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Essential Needs and Nutrition Analysis – Northwest Nigeria (Zamfara, Sokoto, Katsina)

February 2021 Assessment Report



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I. Background, Objectives and Methodology

Context

Nigeria's northwest region – particularly states of Zamfara, Sokoto, and Katsina – has in recent years seen a deterioration in the security situation, marked by an increase in banditry and violence such as extortion, kidnapping, indiscriminate killings and lootings. This surge in insecurity has not only killed thousands of people, but also induced widespread displacement – with nearly 280,000 IDPs tracked in the three states as of January 2021¹. Disrupted livelihoods and hampered market access have further affected populations' capacity to meet their essential needs.

The World Food Programme conducted an in-depth Essential Needs and Nutrition Assessment (ENNA) in February 2021 to fill information gaps on populations' essential needs under multiple shocks in these states. The assessment was conducted in collaboration with the National Bureau of Statistics (NBS), the Federal Ministry of Agriculture and Rural Development (FMARD) through its National Programme for Food Security (NPFS), the National Population Commission (NPoPC), and Food and Agriculture Organization (FAO), Famine Early Warning Systems Network (FEWSNET) and other partners.

Objective

The Essential Needs and Nutrition Assessment aims to generate baseline information on essential needs in these three states – with an in-depth focus on food security and nutrition for both internally displaced populations (IDPs) and the general population of the northwest through the following specific objectives:

- 1) Provide a comparative analysis of demographic, geographic and socio-economic characteristics of food insecure households – including both general population and internally displaced;
- 2) Provide baseline information on the food security and other vulnerability indicators related to unmet essential needs of the conflict-affected population in northwest Nigeria;
- 3) Establish the nutrition situation for IDPs and determine factors influencing malnutrition;
- 4) Analyse impact of COVID-19 pandemic on affected populations.

Methodology

The survey collected quantitative data from altogether 4,077 households, distributed equally among the three states of Sokoto, Katsina and Zamfara. A total of 4,451 children from IDP

¹ **IOM Nigeria**. Displacement Tracking Matrix Northcentral and Northwest Zones. Displacement Report 5. January 2021.
URL: <https://displacement.iom.int/system/tdf/reports/Round%205%20North%20Central%20and%20North%20west%20Report%20.pdf?file=1&type=node&id=10910>

households were screened for Middle Upper Arm Circumference (MUAC), out of which 1964 were measured for weight for height. From within the general population households, 2,465 children were screened for MUAC.

The survey design uses a two-stage stratified cluster sampling methodology for selection of households. The general population sample is stratified at senatorial zone level – using the recommended sample size of 300 households per strata for food security and essential needs – thus results for the general population are statistically representative at both state and senatorial zone levels².

The sampling strata for IDP households is at state level, with sample sizes for anthropometry computed using the Emergency Nutrition Assessment (ENA) for SMART applications. The upper confidence interval (CI) of Global Acute Malnutrition (GAM) prevalence and precision level of GAM was used to estimate the sample size, using a design effect level of 1.5 in accordance with the SMART-ENA rule of thumb.

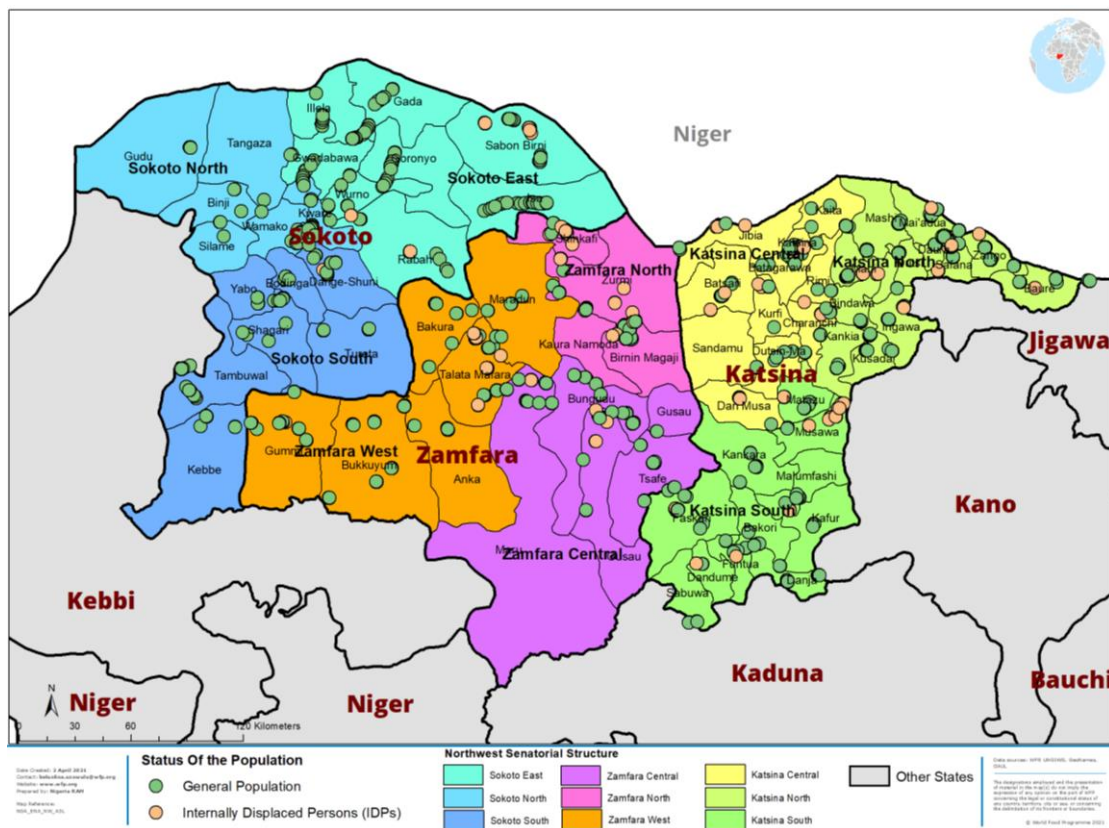


Fig 1: Essential Needs and Nutrition Assessment - Coverage Map

² World Food Programme. Emergency Food Security Assessment Handbook.

https://documents.wfp.org/stellent/groups/public/documents/manual_guide_proced/wfp203246.pdf

II. EXECUTIVE SUMMARY

- In northwest Nigeria, 2.53 million are projected to be food insecure (Phase 3 and above) between the June – August 2021 period, according to the March 2021 *Cadre Harmonise* analysis. An estimated five percent of the total food insecure population (138,476 individuals) are internally displaced persons (IDPs), of which 26,000 are in emergency phase (CH phase 4). Zamfara North, Katsina Central and Katsina South are projected to be in Crisis phase between June and August 2021.
- Among surveyed IDPs, four out of five IDPs have inadequate food consumption as opposed to only 29 percent of the general population. However, Global Acute Malnutrition (GAM) rates for IDP children aged 6-59 months remain below the WHO critical emergency threshold of 15 percent.
- Conflict/insecurity, high food prices and abduction are listed as main shocks faced by both IDPs and general population in the northwest. Very high-resolution data imagery analysis has revealed that since 2017, conflict has caused widespread settlement damage and severe cropland loss in Sokoto North and Zamfara North. Number of violent events increased in Katsina state in 2020, as per data from ACLED. Katsina also has the highest proportion of IDPs who have been displaced for less than year.
- The use of coping strategies to meet food needs is prevalent in three-quarters of the population with similar patterns observed in both general population as well as IDPs. A third of the population has used crisis or emergency coping strategies in the past year. Use of short-term debt to meet food needs is observed in 38 percent of all households, with similar patterns of prevalence observed between both IDP and general populations, and poor and non-poor households.
- IDP households have starkly high prevalence of both monetary and non-monetary multidimensional poverty compared to the general population. Eighty-eight percent of IDP households have monthly expenditures below the national poverty line, while 64 percent are multidimensionally poor.
- Compared to the general population, IDP households show multiple vulnerabilities. More than half the IDPs simultaneously have poor and borderline consumption, are multidimensionally poor, and have economic capacity below the poverty line.
- Sokoto state (in particular, senatorial zones Sokoto South and Sokoto North) have high prevalence of monetary poverty, identified by households' expenditures being below poverty line. On the other hand, Zamfara state shows high prevalence of households with multidimensional (non-monetary) poverty.
- Income, money or resources are perceived as serious unmet needs for both IDPs and general population. For IDPs, this is followed by food (reported by 82 percent of IDPs), followed by shelter (68 percent), healthcare (62 percent), and water (44 percent). For the general population, healthcare is the second-most pressing unmet need (reported by 57 percent of the general population) followed by safety (52 percent).

III. Results

1. Food Security & Nutrition Status

In the three northwest states of Katsina, Sokoto and Zamfara, 1.6 million people are estimated to be food insecure (Phase 3 and above) between March – May 2021, according to the March 2021 *Cadre Harmonise* analysis. Katsina state has the highest numbers of food insecure people (1 million), followed by Zamfara (537,000) and Sokoto states (138,000) as the per latest *Cadre Harmonise*. Katsina central is in crisis phase, while Zamfara North, Zamfara West and Sokoto South are in Phase 2 (Under pressure)³.



Fig 2: Current (March – May 2021) food security situation for northwest Nigeria (Source: March 2021 *Cadre Harmonise*)

2.53 million people are projected to be food insecure (Phase 3 and above) during the lean season period (June to August 2021). Senatorial zones of Zamfara North, Katsina Central and Katsina South are projected to be in Crisis (Phase 3)⁴.

³ **National Programme for Food Security.** *Cadre Harmonisé Result for Identification of Risk Areas and Vulnerable Populations in Sixteen (16) Northern States and the Federal Capital Territory (FCT) of Nigeria Final Phase Report.* March 2021 <https://fscluster.org/nigeria/document/final-fiche-report-march-2021-cadre>

⁴ **National Programme for Food Security.** *Ibid*

Katsina state has the highest prevalence, with nearly 1.4 million projected as food insecure, followed by Zamfara state (710,000 people), and Sokoto states (299,000 people). Katsina state also has the highest numbers of IDPs (121,434 individuals), followed by Zamfara (112,316 individuals) and Sokoto states (45,302 individuals)⁵.



Fig. 2: Projected June – August 2021 food security situation for northwest Nigeria (Source: March 2021 Cadre Harmonise)

These figures mark the highest levels of food insecurity observed in northwest states of Katsina, Sokoto and Zamfara since October – December 2016 period (Fig 4). While looking at the trends, it is important to note that the increased spike from October 2020 onwards can partly be ascribed to improved data availability.

⁵ IOM Nigeria. Displacement Tracking Matrix Northcentral and Northwest Zones. Displacement Report 5. January 2021.

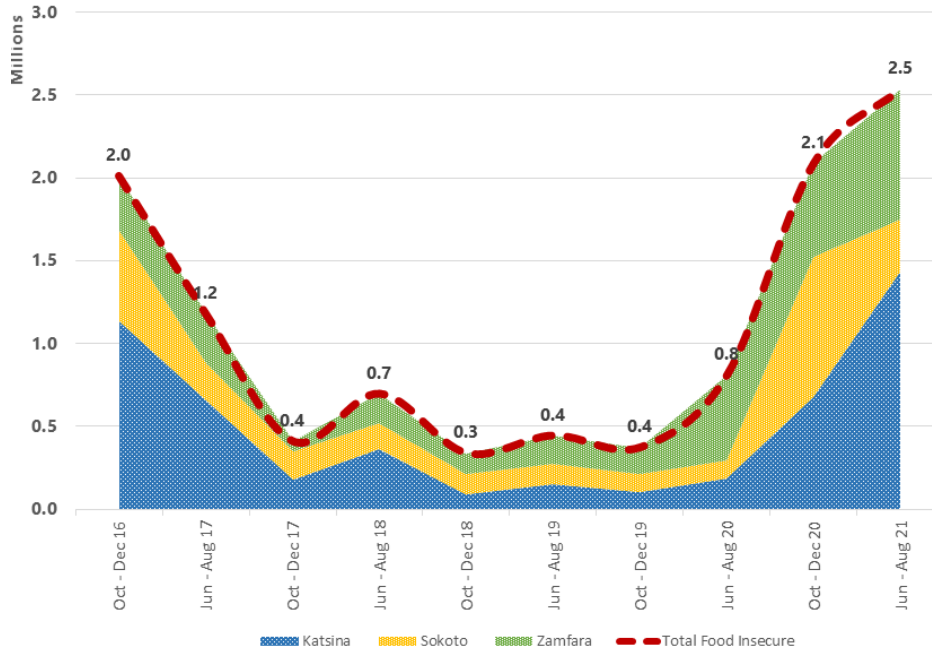


Fig 3: Food insecure population (Phase 3 and above) trends in the three northwest states over the last five year

An estimated five percent of the total food insecure population (138,476 individuals) are IDPs, of which 26,000 are in emergency phase (CH phase 4)⁶. Eighty-two percent of IDP households live in host communities, fifteen percent live in camp or camp-like conditions, while the remaining three percent live in informal settlements. Katsina state – which has the most numbers of both food insecure people and IDPs – also has high portion of IDPs that have arrived within the last year.

Duration of Displacement

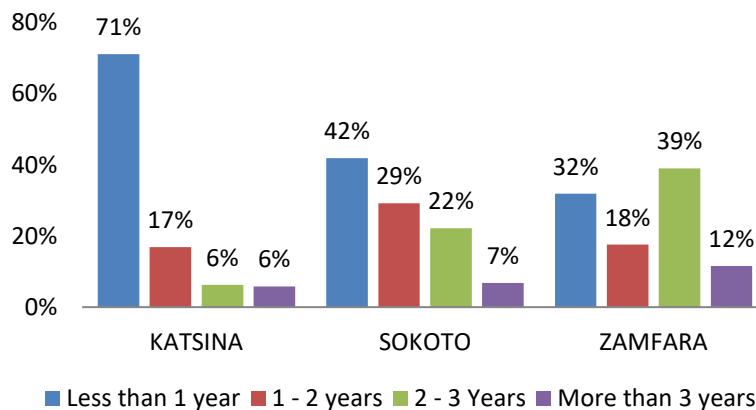


Fig 4: Duration of IDPs' displacement by state

⁶ National Programme for Food Security. Ibid

The food consumption score (FCS) – which measures households’ dietary diversity and intake of different food groups over a seven-day recall period is used to classify households into three consumption categories: poor, borderline and acceptable. Households with poor and borderline food consumption are grouped and classified as having inadequate food consumption. **Nearly half of the total surveyed households (48 percent) have inadequate food consumption.** Further disaggregation of this result by population groups revealed that the prevalence of households with inadequate food consumption is predominantly concentrated among IDPs. **Four out of five IDP households (81 percent) have inadequate food consumption as opposed to only 29 percent within the general population in this category.**

Among the general population, disparities in FCS by senatorial zones are more apparent. The general population of Katsina North and Sokoto East had significantly better FCS, with 99 percent and 98 percent having an acceptable FCS respectively. Senatorial zones with high prevalence of inadequate food consumption include Zamfara North, where more than 60 percent of the general population had inadequate food consumption, followed by those in Katsina Central (48 percent) and Sokoto South (45 percent).

At the state level, IDPs’ food consumption status was worst in Sokoto state, with 93 percent having inadequate food consumption compared to 84 percent in Zamfara and 80 percent in Katsina in this category.

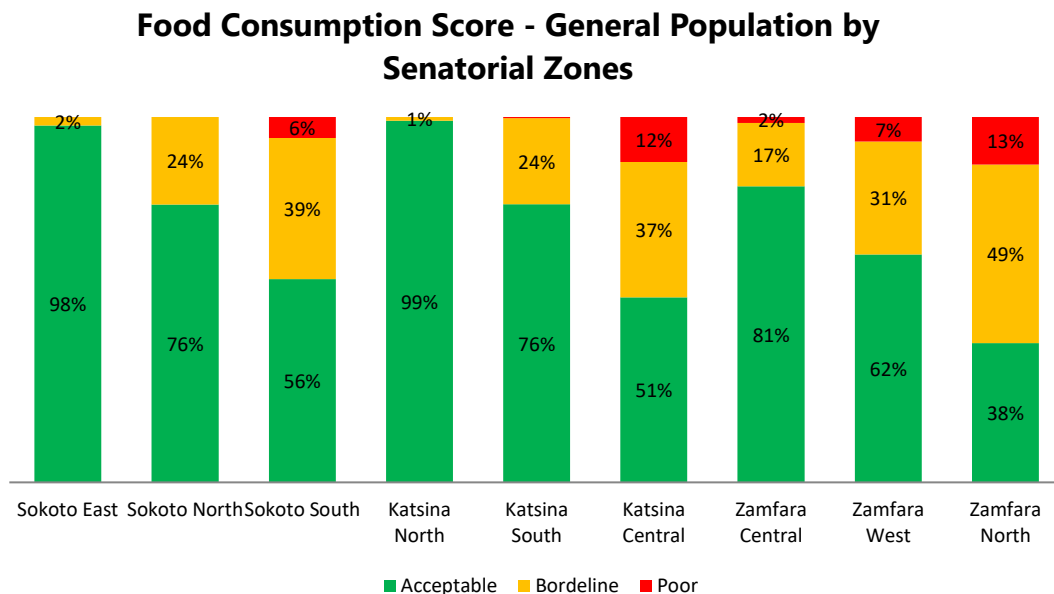


Fig 6: Food Consumption Score by Senatorial Zone for General Population

Food Consumption Score - IDPs by State

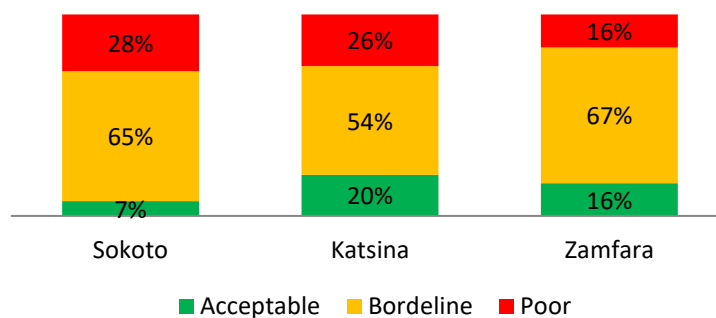


Fig 7: Food Consumption Score by State for IDPs

The nutrition survey of the Essential Needs and Nutrition Assessment in Northwest Nigeria estimates the prevalence of malnutrition in the children between 6-59 months among the IDPs households in the three states. **The prevalence of GAM rate, using weight-for-height z-scores (WHZ) of <-2 SD is below the WHO critical emergency threshold of 15 percent in the three states** with the GAM rates standing at 7.7 percent (5.9 – 10.0 95% C.I.) in Katsina, 5.6 percent (4.1 – 7.6 95% C.I.) in Sokoto and 3.1 percent (2.0 – 4.8 95% C.I.) in Zamfara.

Similarly, GAM prevalence rates using MUAC (<125mm) is 3.5 percent (2.7 – 4.5 95% C.I.) in Katsina, 1.4 percent (0.9 – 2.2 95% C.I.) in Sokoto and 2.3 percent (1.6 – 3.1 95% C.I.) in Zamfara. Comparing GAM prevalence rates between children from general population and children IDPs using MUAC reveals that in Katsina, the general population children have slightly lower GAM prevalence compared to the IDP children, whereas in Zamfara the GAM prevalence is slightly lower than in general population (Table 1).

| Prevalence of Acute Malnutrition | | State | Number of children surveyed | Percentage | 95% CI |
|----------------------------------|---|---------|-----------------------------|------------|------------|
| IDPs | Prevalence of global acute malnutrition (WFH <-2 z-score and/or oedema) | KATSINA | 674 | 7.7 | 5.9 - 10.0 |
| | | SOKOTO | 678 | 5.6 | 4.1 - 7.6 |
| | | ZAMFARA | 612 | 3.1 | 2.0 - 4.8 |
| | Prevalence of global acute malnutrition MUAC (< 125 mm and/or oedema) | KATSINA | 1614 | 3.5 | 2.7 - 4.5 |
| | | SOKOTO | 1249 | 1.4 | 0.9 - 2.2 |
| | | ZAMFARA | 1588 | 2.3 | 1.6 - 3.1 |
| General Population | Prevalence of global acute malnutrition MUAC (< 125 mm and/or oedema) | KATSINA | 931 | 2.7 | 1.8 – 3.9 |
| | | SOKOTO | 564 | 1.2 | 0.6 – 2.5 |
| | | ZAMFARA | 970 | 3.1 | 2.2 – 4.4 |

Table 1: Global Acute Malnutrition (GAM) determined by WHZ and MUAC for IDP children, and measured by MUAC for children of the general population

2. Economic Capacity to Meet Essential Needs

The monthly per capita poverty line of 11452.5 naira (NGN) developed by NBS/World Bank was used as a benchmark to estimate general population's economic capacity to meet essential needs⁷. Households with per capita monthly expenditures below this cut-off are considered lacking the economic means to meet their basic needs. Using this estimate, **72 percent of general population and 88 percent of IDP households have monthly expenditures below poverty line**. In Sokoto South and Sokoto North, economic capacity below poverty line is much more prevalent, with 90 percent and 87 percent of the households living below the monthly per capita poverty line, respectively. In Zamfara South and Sokoto East, the situation is relatively better, with 42 percent and 36 percent of the population living above the poverty line respectively.

Economic Capacity to Meet Essential Needs - General Population



Fig 8: Economic Capacity to Meet Essential Needs by state

Economic capacity to meet essential needs

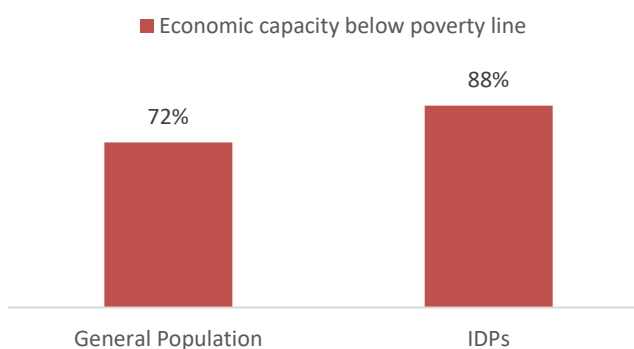


Fig 9: Economic capacity to meet essential needs – General population vs IDPs

⁷ National Bureau of Statistics (NBS). 2019 Poverty and Inequality in Nigeria, May 2020.

3. Livelihood Coping Strategies & Debt

The livelihoods-based coping strategies module is used to better understand the longer-term coping capacity of households. The indicator is derived from a series of questions regarding household behaviors over the past 30 days prior to the interview that lead to asset depletion, such as, selling productive assets or decreasing expenditure on productive inputs. These coping strategies are classified as stress, crisis, or emergency strategies depending on the severity of strategies used and its impact on the household's future coping capacity.

Majority of households in northwest Nigeria (73 percent) reported using livelihood coping strategies, with stress strategies accounting for 40 percent of all surveyed households, crisis strategies for 8 percent, and emergency strategies accounting for 25 percent. Only 27 percent of all surveyed households did not use livelihood coping strategies during the month prior to data collection.

The percentage of households in the general population who did not use livelihood coping strategies was 31 percent, compared to 19 percent in the IDP population, while the percentage of IDP households who used stress and crisis coping strategies was 55 percent, compared to 44 percent in the general population. The proportion of households who used emergency coping strategies was the same in both population groups 25 percent.

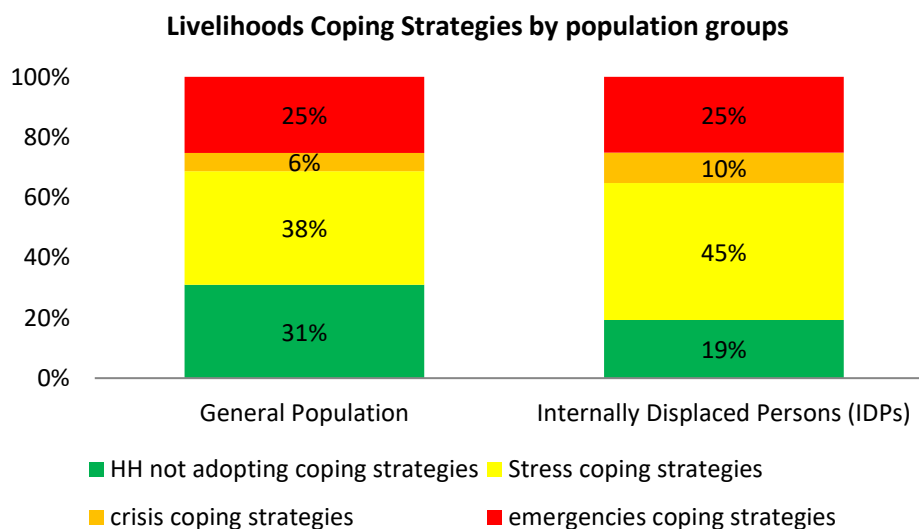


Fig 10: Livelihood Coping Strategies by Population Group

Forty-six percent of all households reported being in debt. Among the debt-incurring households, 88 percent of them report food-related expenses as their primary source of debt. Around half of those households went into debt in the last three months, mostly to cover medical costs, while a fifth borrowed money to start or expand their businesses. Agricultural input purchases and educational expenses were also cited as factors for debt, but to a lesser extent (15 and 10 percent, respectively).

IDP households are slightly more likely to be in debt than the households in the general population (49 percent of IDPs compared to 43 percent of the general population).

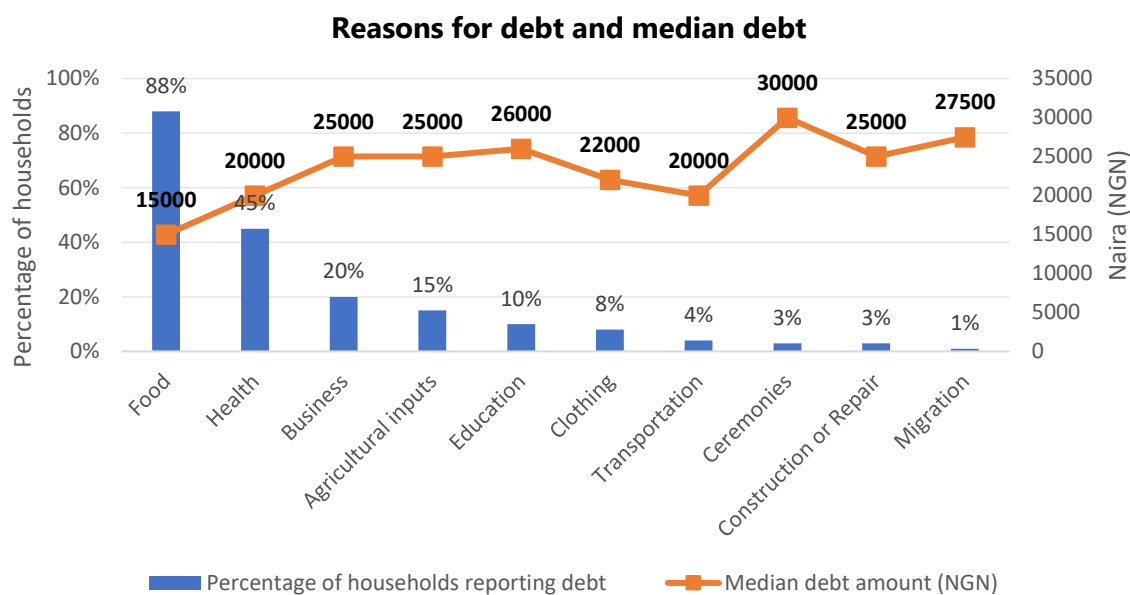


Fig 11: Reasons for Debt and median debt

Median household debt in the last three months is 15,000 NGN. The median debt amount is lowest for food debt (15,000 NGN) and more than half the households who are able to repay their debts have already done so or expected to repay within the next two months. Both poor and non-poor households (determined by expenditures above/below poverty line) are equally likely to take on debt, suggesting frequent use of smaller amounts of debts to meet food needs. Households with expenditures above the poverty line are more likely to take on debt to meet health needs.

4. Multidimensional Deprivation

The multidimensional deprivation index (MDDI) calculates non-monetary poverty at the household level based on deprivation in the six essential needs dimensions: food, health, education, shelter, WASH, and safety. A collection of related indicators is used to calculate each dimension. All dimensions are given equal weight, and each indicator within a dimension is given equal weight.

Multiple deprivations are more prevalent among the general population in Zamfara state's three senatorial zones than in the other two states, with more than 60 percent experiencing moderate or severe deprivation. Katsina North and Sokoto South, on the other hand, have the highest proportions of households with none to minimal deprivation, at 96 and 89 percent, respectively. Contrary to this, IDPs in Zamfara fared better in terms of multiple deprivation than those in Katsina and Sokoto.

MDDI Deprivation - General population By Senatorial Zones

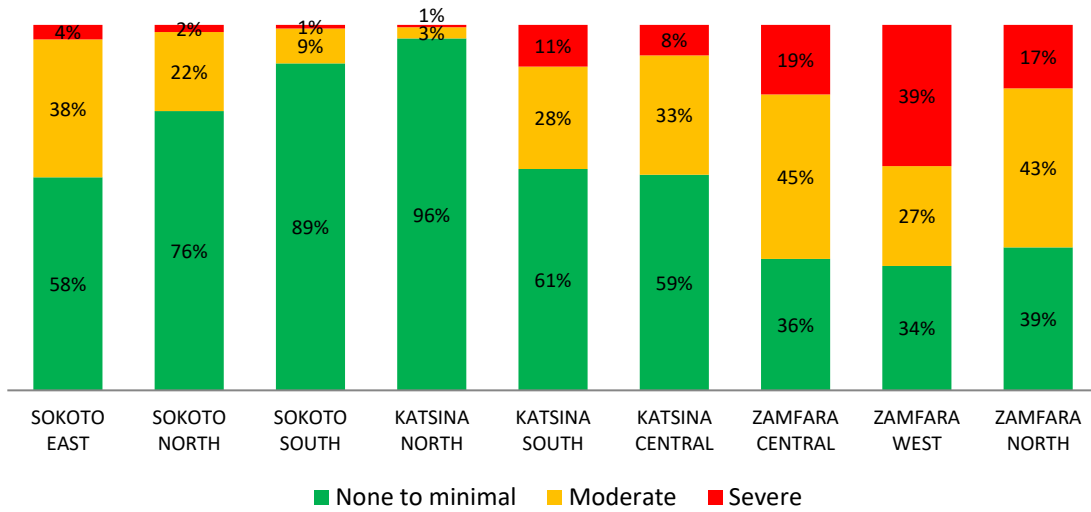


Fig 12: Multidimensional Deprivation Index – General Population by Senatorial Zone

MDDI Deprivation - IDPs by State

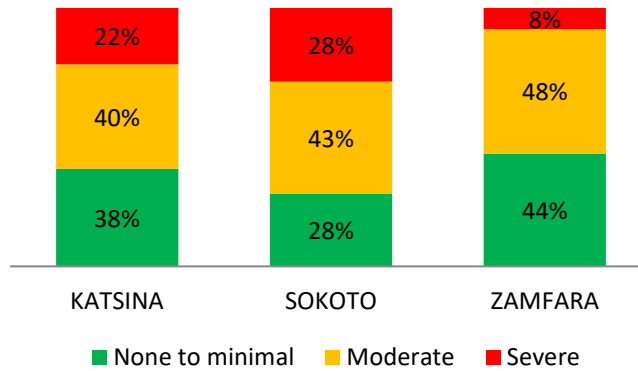


Fig 13: Multidimensional Deprivation Index – IDPs by State

Shelter and safety appear to be uniformly reflected across all levels of deprivation in terms of deprivation by dimension, implying widespread lack of adequate shelter and high levels of insecurity. Other dimensions such as food, education, and WASH become more prominent as deprivation rises. Households with the highest MDDI scores are almost similarly deprived across all dimensions.

Deprivation by Dimension (mean share)

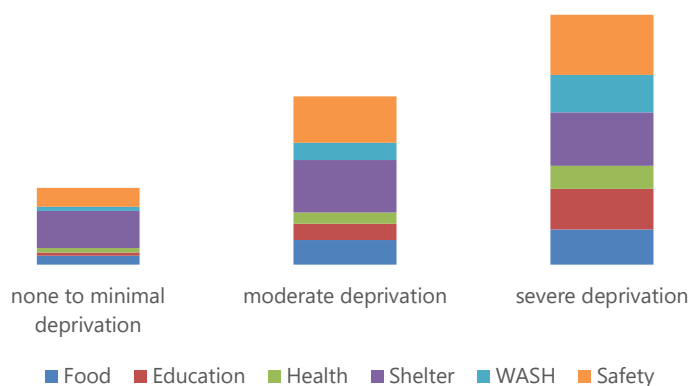


Fig 14: Multidimensional Deprivation Index (MDDI) showing mean share of each deprivation direction

5. Perceived unmet needs

Income, money or resources reported to be the area of most concern for the two population groups with 93 percent of IDPs having serious problems with this need compared to 64 percent from the general population. This is followed by food, reported by 82 percent of IDPs, followed by shelter (68 percent), healthcare (62 percent), and water (44 percent).

For the general population, healthcare is the second-most pressing unmet need reported by 57 percent of the general population’s households. Surprisingly, safety as a serious concern is reported by a higher portion of general population (52 percent) compared to IDPs (42 percent). Both groups reported serious problem with water, hygiene and toilet at a lesser degree.

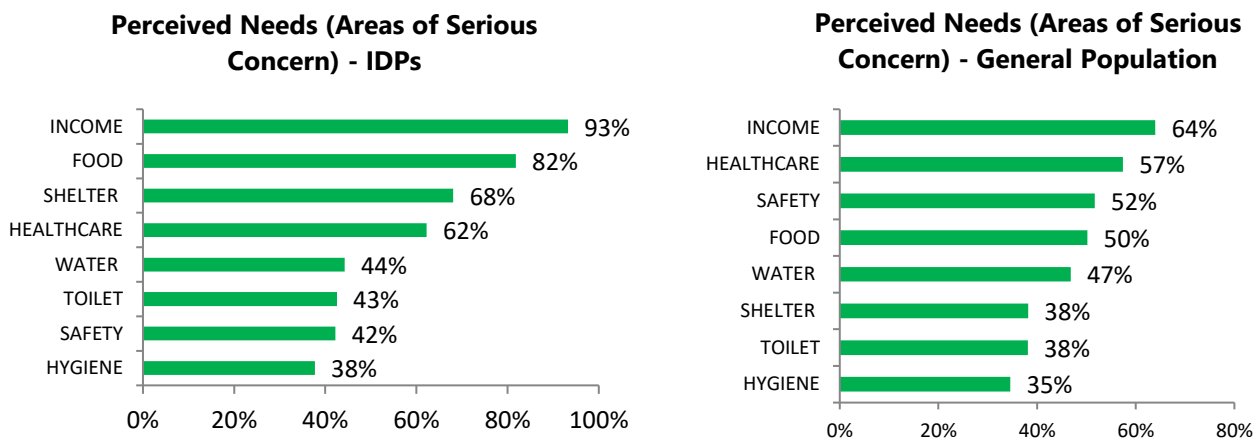


Fig 15: Perceived Needs (Areas of Serious Concern), Comparison between IDPs and General Population

6. Most Significant Shocks Faced by households

Conflict and/or insecurity is reported as the most significant shock by 41 percent households in the general population and more than half of the IDP households. Significant conflict-related cropland loss and settlement damage has been reported in Sokoto North and Zamfara North and Zamfara South (Fig 11). Number of violent events increased in Katsina state in 2020, as per data from ACLED⁸.

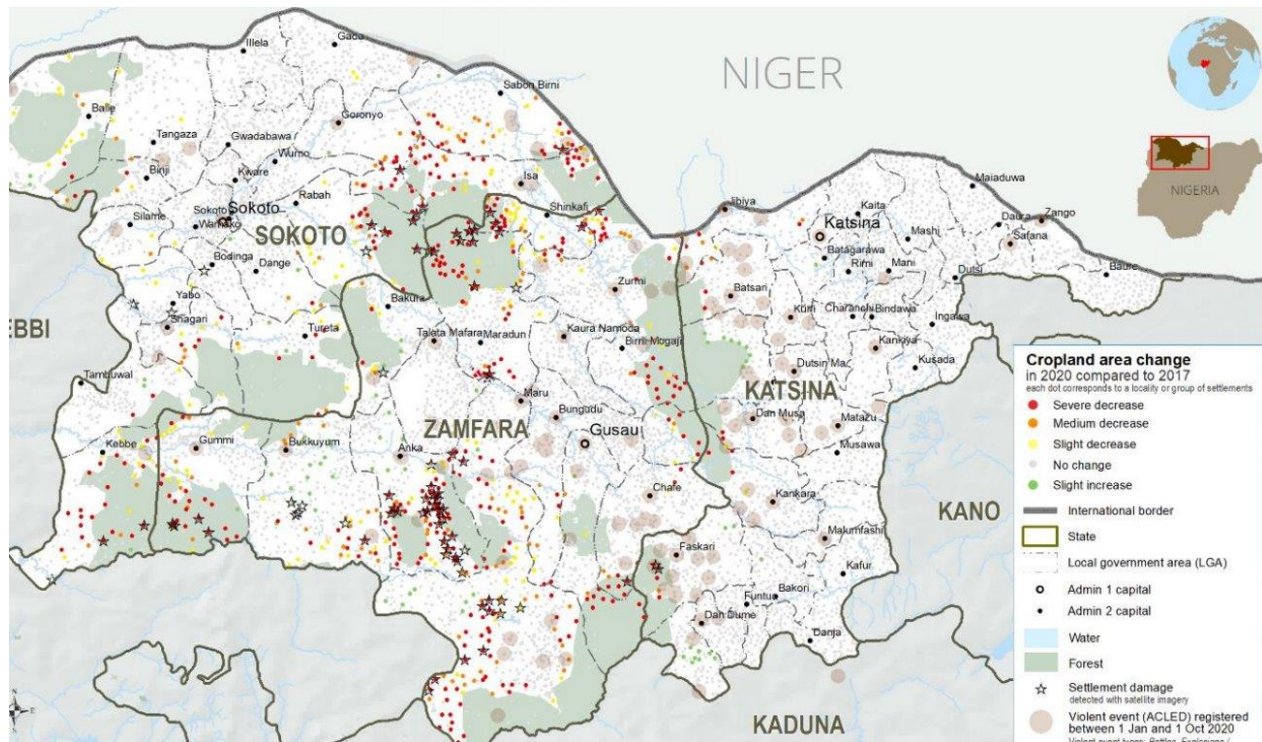


Fig 16: Satellite imagery analysis of cropland area change and damage to settlements

⁸ World Food Programme. Nigeria Satellite Imagery Analysis: Cropland change analysis in hard-to-reach areas Feb 2021. <https://docs.wfp.org/api/documents/WFP-0000124720/download/>

Most Significant Shock or Difficulty Faced by Households

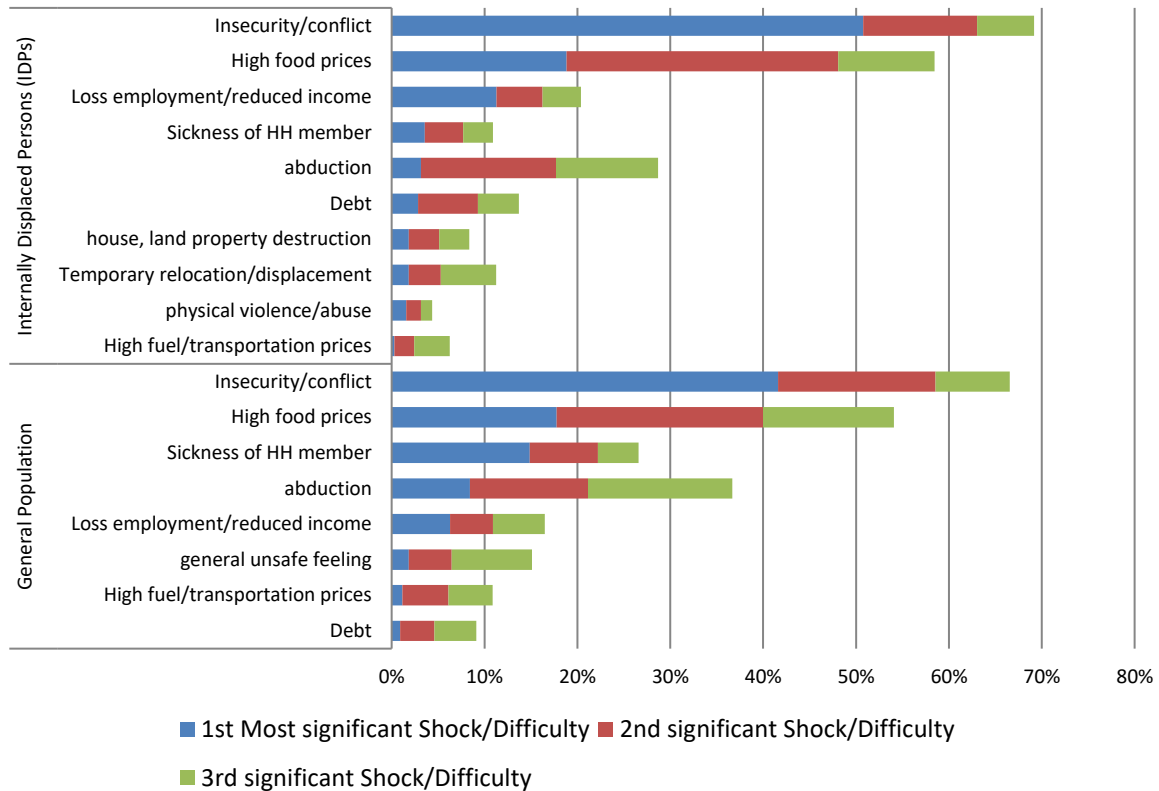


Fig 17: Most Significant Shock/difficulty faced by households - comparison between IDPs and General Population

High food prices are second most reported shocks. Abduction is the third most reported shock reported by 37 percent and 28 percent of the general population and the IDPs respectively.

7. COVID-19 Impact on households' income

Eighty-nine percent of all households experienced a loss of income as a result of the COVID-19 outbreak, either entirely or partially. Just one percent of population saw an increase in income during the time of the epidemic, and the same percentage relied on alternative sources of income to maintain their current level. The remaining nine percent of households saw no change in their income as a result of the pandemic.

Impact of COVID-19 on income sources

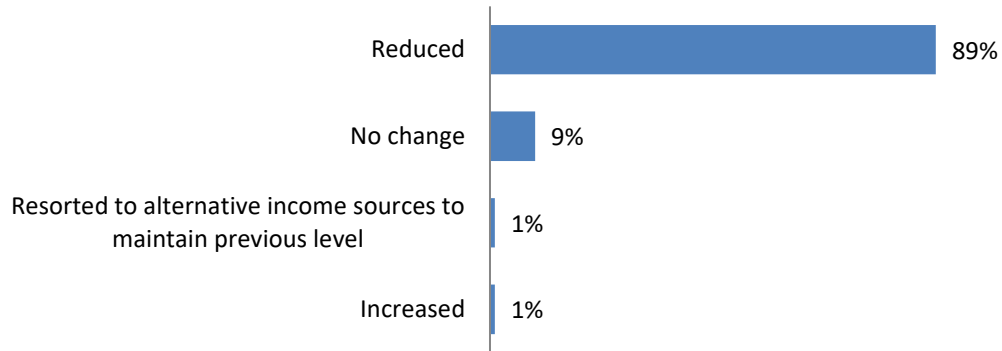


Fig 18: Impact of COVID – 19 on Household’s income

8. Vulnerability profile of households unable to meet essential needs

Over 80 percent of IDPs in all locations have a poor and borderline food consumption score, and 88 percent have economic capacity below the poverty line. On the other hand, the inability of households in the general population to meet essential needs varies greatly depending on the location. Households in the general population seem to have better food security outcomes in most of the senatorial zones however, it was found that around **half of the people living in Zamfara North, Katsina Central and Sokoto South have poor and borderline FCS**, rely more on emergency coping strategies and have economic capacity below the poverty line.

Combining the three different indicators namely economic capacity below poverty line, poor and borderline food consumption and multidimensionally poor shows that the **prevalence of households with deprivations in all three categories is much higher among IDPs (53 percent) than within the general population (15 percent)**. Almost all the surveyed IDP households (99 percent) fall into at least one of the vulnerability categories compared to 83 percent within the households of the general population (Fig 18).

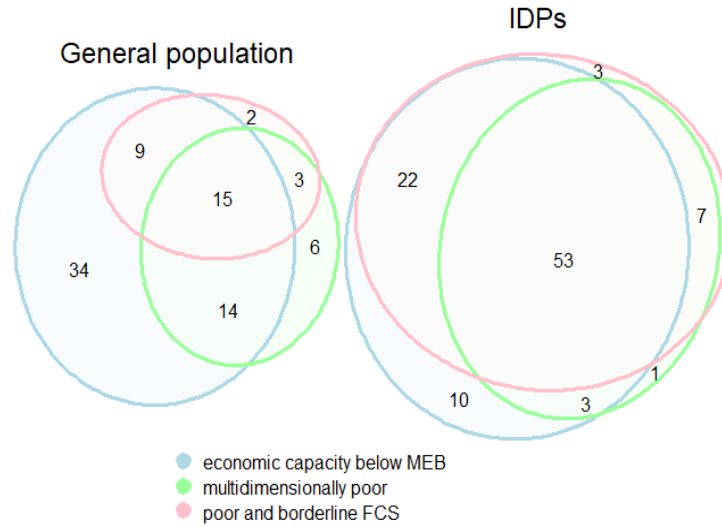


Fig 19: Overlapping vulnerabilities by household status

Within the general population, 88 percent of daily wage earners, 87 percent of those involved in agriculture and 75 percent of the salaried workers and business owners fall into at least one of the vulnerability categories. Twenty-two percent of the daily wage earners have deprivations in all three dimensions compared to seventeen percent for agriculture and only nine percent of salaried workers/business owners (Fig 19).



Fig 20: Overlapping vulnerabilities by Type of Income Sources

IV. Key Recommendations

- Government and food security sector stakeholders must collaborate and communicate closely to provide tailored contextualized responses to the needs of the most vulnerable population in hotspot areas with declared low levels of food insecurity, with priority given to IDPs, and the most vulnerable households of the host communities. This is essential to prevent the fragile food security situation from further deteriorating in the next lean season. Food assistance should be supplemented with long-term livelihood support where possible to reduce the impact of acute food insecurity, especially for the IDPs who should be verified and registered in the government social protection platforms.
- Host community households who are mostly agricultural dependent and their resources have been heavily stretched by the influx of the IDPs should be targeted by seasonal support in the lean season. Daily wage earners who are more market dependent will need a year-round food assistance to maintain an adequate level of food security during the lean season when the prices are expected to rise.
- In the most severely impacted areas of the northwest, female-headed households, displaced households, returnee households, most marginalized host community households, poorest households, those with restricted livelihood opportunities and land access, and households engaged in casual labor should all be targeted and prioritized for assistance.
- These programs should be supplemented with women empowerment measures to strengthen the resilience of female-headed families, as well as nutrition assistance by supplementary and therapeutic feeding centers to minimize the risk of malnutrition among children aged 6 to 23 months.
- Finally, ongoing onsite and remote monitoring of the food and nutrition situation is needed, using both traditional in-person interviews as well as advanced technology such as satellite imagery and remote sensing to gain deeper insights into the nutrition and food security situation and facilitate informed and vigorous response by stakeholders.

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