

MULTI-SECTOR NEEDS ASSESSMENT (MSNA) KEY FINDINGS

MSNA | 2020
Borno State
Nigeria

CONTEXT

North East Nigeria continues to experience significant humanitarian needs after over 11 years of conflict affecting the Lake Chad region. The 2020 Humanitarian Needs Overview (HNO) identified 7.9 million individuals in the three states of Borno, Adamawa and Yobe (collectively, the "BAY" states) to be in need of humanitarian assistance.¹

To respond to persisting information gaps on humanitarian needs severity and to inform response planning, United Nations Office for Coordination of Humanitarian Affairs (OCHA)'s Inter-Sector Working Group (ISWG), with support from REACH, conducted a Multi-Sector Needs Assessment (MSNA) in the BAY States. The MSNA aimed to identify and compare needs by sector and across sectors, across population groups affected by the protracted crisis and in all accessible areas in the BAY states.

The 2020 assessment methodology was adapted to the current COVID-19 health emergency. A mixed methodology was adopted, to avoid in-person data collection.

METHODOLOGY

This Borno State factsheet presents composite analysis at the multi-sectoral and sectoral level for six key sectors: Food Security & Livelihoods (FSL), Water, Sanitation and Hygiene (WASH), Health, Shelter and Non-Food Items (SNFI), Education and Protection. This analysis includes the intersection of Living Standards Gaps (LSGs), Capacity Gaps (CGs) and vulnerability.

Data collection took place between the 13th July and 21st August, with a total of 6,888 household surveys being conducted across the BAY states.

OCHA identified 15 priority Local Government Areas (LGAs) where the need to address information gaps was highest. In these LGAs, two-stage cluster sampling was used in the physically accessible areas. The data at the overall LGA level in these LGAs have a confidence level of 95% and a margin of error of 10% or less for questions that were asked to all households.

In coordination with multiple implementation partners, two data collection methods were used in these priority LGAs. In places with stronger phone network, partner staff on the ground identified respondents using GPS and dialled into the REACH call centres. REACH

enumerators then undertook the household survey on the phone with the respondents. Where there was weak or no phone signal, the household surveys were conducted face to face, following strict COVID-19 protocols.

Five LGAs in Borno State were not assessed due to security concerns and are considered inaccessible to most humanitarian actors. For the remaining 45 LGAs in the BAY states, household surveys were conducted remotely by phone with snowball sampling from contacts provided by past MSNA key informants.

The findings presented in this factsheet are state-level aggregations that combine indicative and representative data, meaning that all findings presented in this factsheet are **indicative only**.

All relevant sectors contributed to the sector-specific indicators and the LSG methodology. LSGs are an analytical construct signifying unmet needs in any given sector, based on a severity score. The highest of these severity scores is taken as the Multi-Sectoral Needs Index (MSNI) score for the household.

Please find a more detailed methodology section in Annex 1 of this factsheet.

Assessment sample

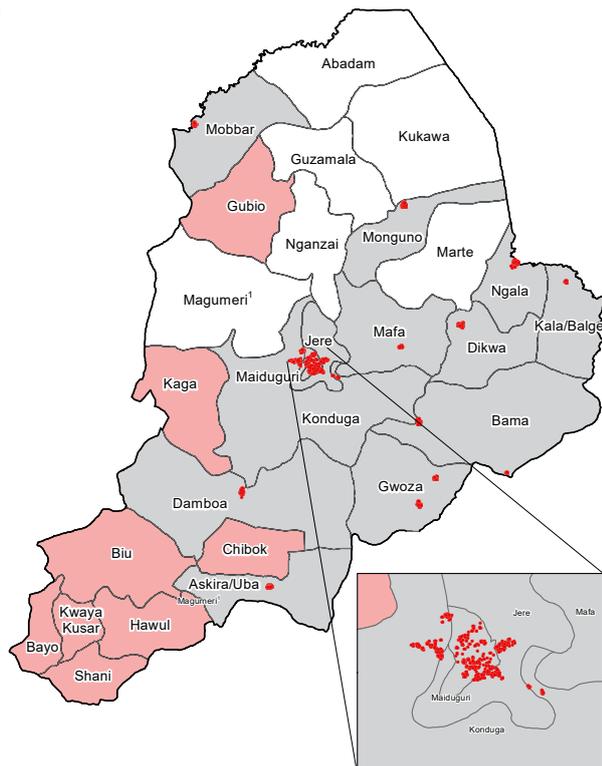
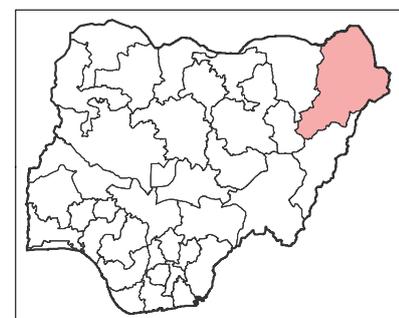
Households: **3,362**
 - Non-Displaced: **751**
 - IDP: **812**
 - Returnee: **865**

LGAs **22 (out of 27)**

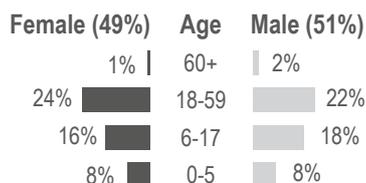
Coverage map

- Assessed with two-stage cluster sampling (representative findings)
- Unassessed areas in partially-accessible LGAs
- Unassessed areas in inaccessible LGAs*
- Assessed with purposive snowball sampling (indicative findings)
- State boundary
- LGA boundary

*Data collection in Magumeri was interrupted by security incidents and the sampling threshold was not reached (48 surveys were completed out of the 60 necessary). As a result, the LGA-level estimates are not shown in this factsheet, but the available data have been included in the state aggregations.
 *Inaccessible LGAs not assessed due to insecurity or lack of partner presence at the time of data collection.



Demographics



Single female-headed households: **14%**

Average household size: **7.3**

¹ OCHA, Nigeria: 2020 Humanitarian Needs Overview, April 2020





MULTI-SECTORAL NEEDS

MSNA | 2020
Borno State
Nigeria

% of households with multi-sectoral needs:¹

94%

of households with multi-sectoral needs:²

1,378,034

see Annex for details on methodology

% of households per Multi-Sectoral Needs Index (MSNI) severity score:



1%	Extreme +	(severity score 4+)
68%	Extreme	(severity score 4)
25%	Severe	(severity score 3)
6%	Stress	(severity score 2)
0%	No or minimal	(severity score 1)

Multi-sectoral needs

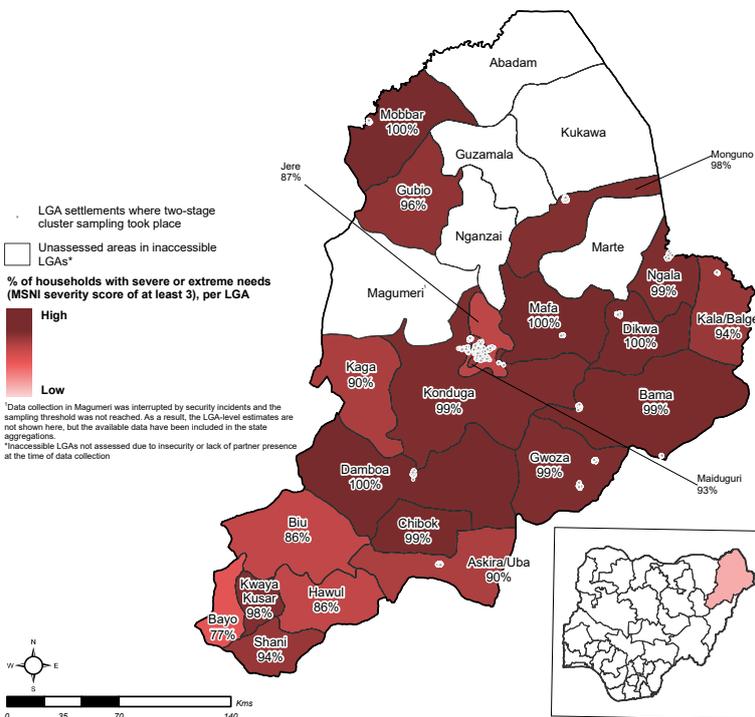
% of households with multi-sectoral needs, per population group:

Non-Displaced	92%	
IDP	98%	
Returnee	97%	

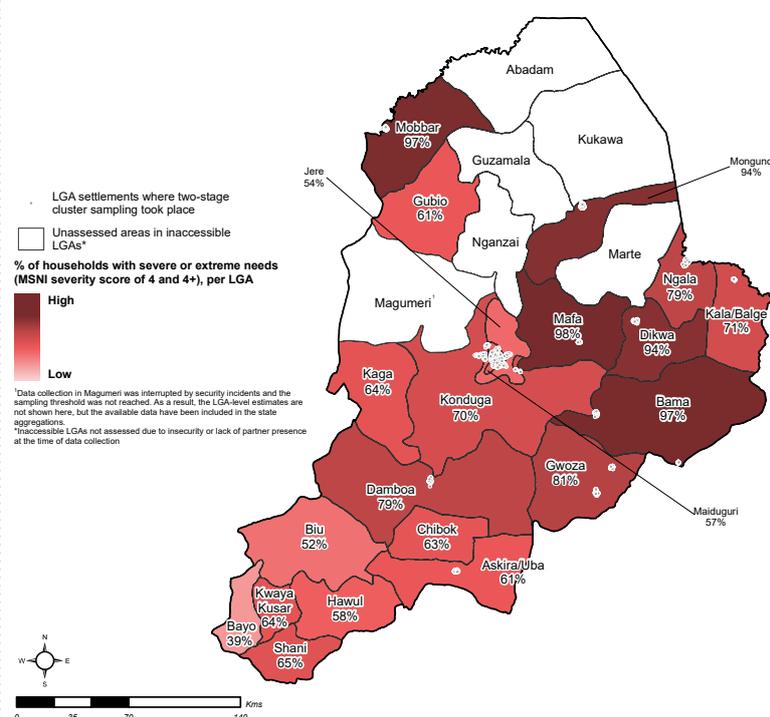
% of households per MSNI severity score, per population group:

	1	2	3	4	4+
Non-Displaced	0%	8%	30%	62%	0%
IDP	0%	2%	12%	83%	3%
Returnee	0%	3%	23%	71%	3%

% of households with severe or extreme needs (MSNI severity score of at least 3), per LGA:



% of households with extreme needs (MSNI severity score of 4 and 4+), per LGA:



¹ Multi-sectoral needs: proportion of households with an MSNI severity score of at least 3, based on the severity of LSGs identified in each household.

² Figure obtained by applying the percentage on population figures from the [Vaccination Tracking System \(VTS\) Dataset](#), March 2020 and International Organisation for Migration (IOM) [Displacement Tracking Matrix \(DTM\) Round 31](#), February 2020

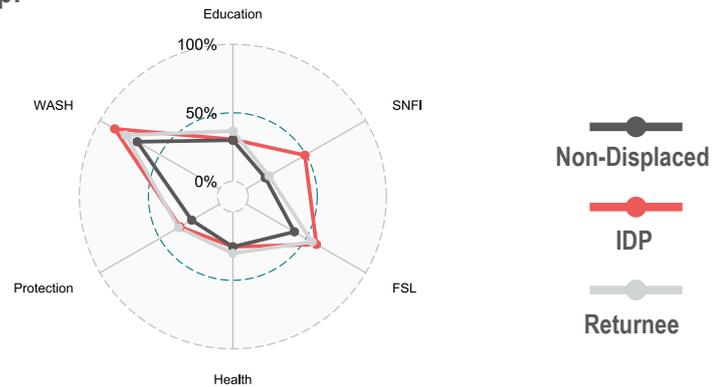


% of households per number of sectoral LSG(s)¹, per population group:

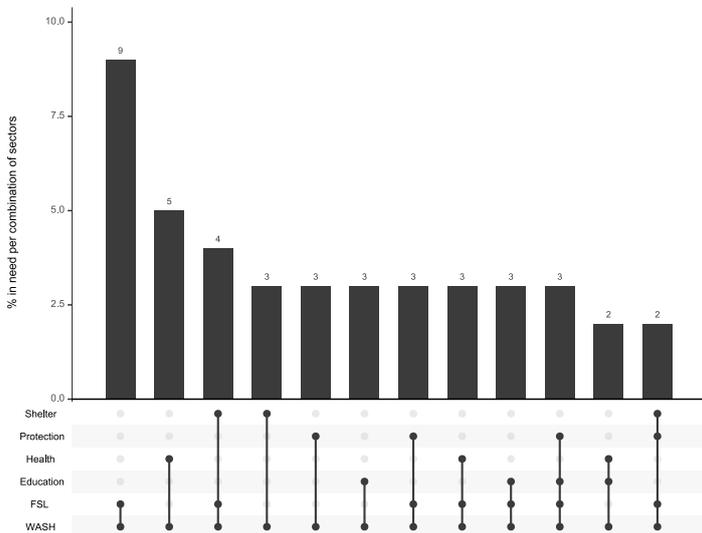
	0	1	2	3	4	5	6
Non-Displaced	8%	30%	31%	17%	12%	3%	0%
IDP	2%	11%	27%	28%	22%	9%	1%
Returnee	3%	18%	28%	28%	17%	5%	1%

22% of households were found to have multi-sectoral needs and to be vulnerable.²

% of households with sectoral LSG(s), per population group:



Most common distinct LSG profiles among households with multi-sectoral needs (made up of one or more LSGs).



The figure on the left shows the most common needs profiles, to identify the most common “distinct combinations” of one or more LSGs amongst those in need. Each household has only one needs profile so the percentages cannot add up to more than 100%. The figure below shows the proportion of households in need by type of LSGs, to identify the most commonly occurring LSGs amongst those in need. Each household can have needs in several sectors so the percentages can add up to more than 100%. The tables below show these distinct needs profiles per population group, and the intersections of sectoral needs, or the most common “pairs” of LSGs.

Among households with multi-sectoral needs, % of households with sectoral LSG(s):

Education	50%	<div style="width: 50%;"></div>
FSL	59%	<div style="width: 59%;"></div>
Health	48%	<div style="width: 48%;"></div>
Protection	48%	<div style="width: 48%;"></div>
Shelter	42%	<div style="width: 42%;"></div>
WASH	66%	<div style="width: 66%;"></div>

Most common distinct needs profiles (made up of one or more LSGs) among households with multi-sectoral needs, per population group:

Non-Displaced	IDP	Returnee
1. WASH and Food Security 9%	1. WASH and Food Security 9%	1. WASH and Food Security 9%
2. WASH and Health 7%	2. WASH, Food Security and Shelter 9%	2. WASH and Health 5%
3. WASH and Education 4%	3. WASH and Shelter 6%	3. WASH, Food Security and Protection 5%

Most common intersections of LSGs (made up of two LSGs), among households with multi-sectoral needs, per population group:

Non-Displaced	IDP	Returnee
1. WASH and Food Security 31%	1. WASH and Food Security 55%	1. WASH and Food Security 44%
2. WASH and Health 20%	2. WASH and Shelter 46%	2. WASH and Education 28%
3. WASH and Education 20%	3. Food Security and Shelter 32%	3. WASH and Protection 27%

¹ Living Standard Gap (LSG): signifies an unmet need in a given sector, where the LSG severity score is 3 or higher.

² See p.11 on pre-existing vulnerabilities for more information. The proportions of vulnerable households with multi-sectoral needs per population group were found to be: 21% non-displaced; 26% IDP; 20% returnee.



FOOD SECURITY & LIVELIHOODS (FSL) LIVING STANDARDS GAP (LSG)¹

MSNA | 2020
Borno State
Nigeria

% of households with a FSL LSG:

46%

of households with a FSL LSG:²

638,761

see Annex for details on methodology

% of households per FSL LSG severity score:



0% Extreme + (severity score 4+)
0% Extreme (severity score 4)
46% Severe (severity score 3)
26% Stress (severity score 2)
28% No or minimal (severity score 1)

LSG

% of households with a FSL LSG, per population group:

Non-Displaced	40%	
IDP	59%	
Returnee	55%	

% of households per FSL LSG severity score, per population group:

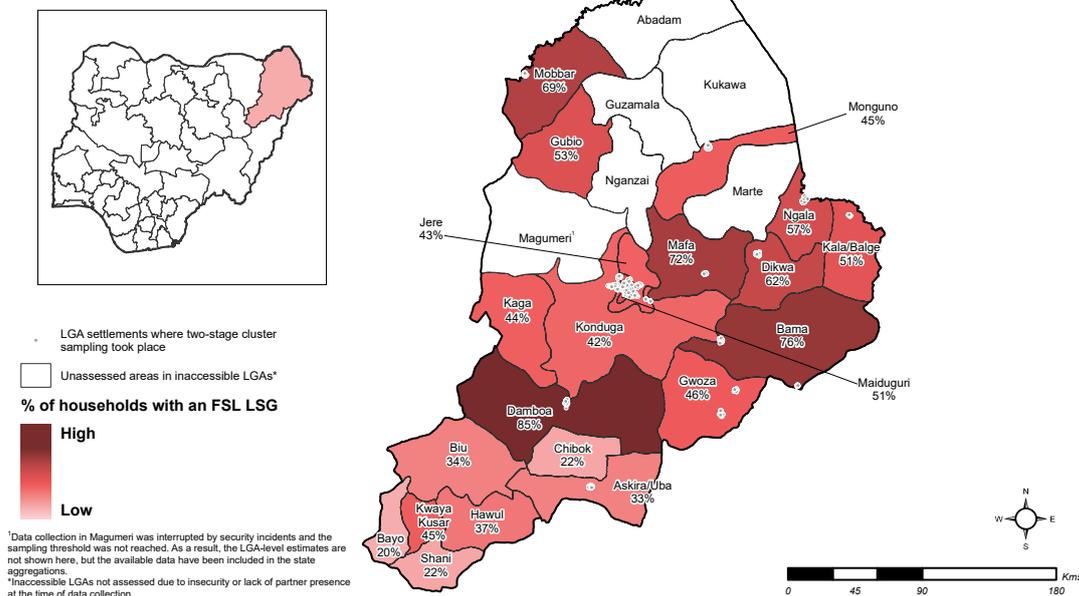
	1	2	3	4	4+
Non-Displaced	35%	25%	40%	0%	0%
IDP	15%	26%	57%	0%	1%
Returnee	17%	27%	54%	0%	0%

16% of households were found to have a FSL LSG and to be vulnerable.⁵

The three main drivers of FSL LSGs were found to be:

- Household Hunger Scale of 2 or higher³ (36%)
- No sufficient access to fuel and/or not using improved fuel source⁴ (13%)
- Used less preferred fuel source when insufficient fuel (11%)

% of households with a FSL LSG, per LGA:



¹ Composite score made up of sufficient access to firewood/fuel in surrounding environment, most commonly used fuel type for cooking, coping strategies used for insufficient fuel, and household hunger scale.

² Figure obtained by applying the percentage on population figures from the [Vaccination Tracking System \(VTS\) Dataset](#), March 2020 and International Organisation for Migration (IOM) [Displacement Tracking Matrix \(DTM\) Round 31](#), February 2020

³ Household Hunger Scale is a composite indicator asking, in the last 30 days, whether there was 1) no food in the house 2) member(s) of the household had gone to sleep hungry due to lack of food and 3) member(s) of the household had gone one day and night without eating due to lack of food. If they answered yes to these questions, households were then asked how often this happened. Each of the six questions is then scored 0-2, with 0 being "did not occur," 1 being "rarely and sometimes," and 2 being "often". A score of 2-3 is classified as "moderate hunger in the household", whilst a score of 4-6 is classified as "severe hunger in the household". For more information, please see the [Food and Nutrition Technical Assistance \(FANTA\) Project](#)

⁴ Due to the accessibility issues facing roads across the North East, lack of access to fuel is usually due to high prices or a lack of availability all together. It is common for households to swap part of their food distribution/rations for better fuel (gas or firewood), reducing their food security. If they are unable to do this and unable to collect firewood themselves, due to security concerns, they may also rely on less preferred sources of fuels, including agricultural waste, animal dung, kerosene and charcoal. Alongside the harmful carcinogenic qualities of these fuels, their usage can be used as a proxy for wider access issues by the Nigerian Food Security and Livelihoods partners.

⁵ See p.11 on pre-existing vulnerabilities for more information. The proportions of vulnerable households with a FSL LSG per population group were found to be: 21% non-displaced; 17% IDP; 15% returnee.



WATER, SANITATION & HYGIENE (WASH) LIVING STANDARDS GAP (LSG)¹

MSNA | 2020
Borno State
Nigeria

% of households with a WASH LSG:

74%

of households with a WASH LSG:²

1,024,212

see Annex for details on methodology

% of households per WASH LSG severity score:



0%	Extreme +	(severity score 4+)
63%	Extreme	(severity score 4)
11%	Severe	(severity score 3)
24%	Stress	(severity score 2)
2%	No or minimal	(severity score 1)

% of households with a WASH LSG, per population group:

Non-Displaced	69%	
IDP	88%	
Returnee	79%	

% of households per WASH LSG severity score, per population group:

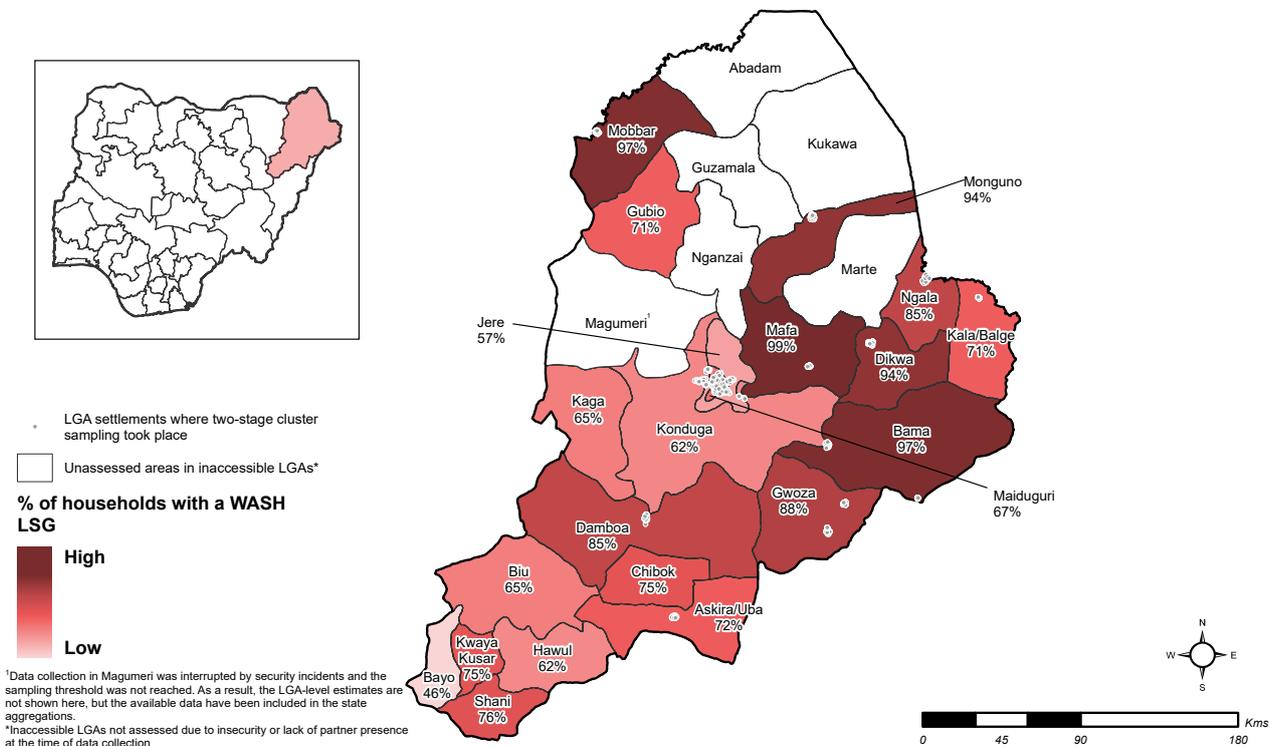
	1	2	3	4	4+
Non-Displaced	2%	29%	11%	58%	0%
IDP	1%	12%	12%	75%	1%
Returnee	2%	19%	11%	66%	1%

22% of households were found to have a WASH LSG and to be vulnerable.⁴

The three main drivers of WASH LSGs were found to be:

- Unimproved latrine shared with 4 or more households³ (56%)
- No access to soap (31%)
- Insufficient water for cooking, bathing or drinking (22%)

% of households with a WASH LSG, per LGA:



¹Data collection in Magumeri was interrupted by security incidents and the sampling threshold was not reached. As a result, the LGA-level estimates are not shown here, but the available data have been included in the state aggregations.
²Inaccessible LGAs not assessed due to insecurity or lack of partner presence at the time of data collection

¹ Composite indicator made up of access to an improved water source, time (minutes) taken to fetch water, access to a sufficient quantity of water for drinking, cooking, bathing, washing or other domestic use, access to a functional and improved sanitation facility including number of households sharing facility, access to functioning handwashing facilities and access to soap.

² Figure obtained by applying the percentage on population figures from VTS Dataset, March 2020 and IOM DTM Round 31, February 2020

³ Unimproved latrines reported during data collection were pit latrine without a slab and/or without a platform, open hole, bucket toilet, plastic bag, hanging toilet and open defecation. For more information on definitions of unimproved latrines, see Joint Monitoring Programme for Water Supply and Sanitation (JMP) Annex 2 on Safely Managed Sanitation Services

⁴ See p.11 on pre-existing vulnerabilities for more information. The proportions of vulnerable households with a WASH LSG per population group were found to be: 22% non-displaced; 26% IDP; 20% returnee.





HEALTH LIVING STANDARDS GAP (LSG)¹

MSNA | 2020
Borno State
Nigeria

% of households with a health LSG:

26%

of households with a health LSG:²

359,242

see Annex for details on methodology

% of households per health LSG severity score:



1%	Extreme	(severity score 4)
26%	Severe	(severity score 3)
69%	Stress	(severity score 2)
5%	No or minimal	(severity score 1)

% of households with a health LSG, per population group:

Non-Displaced	26%	
IDP	26%	
Returnee	30%	

% of households per health LSG severity score, per population group:

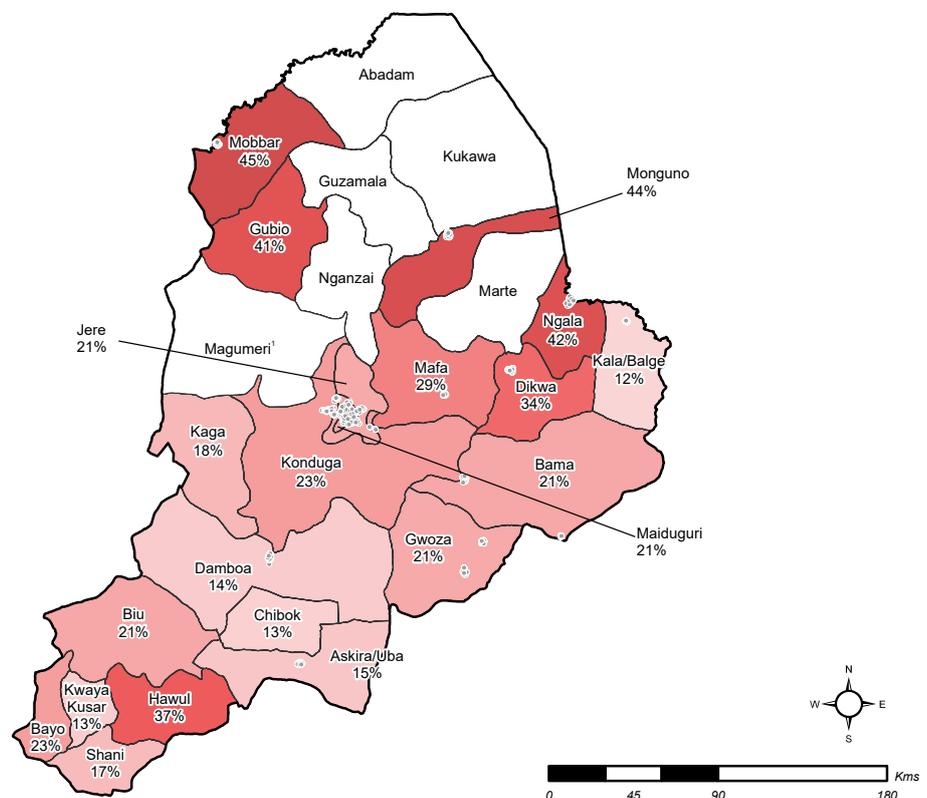
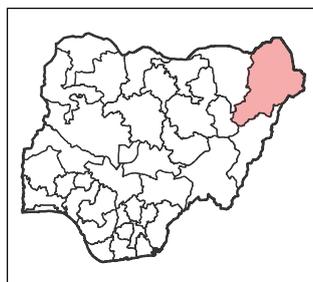
	1	2	3	4
Non-Displaced	4%	70%	25%	1%
IDP	8%	67%	25%	0%
Returnee	5%	65%	30%	1%

5% of households were found to have a health LSG and to be vulnerable.³

The three main drivers of health LSGs were found to be:

- No measles vaccine for child 6 months - 5 years (13%)
- One hour or greater walk to access healthcare (8%)
- No BCG vaccine for child 6-23 month (4%)

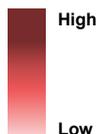
% of households with a health LSG, per LGA:



LGA settlements where two-stage cluster sampling took place

Unassessed areas in inaccessible LGAs*

% of households with a Health LSG



¹Data collection in Magumeri was interrupted by security incidents and the sampling threshold was not reached. As a result, the LGA-level estimates are not shown here, but the available data have been included in the state aggregations.

*Inaccessible LGAs not assessed due to insecurity or lack of partner presence at the time of data collection



¹ Composite indicator made up of households with children aged 0-15 years with vaccination card, 0-23 month old children receiving PENTA, Polio and BCG vaccines, 6 months - 15 year old child(ren) receiving measles vaccine, distance to health facility, support for most recent birth, members ill in previous two weeks, preferred treatment centre for healthcare and adapting behaviours to COVID-19.

² Figure obtained by applying the percentage on population figures from VTS Dataset, March 2020 and IOM DTM Round 31, February 2020

³ See p.11 on pre-existing vulnerabilities for more information. The proportions of vulnerable households with a shelter LSG per population group were found to be: 4% non-displaced; 6% IDP; 8% returnee.





SHELTER LIVING STANDARDS GAP (LSG)¹

MSNA | 2020
Borno State
Nigeria

% of households with a shelter LSG:

24%

of households with a shelter LSG:²

335,343

see Annex for details on methodology

% of households per shelter LSG severity score:



1%	Extreme +	(severity score 4+)
16%	Extreme	(severity score 4)
8%	Severe	(severity score 3)
54%	Stress	(severity score 2)
22%	No or minimal	(severity score 1)

% of households with a shelter LSG, per population group:

Non-Displaced	16%	
IDP	49%	
Returnee	19%	

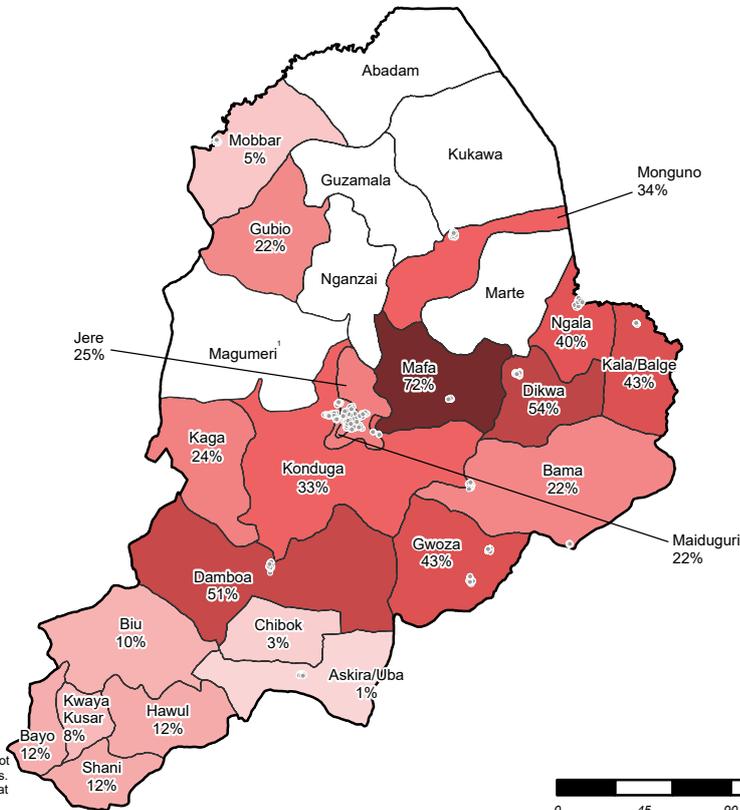
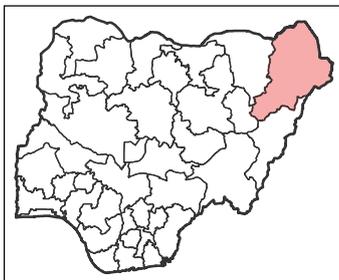
- The three main drivers of shelter LSGs were found to be:
- Communal, transit, or makeshift shelter or living without shelter (9%)
 - Organisation-provided shelter leaking in light and heavy rain (9%)
 - Non-removable debris or limited ventilation in shelter (8%)

% of households per shelter LSG severity score, per population group:

	1	2	3	4	4+
Non-Displaced	28%	56%	8%	8%	0%
IDP	8%	43%	8%	40%	1%
Returnee	16%	65%	7%	11%	2%

8% of households were found to have a shelter LSG and to be vulnerable.³

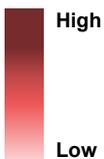
% of households with a shelter LSG, per LGA:



LGA settlements where two-stage cluster sampling took place

Unassessed areas in inaccessible LGAs*

% of households with a Shelter LSG



¹Data collection in Magumeri was interrupted by security incidents and the sampling threshold was not reached. As a result, the LGA-level estimates are not shown here, but the available data have been included in the state aggregations.
²Inaccessible LGAs not assessed due to insecurity or lack of partner presence at the time of data collection

¹ Composite indicator made up of access to safe and healthy housing enclosure units, access to shelters meeting agreed technical and performance standards (had damage or structural problems), number of households sharing shelters and whether household is in need of non-food items.

² Figure obtained by applying the percentage on population figures from VTS Dataset, March 2020 and IOM DTM Round 31, February 2020

³ See p.11 on pre-existing vulnerabilities for more information. The proportions of vulnerable households with a shelter LSG per population group were found to be: 6% non-displaced; 15% IDP; 4% returnee.





EDUCATION LIVING STANDARDS GAP (LSG)¹

MSNA | 2020
Borno State
Nigeria

% of households with an education LSG:

31%

of households with an education LSG:²

424,793

see Annex for details on methodology

% of households per education LSG severity score:



0% Extreme (severity score 4)
31% Severe (severity score 3)
33% Stress (severity score 2)
36% No or minimal (severity score 1)

% of households with an education LSG, per population group:

Non-Displaced	30%	
IDP	31%	
Returnee	37%	

% of households per education LSG severity score, per population group:

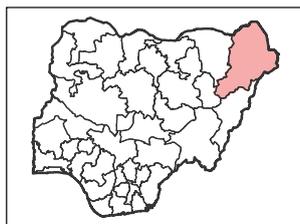
	1	2	3	4
Non-Displaced	37%	33%	30%	0%
IDP	35%	34%	31%	0%
Returnee	37%	26%	37%	0%

The three main drivers of education LSGs were found to be:

- No remote learning during COVID-19 school closure due to cost, child labour, marriage, or pregnancy (14%)
- No child 3-17 years attending formal education (11%)
- Child 5-17 years dropped out in last school year before COVID-19 measures (7%)

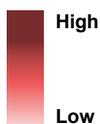
9% of households were found to have an education LSG and to be vulnerable.³

% of households with an education LSG, per LGA:

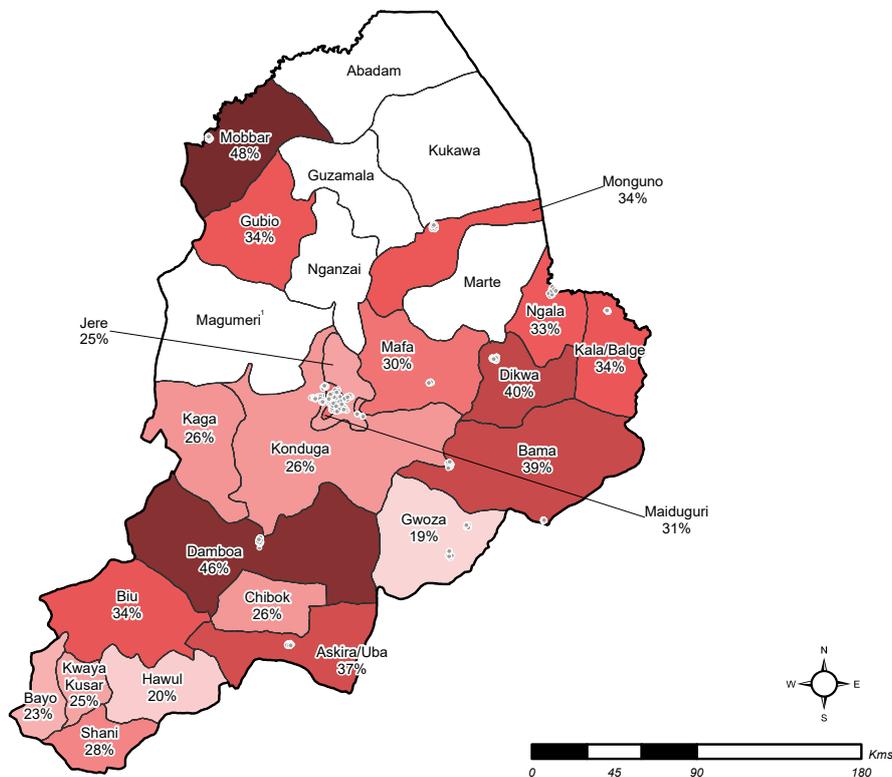


* LGA settlements where two-stage cluster sampling took place
□ Unassessed areas in inaccessible LGAs*

% of households with an Education LSG



¹Data collection in Magumeri was interrupted by security incidents and the sampling threshold was not reached. As a result, the LGA-level estimates are not shown here, but the available data have been included in the state aggregations.
²Inaccessible LGAs not assessed due to insecurity or lack of partner presence at the time of data collection



¹ Composite indicator made up of children attending formal education pre-COVID-19 outbreak, number of children continuing to learn remotely during COVID-19 lockdown and reasons for not learning remotely, preferred education support modality and number of children 5-17 years old dropping out of school in the previous year.

² Figure obtained by applying the percentage on population figures from VTS Dataset, March 2020 and IOM DTM Round 31, February 2020

³ See p.11 on pre-existing vulnerabilities for more information. The proportions of vulnerable households with an education LSG per population group were found to be: 8% non-displaced; 9% IDP 10% returnee.





PROTECTION LIVING STANDARDS GAP (LSG)¹

MSNA | 2020
Borno State
Nigeria

% of households with a protection LSG:

27%

of households with a protection LSG:²

369,681

see Annex for details on methodology

% of households per protection LSG severity score:



11%	Extreme	(severity score 4)
16%	Severe	(severity score 3)
51%	Stress	(severity score 2)
22%	No or minimal	(severity score 1)

% of households with a protection LSG, per population group:

Non-Displaced	23%	
IDP	33%	
Returnee	34%	

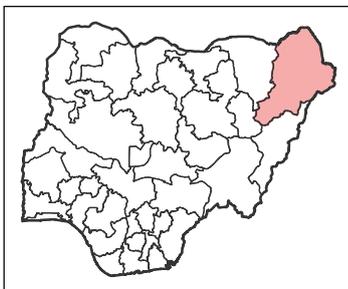
% of households per protection LSG severity score, per population group:

	1	2	3	4
Non-Displaced	23%	54%	13%	10%
IDP	24%	43%	21%	12%
Returnee	14%	51%	21%	13%

- The three main drivers of protection LSGs were found to be:
- Affected by protection incident in 3 months prior to data collection (10%)
 - Experienced movement restrictions not related to COVID-19 in the 30 days prior to data collection (8%)
 - Reported looting and/or threat of eviction (6%)

10% of households were found to have a protection LSG and to be vulnerable.³

% of households with a protection LSG, per LGA:



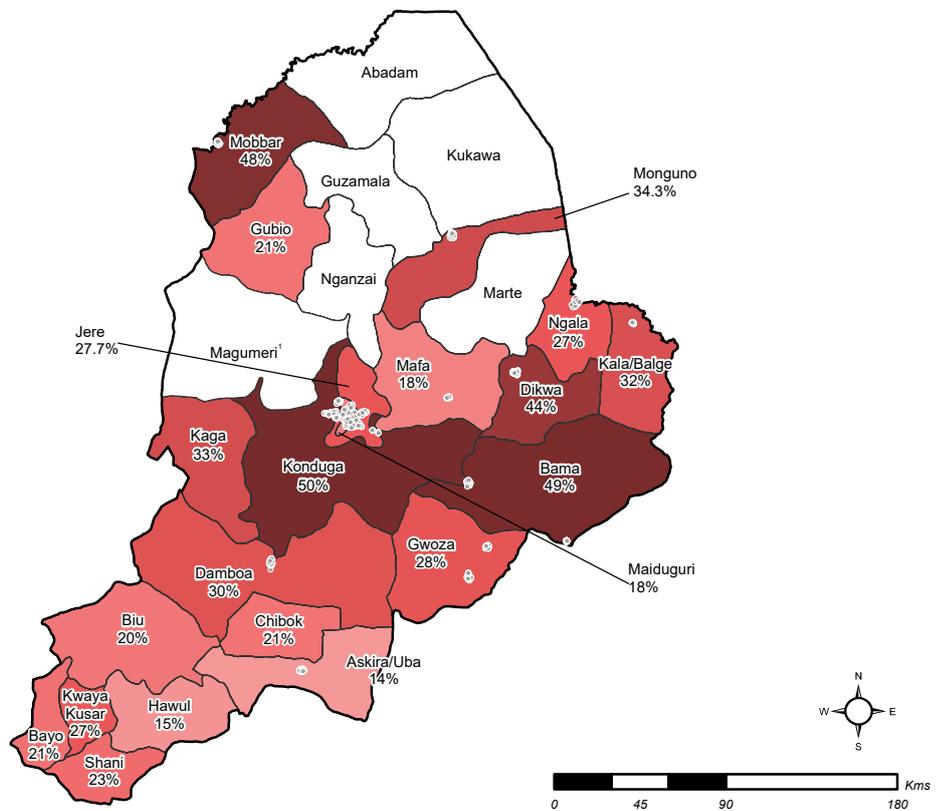
LGA settlements where two-stage cluster sampling took place

Unassessed areas in inaccessible LGAs*

% of households with a Protection LSG



¹Data collection in Magumeri was interrupted by security incidents and the sampling threshold was not reached. As a result, the LGA-level estimates are not shown here, but the available data have been included in the state aggregations.
²Inaccessible LGAs not assessed due to insecurity or lack of partner presence at the time of data collection



¹ Composite indicator made up of movement restrictions experienced over last 30 days, involvement of household members in safety and security incidents over last 3 months, signs of psychological distress in children, possession of identification documents, reason for any children not living with household and presence of housing, land and property issues.

² Figure obtained by applying the percentage on population figures from VTS Dataset, March 2020 and IOM DTIM Round 31, February 2020

³ See p.11 on pre-existing vulnerabilities for more information. The proportions of vulnerable households with a protection LSG per population group were found to be: 10% non-displaced; 9% IDP; 9% returnee.



% of households with a CG but no LSG (time of data collection):

4%

of households with a CG but no LSG (time of data collection):²

53,456

see Annex for details on methodology

% of households with a CG but no LSG at the time of data collection, per population group:

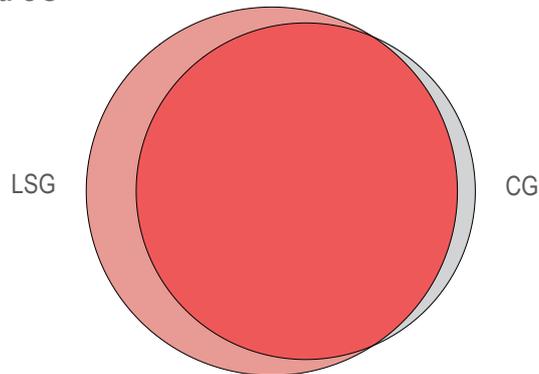
Non-Displaced	5%	■
IDP	2%	■
Returnee	3%	■

4% of households were found to have a CG but no LSG at the time of data collection, and to be vulnerable.³

Per population group:

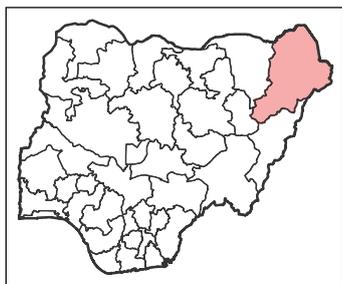
Non-Displaced	1%	
IDP	1%	
Returnee	1%	

98% of households were found to have at least one LSG and/or a CG



- 8% of households were found to have at least one LSG but no CG;
- 86% of households were found to have both at least one LSG and a CG;
- 4% of households were found to have no LSG but a CG.

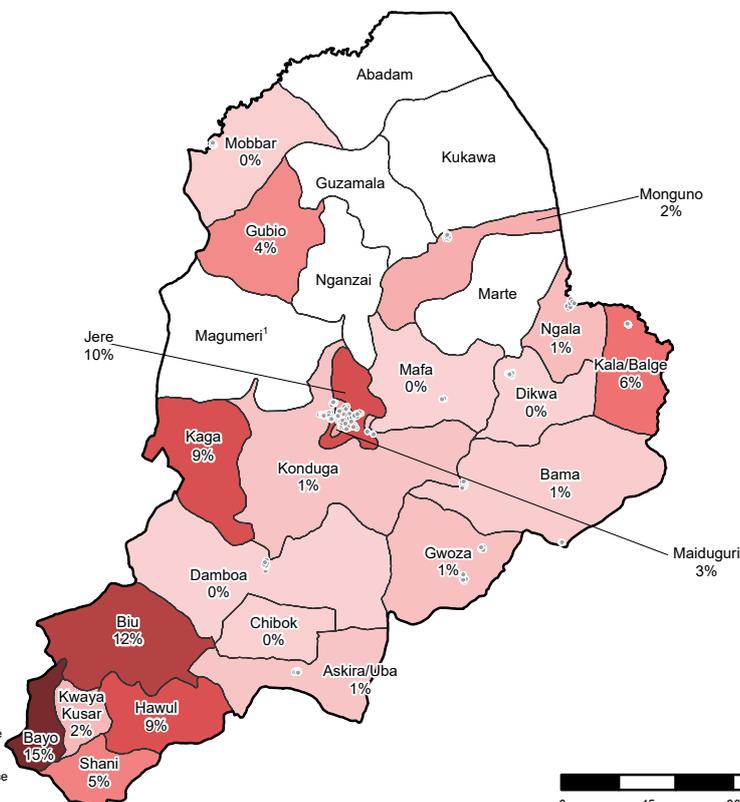
% of households with a CG but no LSG at the time of data collection, per LGA:



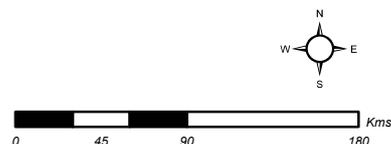
● LGA settlements where two-stage cluster sampling took place

□ Unassessed areas in inaccessible LGAs*

% of households with a CG but no LSG at the time of data collection, per LGA



¹Data collection in Magumeri was interrupted by security incidents and the sampling threshold was not reached. As a result, the LGA-level estimates are not shown here, but the available data have been included in the state aggregations.
*Inaccessible LGAs not assessed due to insecurity or lack of partner presence at the time of data collection



¹ Capacity Gap indicators have been identified from all sectors. They indicate when a household's current method of coping with the ongoing situation is unsustainable or increases stress on the household long term. See annex 1 for more details

² Figure obtained by applying the percentage on population figures from VTS Dataset, March 2020 and IOM DTM Round 31, February 2020

³ See p.11 on pre-existing vulnerabilities for more information.





PRE-EXISTING VULNERABILITIES¹

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% of households with at least one LSG and vulnerable:

28%

of households with at least one LSG and vulnerable:²

378,636

see Annex for details on methodology

% of households with at least one LSG, per vulnerability severity score:



1%	Extreme	(severity score 4)	Vulnerable ³
29%	Severe	(severity score 3)	
15%	Stress	(severity score 2)	
55%	No or minimal	(severity score 1)	

% of households with at least one LSG and vulnerable, per population group:

Non-Displaced	30%	
IDP	29%	
Returnee	26%	

% of households with at least one LSG per vulnerability severity score, per population group:

	1	2	3	4
Non-Displaced	55%	15%	29%	1%
IDP	55%	17%	28%	0%
Returnee	59%	15%	26%	0%

The two main drivers of vulnerability were found to be:

- Member with mental or physical disability or chronic illness and 60 years or older (18%)
- Single female head of household (14%)

% of households overall, per vulnerability severity score:



% of households with a LSG, per sector and vulnerability profile :

% of households...	Education	FSL	Health	Protection	Shelter	WASH	At least 1 LSG	CG
Overall	31%	46%	26%	27%	24%	74%	94%	90%
Profile of head of household								
...with a single female head of household	31%	61%	16%	16%	30%	74%	85%	94%
...with a head of household 60 years or older and no male household member 18-59 years old without a physical or mental disability	33%	55%	13%	13%	37%	89%	83%	96%
At least one member...								
...has a chronic illness	29%	52%	21%	21%	26%	73%	81%	91%
...has a mental disability	21%	67%	19%	19%	34%	88%	92%	93%
...has a physical disability	31%	49%	19%	19%	25%	78%	85%	96%
...is a pregnant woman or girl	33%	53%	22%	22%	21%	71%	82%	84%
...is aged 60 years or older	31%	54%	16%	16%	26%	80%	82%	91%

¹ Vulnerability composite made up of the status of head of household, including gender, age and marital status, as well as the presence of household members with chronic illness, physical disability and mental disability. Finally, the vulnerability composite takes into account the age dependency (ratio of members outside 15-65 years old compared to those inside that age range)

² Figure obtained by applying the percentage on population figures from VTS Dataset, March 2020 and IOM DTM Round 31, February 2020

³ The overall proportion of vulnerable households, regardless of whether they have a LSG or not, was found to be 29%, including: 30% non-displaced; 29% IDP; 26% returnee





This annex provides further information on the methodology used for the MSNA, including: (1) summary of the methodology and the sampling methods in particular; (2) definitions of key concepts; (3) severity scale; (4) identification of LSGs and CG.

METHODOLOGY OVERVIEW

For priority LGAs where two-stage cluster sampling took place, areas deemed inaccessible due to security reasons or COVID-19 movement restrictions were identified and were excluded from the sample. Population estimates in physically accessible locations were used to determine how many surveys would be conducted in which location; this was based on the [Vaccination Tracking System \(VTS\) March 2020 dataset](#) and the International Organization for Migration's [Displacement Tracking Matrix \(DTM\) Round 31](#) (February 2020) dataset, which provide estimates of IDPs and non-displaced population numbers in identified settlements, camps and informal sites, as well as estimated number of returnees at the LGA-level. The data has been weighted to match the sampling frame, to allow for an accurate representation of the sampled population.

For the remaining assessed LGAs where snowball sampling was used to collect indicative data, REACH targeted an approximately equal number of male and female headed households for each population group of interest. Phone contacts of households residing in these areas were identified through existing key informant networks and snowball sampling from respondents. Non-probability sampling generates findings that may show trends in the LGAs/states, but have no known level of statistical precision and may not be representative or generalizable. However, they have been weighted to approximate the population distribution in the LGAs/states as identified by VTS and DTM. The weighting in these purposively sampled LGAs also accounted for the over-representation of female-headed households using the 2019 MSNA data on gender of the heads of household.

The complete details on weighting and data collection can be found in the [Terms of Reference](#) and the [Results Table](#) for MSNA indicators.

Figure 1: Population Sampling Frame - Borno

Population Group	Est. number of households	Source
Overall	1,394,162	VTS (Feb 2020) and DTM (Round 31, March 2020)
Non-Displaced	329,626	VTS (Feb 2020)
IDP	915,213	DTM (Round 31, March 2020)
Returnee	137,126	DTM (Round 31, March 2020)

DEFINITIONS

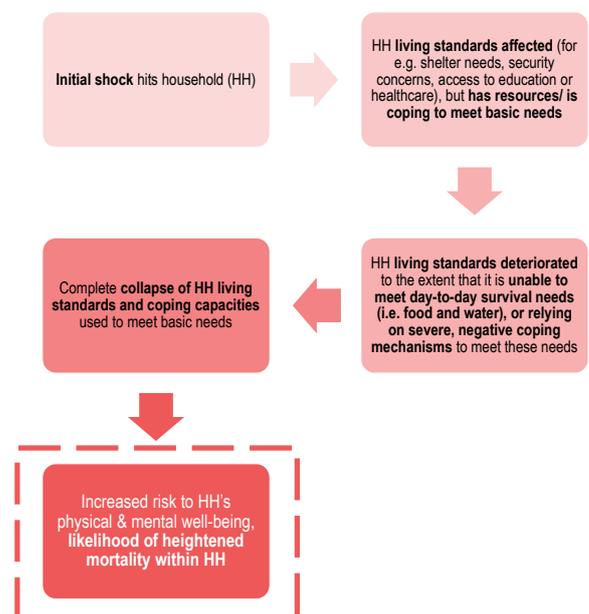
- **Living Standard Gap (LSG):** signifies an unmet need in a given sector, where the LSG severity score is 3 or higher.
- **Capacity Gap (CG):** signifies that negative and unsustainable coping strategies are used to meet needs. Households not categorised as having an LSG may be maintaining their living standards through the use of negative coping strategies.
- **Pre-existing vulnerabilities:** the underlying processes or conditions that influence the degree of the shock and influence exposure, vulnerability or capacity, which could subsequently exacerbate the impact of a crisis on those affected by the vulnerabilities.
- **Severity:** signifies the “intensity” of needs, using a scale that ranges from 1 (minimal/no) to 4+ (extreme+)
- **Magbiture:** corresponds to the overall number or percentage of households in need.

SEVERITY SCALE

The severity scale is inspired by the draft Joint Inter-Sectoral Analysis Framework (JIAF), an analytical framework being developed at the global level aiming to enhance understanding of needs of affected populations. It measures a progressive deterioration of a household’s situation, towards the worst possible humanitarian outcome (see figure X).

While the JIAF severity scale includes 5 classifications ranging from 1 (none/ minimal) to 5 (catastrophic), for the purpose of the MSNA, only a scale of 1 (none/ minimal) to 4+ (extreme+) is used. A “4+” score is used where data indicates that the situation could be catastrophic. This is because data that is needed for a score of 5 (catastrophic) is primarily at area level (for example, mortality rates, malnutrition prevalence, burden of disease, etc.) which is difficult to factor into household level analysis. Additionally, as global guidelines on the exact definitions of each class are yet to be finalized, and given the response implications of classifying a household or area as class 5 (catastrophic), REACH is not in a position to independently verify if a class 5 is occurring.

Figure 2: Rationale behind the severity scale



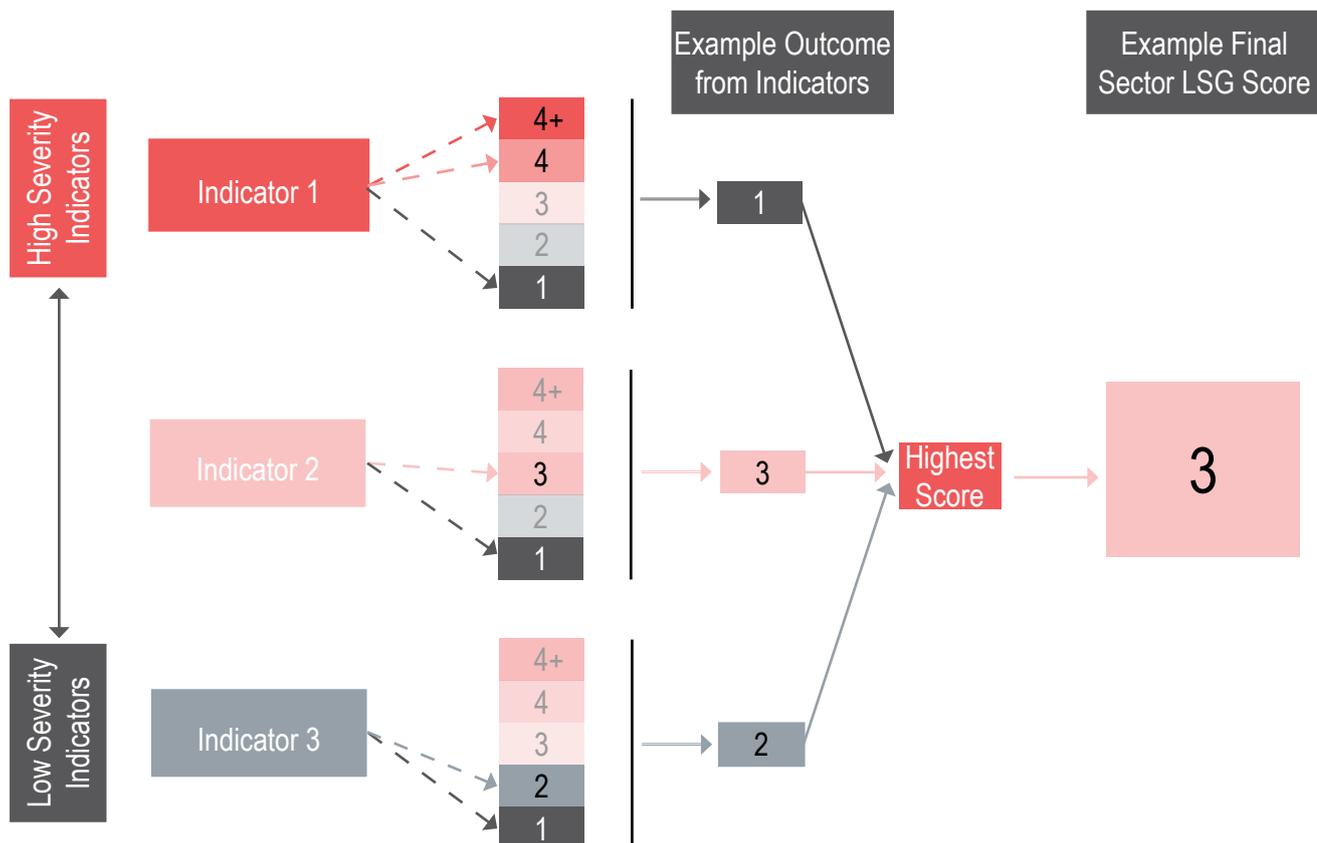


IDENTIFICATION OF LSG AND CG

The LSG for a given sector is produced by aggregating unmet needs indicators per sector. For the 2020 MSNA, a simple aggregation methodology has been identified, building on the Multidimensional Poverty Index (MPI) aggregation approach. Using this method, each unit (household) is assigned a “deprivation” score according to its deprivations in the component indicators. The deprivation score of each household is obtained by calculating the percentage of the deprivations experienced, so that the deprivation score for each household lies between 0 and 100. The method relies on the categorization of each indicator on a binary scale: does (“1”) / does not (“0”) have a gap. The threshold for how a household is considered to have a particular gap or not is determined in advance for each indicator. The 2020 MSNA aggregation methodology outlined below can be described as “MPI-like”, using the steps of the MPI approach to determine an aggregated needs severity score. The section below outlines guidance on how to produce the aggregation using household-level data.

- 1) Identified indicators that measure needs (‘gaps’) for each sector, capturing the following key dimensions: accessibility, availability, quality, use, and awareness;
- 2) Identified particular survey response options as key indicators that signaled unmet needs and classified these response options into severity levels from 1 to 4+ based on recommendations from sectoral experts;
 - a. High severity indicators were identified that would automatically classify the household as having an LSG and result in a score of 4 or 4+ depending on the response option chosen;
 - b. Indicators of lower severity would only contribute toward a household score of 1, 2, or 3;
 - c. The final score/severity class is the highest score generated for any indicator, as outlined in figure 3 below;
- 3) Identified indicator scores for each household based on data collected;
- 4) Calculated the proportion of the population with a final severity score of 3 and above, per sector. Having a severity score of 3 and above in a sector is considered as having an LSG in that sector;
- 5) Identified households that do not have an LSG but that do have a CG;
 - a. Identified individual indicators scores (0 or 1) for all CG indicators, amongst households with a severity score of 1 or 2;
 - b. If any CG indicator has a score of 1, the household is categorised as having a CG;
- 6) Projected percentage findings onto the population data that was used to build the sample, with accurate weighting to ensure best possible representativeness.

Figure 3: Identifying LSG per sector with scoring approach - example





ANNEX 3: ESTIMATING OVERALL SEVERITY OF NEEDS

The MSNI is a measure of the household's overall severity of humanitarian needs (expressed on a scale of 1 – 4+), based on the highest severity of sectoral LSG severity scores identified in each household.

The MSNI is determined through the following steps:

- 1) First, the severity of each of the sectoral LSGs is calculated per household, as outlined in the annex 2.
- 2) Next, a final severity score (MSNI) is determined for each household based on the highest severity of sectoral LSGs identified in each household.

- As shown in the example in Figure X below, household (HH) 1 has a final MSNI of 4 because that is the highest severity score, across all LSGs within that household.

Figure 4: Examples of MSNI scores per household based on sectoral analysis findings

	Sectoral LSG Severity Score						Final MSNI
	Food Sec	Health	WASH	Protection	Education	Etc.	
HH 1	4	4	4	4	3	3	4
HH 2	2	2	4	2	1	1	4
HH 3	3	3	3	4+	2	1	4+
Etc.	2	3	1	1	2	1	3

Key limitation: regardless of whether a household has a very severe LSG in just one sector (e.g. WASH for HH2 above) OR co-occurring severe LSGs across multiple sectors (e.g. food security, health, WASH, protection for HH1 above), their final MSNI score will be the same (4). While this might make sense from a “big picture” response planning perspective (if a household has an extreme need in even one sector, this may warrant humanitarian intervention regardless of the co-occurrence with other sectoral needs), additional analysis should be done to understand such differences in magnitude of severity between households. To do that, additional analysis outputs have been produced, as shown on page 3.



ASSESSMENT CONDUCTED IN THE FRAMEWORK OF:

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