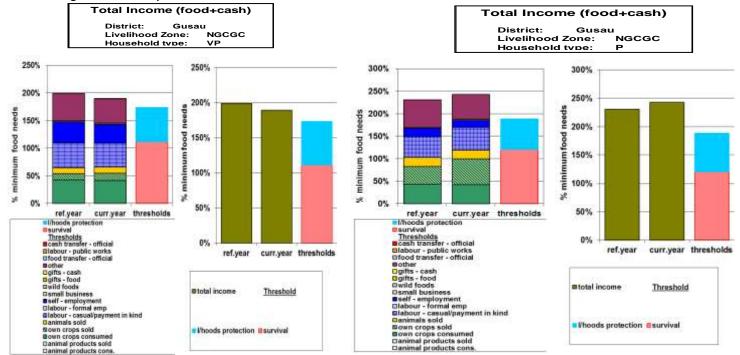
3.2 Projected Outcomes by Livelihood Zone and by District

The results of the outcome analysis are presented in this section. These illustrate how scenario development and problem specification are expected to impact upon total income for households in different wealth groups in the five livelihoods zones. The following graphs present the results of the scenario development/problem specifications for very poor and poor households for one district within each livelihood zone, the districts where key parameters were mainly monitored.

NG08: NW Cotton, Groundnuts and Mixed Cereals Livelihood Zone

The results for the scenario analysis show that there will be no emergency food or livelihood protection deficits. In theory, households could see improved food and income access this year. The relative stable food prices as a result of normal rains were balanced by similar increase in livestock selling prices as result of the period and wage rates (agricultural labor, firewood sales, and construction). In addition, both cash and food crops selling prices remain at or below inflation rate except Cowpea, groundnut and soya beans increased more than the inflation rate while overall crop production remained stable. The net effect could be higher total incomes.

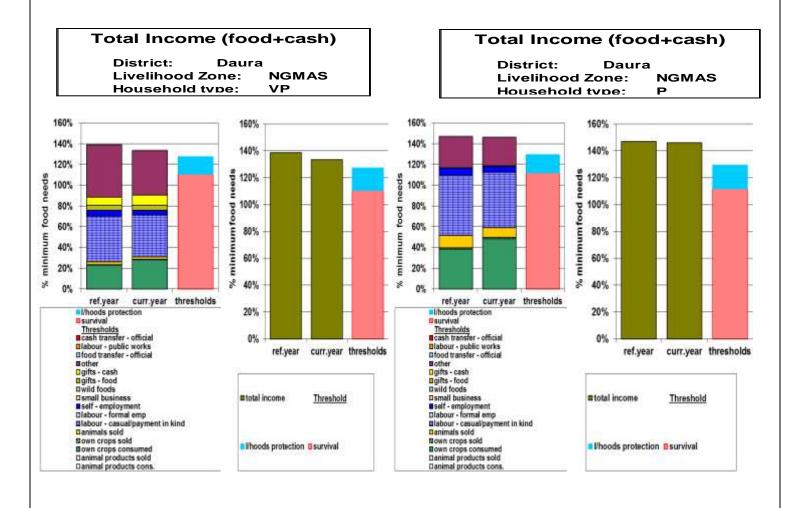
The current scenario; when compared with the reference year shows that the reference year total income is better than the current year scenario for the very poor households. Self-employment and others which include petty trade and remittances also decreases significantly in the current year scenario as compared to reference year. The case is different for the poor group as the current year scenario is better than the reference year. The result shows a significant increase in the sales of own crops by the poor, increase in self-employment and petty trade which impacted positively on their total income. Also with availability of fertilizer with a relatively good price at least below inflation rate, production seems to be above average with stable price.



NG04: NW Millet & Sesame Livelihood Zone

The results for the scenario analysis show that households will not require emergency food or livelihood protection aid this year. Overall crop production and selling price of the principal cash crop- sesame- have increased compared to the reference year. In addition, the improvement of wage rates – agricultural labor, firewood sales, self-employment- will allow households to contain the moderate increase of the staple food price – millet - and moreover to have higher total incomes as shown in the graphs below.

The current year scenario as compared to reference shows a slight decrease in the overall economic activity of the very poor households as compared to the poor group who witnessed a significant increase of their overall economic activities though still a little below that of the reference year. Own crop consumption by the poor increased as casual labour demand increases. This also allow for stable food purchase which remain the same as the reference year purchase.



NGII: Hadejia Valley Mixed Economy Livelihood Zone

The results for the scenario analysis show that very poor and poor households in the Hadeija Valley Mixed Economy LZ will likely face no deficit: as production remain stable with normal rain and relatively stable price as well as high demand for agriculture labour. In this LZ, in the reference year, crop sales - mainly market vegetables – and casual labor provided more than a half of total income of very poor households. In the current year, market vegetable production remains stable while prices decreased dramatically for pepper, onions and tomatoes due to high production in November 2014. In addition, agricultural wage decreased as a result of high supply of casual labour. At the same time, the staple food price - maize - increased significantly eroding the purchasing power of the households severely affected by the loss in market vegetables cash income. The net effect of all these changes would be a lesser total income for all wealth groups compared to the reference year.

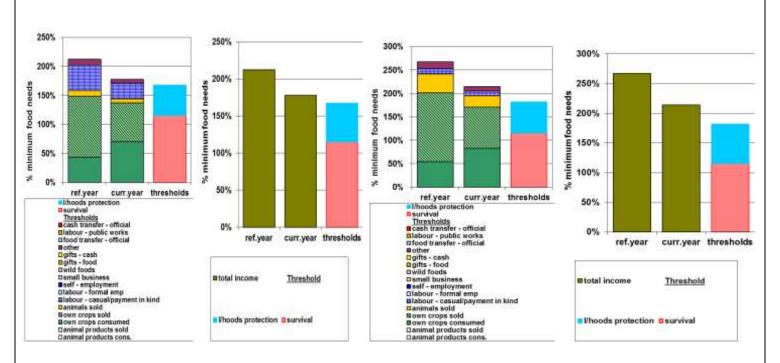
The reference year economic activity, especially income for the poor and the very poor is better than the current year scenario. The situation portrays a situation whereby, while people are slightly above the livelihoods protection threshold, they likely cannot save money or re-investment as well as meet social obligations. The situation needs to be monitored as it may deteriorate with time, especially during the lean season.

Total Income (food+cash)

District: Kafin Hausa Livelihood Zone: NGHVM Household type: VP

Total Income (food+cash)

District: Kafin Hausa Livelihood Zone: NGHVM Household type: P



NG03: NW Millet, Cowpeas and Groundnuts Livelihood Zone

The results for the scenario analysis show that there will be no emergency food or livelihood protection deficits for any wealth group. In the reference year, poorer households obtained their income from crops, local labor, self-employment and payment in kind. For crops, the decrease in selling prices was balanced by an improvement of the production leading to an increase of crop total income for the current year. The total income of casual labor and self-employment remained almost stable with. The increase in staple food, millet price and inflation rate was moderate. The net effect is that all wealth groups could see their total food and income access improved this year as compared to the reference year.

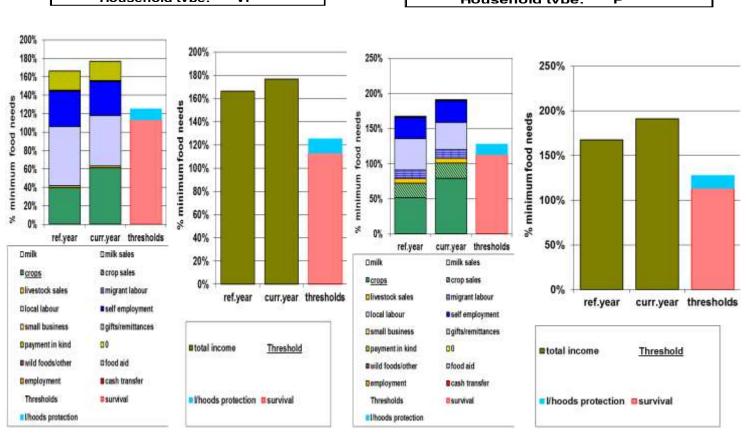
The result as compared to the reference year shows and overall increase and stable production and prices in the current year. This is as a result of fewer hazards witnessed in the zone for the last ten years s investigated using time events. Local labour and own crop production add significantly to the total income of the very poor households, also self-employment contributed significantly to the poor and very poor household's income thereby, meeting their survival and livelihood protection thresholds.

Total Income (food+cash)

District: Gagarawa Livelihood Zone: MCG Household type: VP

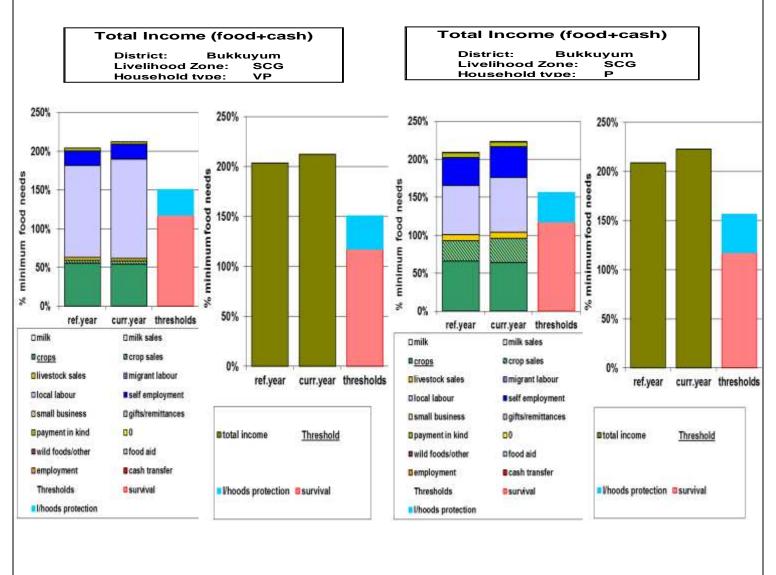
Total Income (food+cash)

District: Gagarawa Livelihood Zone: MCG Household type: P



NG06: NW Sorghum, Cowpeas and Groundnuts Livelihood Zone

The results for the scenario analysis show that there will be no emergency food or livelihood protection deficits for any wealth group, and that for all wealth groups, total food and income access will likely be above their level during the reference. In the reference year, poorer households obtained their income from local labor and crops and in a lesser extent from payment in kind. In the current year, staple food price – sorghum – remains unchanged or stable. Local labor wage which is the first income source of poorer households increased significantly, adding to the overall increase in the total income of the poorer groups as compared to the reference year.



IV- SUMMARY OF THE RESULTS COMPARED WITH THE TWO THRESHOLDS

The analysis shows that no wealth group will likely face any deficit in four of the five livelihood zones (MAS, CGC, SCG & MCG) meaning that households in these four zones will be able to secure sufficient food and income to live above the basic survival and livelihood protection thresholds.

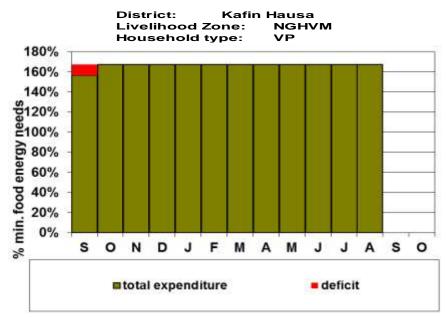
Summary of Outcome Analysis Results: Wealth Groups/Livelihood Zones Facing Deficits						
	MAS	CGC	HVM	SCG	MCG	
Very Poor	No deficits	No deficits	No deficit	No deficits	No deficits	
Poor	No deficits					
Middle	No deficits					
Better Off	No deficits					

V- TIMING OF DEFICITS

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 2014 – August 2015** as **projected**. The period when households are unlikely to be able to cover their livelihood protection needs is shown in red.

The seasonal expenditure graph below depict 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 which is in the month of September. The graph shows the timing of intervention to support livelihood. Since the livelihood protection threshold is around 120%, when compared with the seasonal graph deficit, shows that the poor and very poor are well above 120%.

Seasonal Expenditure (Food+Cash)



VI- RESPONSE OPTIONS AND RECOMMENDATIONS

The workshop participants did not formally discuss about response options for the November 2014 analysis

The OA process was improved from previous sessions, by following recommendations that were agreed upon during the HEA WG in April and July analyses. In particular the following improvements were made:

- All primary key Parameters monitored. This was kept simple such as setting up linkages with government agencies such as ADP (Agricultural Development Programme) that regularly collect production and price data. In addition, data were regularly collected in the field.
- The unit of measurement (tier, sack, daily rate, bundle, etc) for each key parameter and the particular market (s) to monitor for each livelihood zone were taken into consideration and standardized for all commodities.

CONCLUSION

The analysis shows that no wealth group will face any deficit in the five livelihood zones (MAS, CGC, SCG, HVM & MCG) meaning that households in these five zones will be able to secure sufficient food and income to live above the basic survival and livelihood protection thresholds.

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

Problem Specification for NW Cotton, Groundnuts and Mixed Cereals Livelihood Zone						
Key parameter	Production Problem	Price Problem				
Cattle	95%	125%				
Goats	100%	125%				
Sheeps	100%	113%				
Cow's Milk	100%					
Maize	99%	104%				
Millet	92%	121%				
Rice	148%	107%				
Cowpeas	102%	141%				
Soya beans	100%	176%				
Sorghum	100%	84%				
Groundnuts	90%	153%				
Cotton	177%	133%				
Agricultural labor	100%	127%				
Construction	100%	100%				
Fetching water	100%	100%				
Firewood sales	100%	100%				
Credit	100%	100%				
Self-employment	100%	100%				
Components of the Livelihood	Protection Basket (LPB)					
Fertilizer: Urea		125%				
Staple Food (Sorghum)		113%				
Inflation		127%				

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

Key parameter	Production Problem	Price Problem
Cattle	100%	119%
Goats	100%	84%
Sheeps	100%	140%
Cow's Milk	100%	103%
Millet	129%	
Cowpeas	122%	
Sorghum	118%	
Sesame	110%	153%
Agricultural labor	100%	113%
Construction	100%	100%
irewood sales	100%	100%
elf-employment	100%	100%
Components of the Livelihoo	d Protection Basket (LPB)	
ertilizer: Urea		143%
staple Food (Millet)		120%
Inflation		148%

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.

NGII: Hadejia Valley Mixed Economy Livelihood Zone

Problem Specification for Hadejia Valley Mixed Economy Livelihood Zone					
Key parameter	Production Problem	Price Problem			
Cattle	100%	102%			
Goats	100%	107%			
Sheeps	100%	125%			
Cow's Milk	100%	109%			
Maize	102%	176%			
Millet	286%	121%			
Rice	104%	116%			
Wheat	88%	125%			
Cowpeas	74%	141%			
Sorghum	150%	107%			
Rice irrigated	100%	100%			
Pepper	100%	100%			
Onions	98%	65%			
Tomatoes	102%	100%			
Agricultural labor	100%	94%			
Construction	100%	100%			
Fish sales	100%	100%			
Self-employment	100%	100%			
Components of the Livelihoo	d Protection Basket (LPB)				
Fertilizer		120%			
Staple Food (Maize)		177%			
Inflation		137%			

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

Key parameter	Production Problem	Price Problem	
Cattle	100%	109%	
Goats	100%	100%	
Sheeps	100%	108%	
Cow's Milk	100%	96%	
Sorghum	163%	127%	
Millet	148%	98%	
Rice	104%	94%	
Cowpeas	150%	84%	
Maize	139%	112%	
Groundnuts	100%	94%	
Pepper	100%	100%	
Agricultural labor: pre-harvest	100%	100%	
Construction	100%	100%	
Firewood & Charcoal sales	100%	100%	
Frade: livestock & dry goods	100%	100%	
Components of the Livelihood P Fertilizer	rotection Basket (LPB)	120%	
Labor			
Animal drugs			
Ploughing/Land rental			
Transport			
Education			
1 edicine			
Medicine Tax Staple Food (Millet) Inflation		100%	

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	95%	150%					
Goats	100%	100%					
Sheeps	100%	145%					
Cow's Milk	100%	118%					
Sorghum	100%	130%					
Millet	92%	81%					
Rice	100%	108%					
Cowpeas	100%	110%					
Maize	97%	95%					
Groundnuts	100%	151%					
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 Pr	rotection Basket (LPB)						
Fertilizer		120%					
Labor							
Animal drugs							
Ploughing/Land rental							
Transport							
Education							
Medicine							
Tax							
Staple Food (Sorghum)		100%					
Inflation		117%					

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.

7.2 Table summarizing the Outcome Analysis results

Country	LZ Baseline Code	LZ Name	Wealth Group	% Pop	Timing of Deficit	Surviv al Deficit	Livelihood Protection Deficit (%Kcal)
	HVM	NGII: Hadejia	V. Poor	38%			
		Valley Mixed	Poor	20%			
		Economy	Middle	23%			
			B/Off	19%			
	CGC	NG08: North	V. Poor	26%			
		West Cotton,	Poor	26%			
		Groundnuts &	Middle	26%			
		mixed Cereals	B/Off	22%			
NI:: -	MAS	NG04: North	V. Poor	34%			
Nigeria		West Millet &	Poor	32%			
(Northern)		Sesame	Middle	19%			
			B/Off	15%			
	MCG	North West	V. Poor	34%			
		Millet,	Poor	21%			
		Cowpeas,	Middle	20%			
		Groundnuts and Cotton	B/Off	26%			
	SCG	North West	V. Poor	33%			
		Sorghum,	Poor	20%			
		Cowpeas and	Middle	23%			
		Groundnuts	B/Off	24%			

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

7.3 List of participants

S/No	NAMES ORGANIZATIONS E		E-MAIL	PHONE NO	
1.	Amadou D Diop	Save the children Intern.	Amadou.Diop@savethechildern.org	+2217740993	
2.	Nelson Barde	Save the children Intern.		07030330669	
3.	Auwalu M. Bello	Budget & Econ. Plan. Dirt.	ambelld@gmail,com	08039434277	
4.	Ibrahim Turaki	Budget & Econ. Plan. Dirt.	ibrahimturaki2004@yahoo.com	08024472343	
5.	Benjamin Morris	Csw – Nigeria	bcomplete18@gmail.com	08023757419	
6.	Bala Haruna zango	KTARDA	balaharunazng@gmail.com	08065904009	
7.	Halidu Alhassan	ZARDP	halduya@yahoo.com	07066665839	
8	Yunusa Salhu	ZARDP	yanusa@yahoo.com	08069226359	
9	Aminu Rabiu	KTARDA	aminurabiu@yahoo.com	08069289665	
10	Hassan Mohammed		NIL	08037263828	
11	Shehu A. Abubakar	ZARDP	saamrik@yahoo.co.uk	08096495150	
12	Lilian Lucas	SGR	Lilian12nadilya@yahoo.com	08039675454	
13	Alhassan Alhassa	NEMA	Alhassanalhassan51@yahoo.com	07038520037	
14	Adamu Ishaq Ado	NEMA	adoishaq@yahoo.com	08061537365	
15	Christy Yunanah	NPC	christyyunana@gmail.com	08053816050	
16	Aso Vakporaye	NPC	asovakporaye@yahoo.co.uk	08023062970	
17	Nnenna Okoh	NPC	Nnenna_kene@yahoo.com	08034747158	
18	Sani Bilya .B	KTARDA	NIL	08037263828	
19.	Suleiman Sheriff	SGR	sy_sherif@yahoo.com	08036245993	