

## INTRODUCTION

In the BAY states of north-east Nigeria (Borno, Adamawa and Yobe), various conflict escalations have been noted in recent times. The security situation remains unpredictable and leads to fluid mobility. Some violent attacks by NSAG (Non-State Armed Groups) were recorded in the last months of 2021 against IDPs, returnees and aid workers. At present, the humanitarian situation is rapidly approaching famine levels and is characterised by high levels of food insecurity, malnutrition and exposure to diseases.

Additionally, recent efforts by the Borno State Government (BSG) to shut down displacement camps in the urban centres of Borno State have created several risks and hardships. Many IDPs who resided in the camps have now integrated in camps and host communities in their LGAs of origin. In most cases, the security situation in areas of origin is still considered unsafe and does not allow for a safe return to their villages. The influx of IDPs in the respective LGAs has resulted in additional pressure on already stretched facilities and services across the camps and host communities.

In order to find durable solutions for internal displacement — whether through return to communities of origin, local integration, or relocation — and to prevent new displacements in the region, it is critical to understand the relative levels of stability in locations hosting returnees or displaced populations. Therefore, IOM has launched the Stability Index (SI) in Nigeria, to evaluate the stability of areas hosting returnees or displaced populations. The SI seeks to understand which factors influence a location's stability, which can inform priority programmatic interventions along the humanitarian, peace and development nexus in order to strengthen the resilience and stability and prevent future forced displacements.

**This report presents the result from the second Stability Index round conducted in January 2022 in Nigeria's BAY states (Borno, Adamawa and Yobe).**

## 1. METHODOLOGY

The **Stability Index** combines 35 key indicators of stability to estimate a single Stability Score for each surveyed locality. These indicators relate to three key themes crucial to stability: **safety and security, livelihoods and basic services, and social cohesion**. Indicators for each of these themes are grouped to create sub-indexes to facilitate the comparison of localities by theme. (see *Appendix for further information on the indicators included in this analysis*).

These indicators, taken in aggregate, highlight areas that are conducive to durable solutions for internal displacement. Three “anchor questions” about the perception of stability in the community (feeling of stability, future intentions of the community, trends of the situation) are used to validate the relationship between the Stability Score and community sentiment. (see *Appendix for further information about how anchor questions are used for index validation*).

The Stability Index uses Principal Component Analysis to assess the impact of each indicator on the variability in the data. (see *Appendix for further information on Stability Index calculations*). The Stability Index and sub-indexes range from 0 (poor conditions for stability) to 100 (good conditions for stability).

Number of Localities Surveyed per State

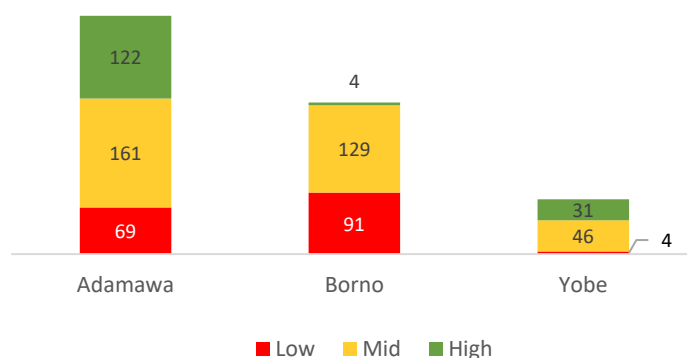
BORNO	15 LGAs	224 LOCATIONS
ADAMAWA	16 LGAs	352 LOCATIONS
YOBE	6 LGAs	81 LOCATIONS

### 1.1 Data collection overview

The Stability Index includes data collected through key informant interviews at the locality level in 657 displacement affected locations in north-east Nigeria. Key informants, including mayors, community leaders, and aid workers were interviewed in each location by enumerators in January 2022.

The key informant method has the advantage of allowing the coverage of many localities. Multiple key informants were interviewed in each locality, allowing IOM to cross-validate information. However, the main limitation of this data collection methodology lies in the fact that only a few informants report on the views of an entire community.

Number of Localities per State and per SI score



## 2. STABILITY SCORES ANALYSIS

### 2.1 Stability Index Score Analysis (by scale and by state)

The average Stability Index score of the 657 locations assessed in north-east Nigeria was **79/100**. The lowest SI score was recorded in a location in the LGA Madagali of Adamawa State (Kwa Kara in the ward Wagga with a SI score of 45/100). The highest SI score was recorded in a location in the LGA Guyuk of Adamawa State (Gwawura in the ward Chikila with a score of 100/100).

The state of Yobe recorded the highest average Stability Index score (85/100) while Borno recorded the lowest average SI score (75/100). The most influential variable on the perception of stability in north-east Nigeria was ‘freedom of movement’, situated in the ‘safety and security’ scale. When considering the different scales per state, the factors that determine the perception of stability at the state level can be identified. Yobe scored considerably higher than Borno in ‘freedom of movement’, which was reflected in the average SI score for the state. Similarly, Borno scored the lowest on ‘safety and security’ (74/100), which impacted the overall SI score of the state. Borno is the most conflict-affected state in north-east Nigeria and has a long history of attacks by NSAG which led to widespread displacement of civilians and a situation of generalized violence.

As a result, only four locations in the state of Borno recorded a high Stability Index score (88/100 or higher). To the contrary, only four localities in the state of Yobe recorded a low Stability Index score (73 or less). Yobe scored higher in ‘safety and security’ (82/100), which resulted in better access to livelihoods and basic services (78/100) and improved social cohesion between the members of the communities (85/100). To determine whether locations had a high, mid or low score, the quartile system was used. High scoring localities include the top 25 per cent of localities assessed (with an SI score of 88 or higher), while low scoring localities refer to the lowest scoring 25 per cent of localities (with an SI score of 73 or below).

For the **social cohesion** scale, the state of Yobe scored the highest with a score of (85/100), while the state of Borno (80/100) scored the lowest. Also, for the **livelihoods and basic services** scale, the highest score was recorded in Yobe (77/100) while Borno scored lowest with 67/100.

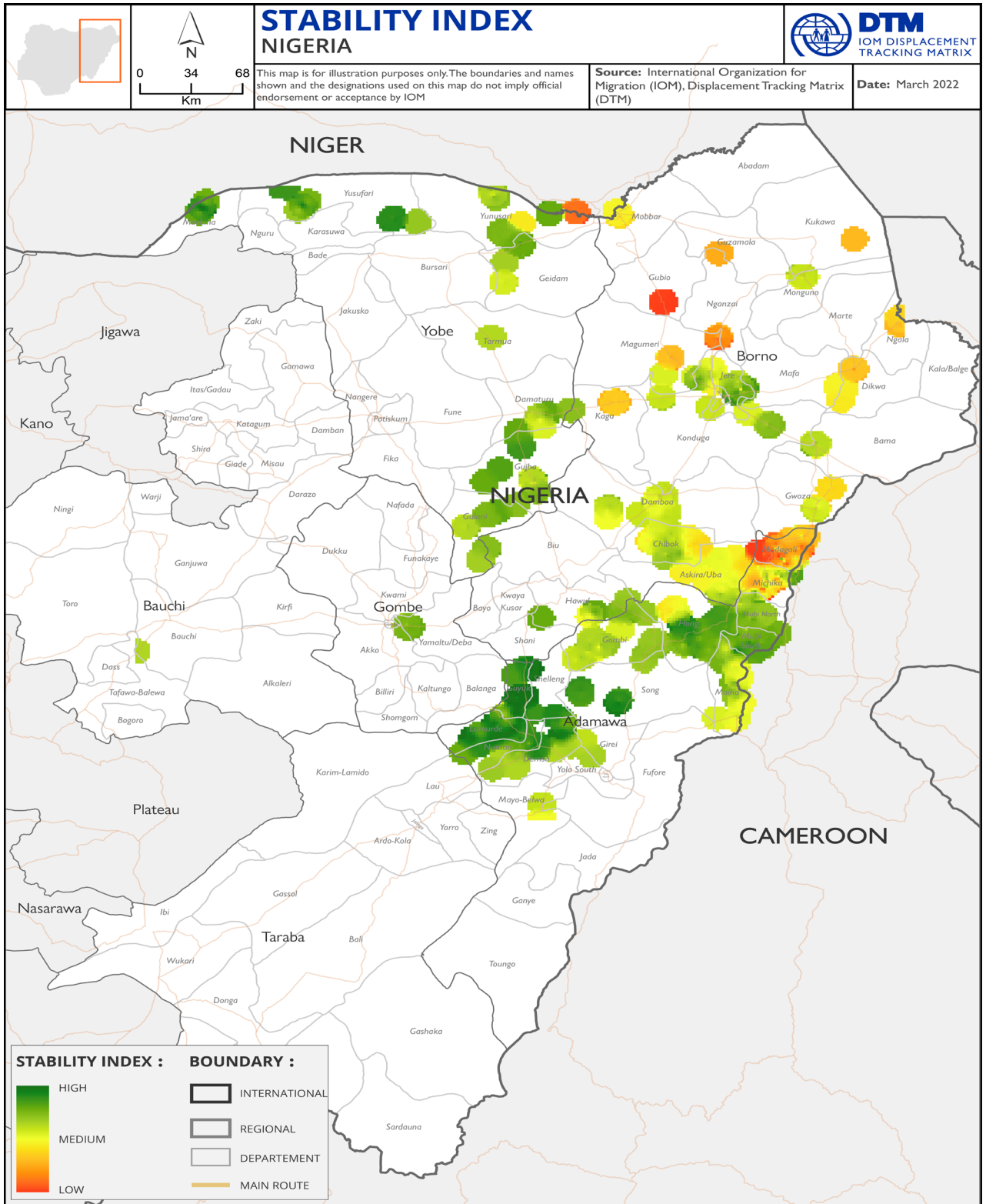
STATE	STABILITY INDEX SCORE	LIVELIHOOD & BASIC SERVICES	SOCIAL COHESION	SAFETY AND SECURITY
Borno	75/100	65/100	79/100	74/100
Adamawa	81/100	75/100	83/100	78/100
Yobe	85/100	78/100	85/100	82/100
<b>Total</b>	<b>79/100</b>	<b>72/100</b>	<b>82/100</b>	<b>77/100</b>

### 2.2 Stability Scores by Locality and Department

**Borno** – The overall stability scores in the assessed localities in the state of Borno varied between 47/100 (lowest score) and 96/100 (highest score). The average stability index score for the state of Borno was 75/100. When considering the scores at LGA level, the LGA with the highest stability index score was Jere LGA (86/100), followed by Konduga LGA (80/100) and Bama LGA (80/100). The LGAs with the lowest stability index scores were Gubio LGA (51/100), Magumeri LGA (61/100) and Dikwa LGA (66/100).

**Adamawa** – The overall stability scores in the assessed localities in the state of Adamawa varied between 45/100 (lowest score) and 100/100 (highest score). The average stability score for the state of Adamawa was 81/100. When considering the scores at LGA level, the LGA with the highest stability index score was Lamurde LGA (94/100), followed by Guyuk LGA (92/100) and Numan LGA (92/100). The LGAs with the lowest stability index scores were Madagali LGA (61/100), Michika LGA (70/100) and Mayo-Belwa LGA (76/100).

**Yobe** – The overall stability scores in the assessed localities in the state of Yobe varied between 71/100 (lowest score) and 96/100 (highest score). The average stability score for the state of Yobe was 85/100. When considering the scores at LGA level, the LGA with the highest stability index score was Yusufari LGA (90/100), followed by Geidam LGA (87/100) and Yunusari LGA (87/100). The LGAs with the lowest stability index scores were Damaturu LGA (81/100), Gulani LGA (83/100) and Gujba LGA (86/100).



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### 3. LOCALITY ANALYSIS

#### 3.1. Comparative analysis of localities with highest and lowest SI scores

The table below shows the Stability Index, three sub-index scores, stability “anchor questions”, and top five most influential variables for the localities with the highest and lowest Stability Index Scores in north-east Nigeria (which are explained on the following page). It is interesting to note that both localities with the lowest SI score and localities with the highest SI scores are situated within the state of Adamawa. Guyuk LGA, where localities with the highest SI scores in north-east are situated, is located on the border with Gombe State, a relative stable region with a recent history of return movements and few security incidents. In contrast, Madagali LGA is situated on the border with Cameroon and Borno State and has witnessed little return movement in recent years. The LGA is characterized by violent conflict escalations due to the presence of Non-State Armed Groups (NSAG) and the security situation remains unpredictable. The food security in the LGA is rapidly deteriorating and the lack of stability leads to a fluid mobility situation.

Furthermore, the interpretation of the key variables per locality allows for tailor-made approaches that could support certain areas of focus that may improve the overall perception of stability of the locality. For example: the locality Ghenjuwa in Michika LGA of Adamawa State has a poor SI score (48/100) but scores high on ‘Daily Public Life’. It is clear that in that specific locality, efforts to enhance the daily public life are not required and will not impact the overall perception of stability.

	Location				SI	Sub-Scores			Key Questions			Key Variables					
	State	LGA	Ward	Locality		SI Score	Services Score	Security Score	Cohesion Score	Feeling Stability	Feeling Community	Feeling Situation	Freedom of Movement	Access to farmland	Daily public life	Fishing situation	Presence of formal conflict
Localities with the Lowest SI Scores	Adamawa	Madagali	Wagga	Kwa Kara	45	31	43	46									
	Adamawa	Madagali	Wagga	Wagga Chakawa	46	28	57	74									
	Borno	Gubio	Gubio town I	Busamari	47	40	44	69									
	Borno	Gubio	Gubio town II	Goneri	48	43	73	65									
	Adamawa	Michika	Minkis/ wuro ngiki	Ghenjuwa	48	51	43	48									
	Adamawa	Madagali	K/wuro ngayandi	Kirchinga A	48	48	57	48									
	Borno	Gubio	Gubio town I	Mallam Suri	49	34	42	65									
	Borno	Gubio	Gubio town II	Bulakareya	49	46	66	69									
	Adamawa	Madagali	Pallam	Kojiti	49	47	65	46									
	Adamawa	Michika	Michika I	Central	49	36	74	30									
	Adamawa	Madagali	K/wuro ngayandi	Kirchinga B	50	53	65	48									
	Adamawa	Madagali	Duhu/ shuwa	Shuwa	50	47	68	51									
	Adamawa	Madagali	K/wuro ngayandi	Kopa 2	50	51	47	59									
	Adamawa	Michika	Michika II	Sangere I	50	61	42	71									
	Adamawa	Madagali	Madagali	Sabon Gari	50	51	75	41									
	Borno	Gubio	Gubio town II	Hausari	50	44	49	61									
	Localities with the Highest SI Scores	Borno	Jere	Dusuman	Hausari dusuman	96	94	79	97								
Adamawa		Lamurde	Ngbakowo	Ngbakowo	96	91	76	95									
Adamawa		Malha	Pakka	Pakka	96	88	82	96									
Adamawa		Lamurde	Opalo	Chumun	96	92	89	97									
Yobe		Geldam	Ashelkri	Ajari	96	95	90	100									
Adamawa		Lamurde	Waduku	Waduku	96	91	77	97									
Adamawa		Numan	Numan II	Wodi pare	97	96	56	93									
Adamawa		Lamurde	Lamurde	Lamurde	97	97	89	80									
Adamawa		Lamurde	Gyawana	Gyawana	97	97	85	94									
Adamawa		Guyuk	Chikila	Dangur durara	97	92	89	100									
Adamawa		Guyuk	Banjiram	Kwadadai	97	94	68	100									
Adamawa		Guyuk	Dumna	Kerau	97	92	78	100									
Adamawa		Lamurde	Lamurde	Buamutudo	98	94	87	100									
Adamawa		Malha	Manjekin	Manjekin	98	91	89	93									
Adamawa		Guyuk	Banjiram	Anguwan jaun	100	96	75	100									
Adamawa		Guyuk	Chikila	Gwawura	100	95	82	100									

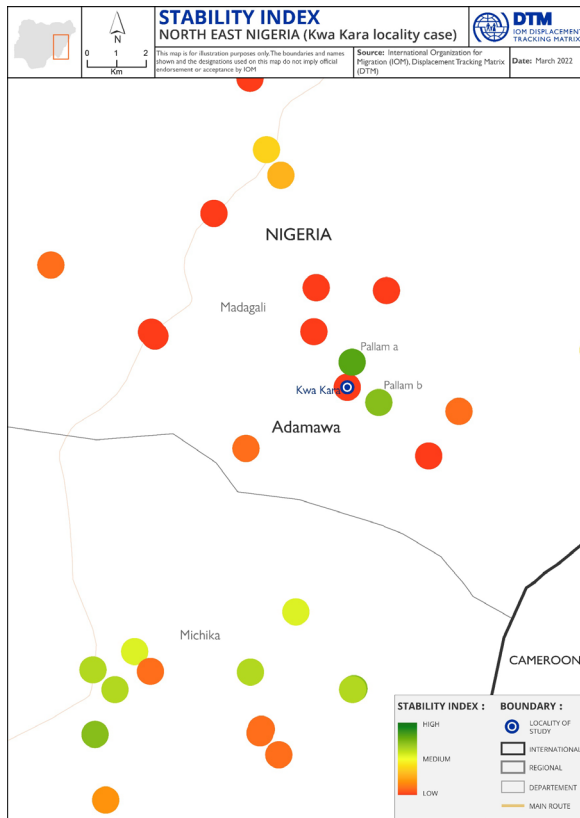
### 3.2 CASE STUDY: Comparison of Low and High Scoring Localities

#### Kwa Kara Street, Wagga

Located in Madagali LGA of Adamawa State, **Kwa Kara** is a locality in Wagga ward, close to the Cameroonian border. Compared to Nigeria's average Stability Index score (79/100), Kwa Kara Street has a rather low score of **45/100**, the lowest of all scores in the BAY states.

Based on the Stability Index score, Kwa Kara's residents may need to leave soon due to stability or safety concerns. When considering the most influential variables in the BAY states, the residents' freedom of movement in Kwa Kara is heavily restricted as a result of a curfew. It was reported that residents only leave their homes when absolutely necessary. Both security incidents and petty crime have increased in the months prior to the assessment, and serious security incidents were reported. This has a considerable impact on the perception of stability of the locality.

Additionally, key informants indicated that fishing grounds and farmlands are not accessible due to security reasons. This resulted in the fact that the scale of livelihoods and basic services scores very low with 31/100.

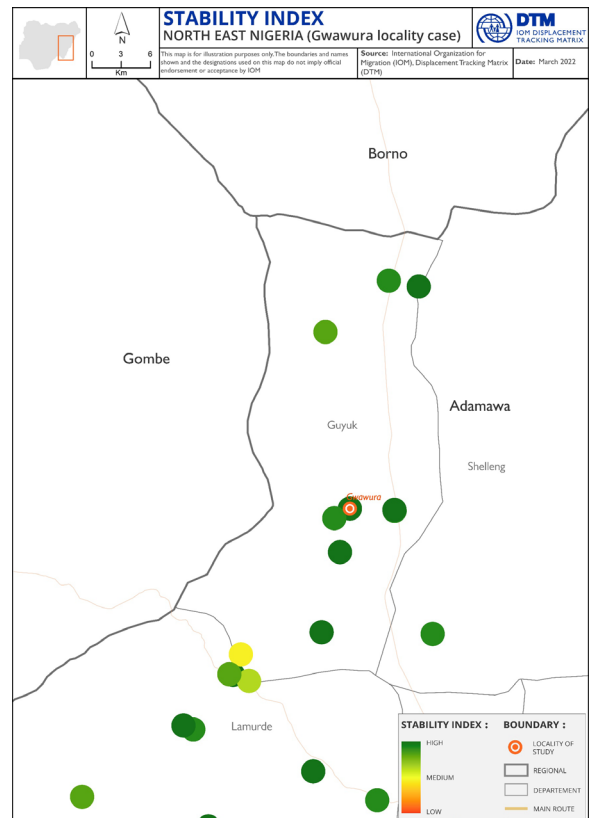


#### Gwawura, Chikila

Gwawura is a locality in Guyuk LGA, situated in the western part of Adamawa state and has a Stability Index score of 100/100. Gwawura has the highest score of all localities assessed in north-east Nigeria.

The locality is considered very stable and residents do not need to leave soon because of any safety or security concerns. In fact, there are no restrictions of movement in Gwawura and key informants described the daily public life as lively and normal. Petty crimes have decreased, and no serious security incidents have been reported in the months prior to the assessment.

Furthermore, fishing grounds and farmlands in Gwawura are accessible and being used by the residents of the community. As these factors are among the most influential variables for stability in north-east Nigeria, Gwawura scored very high for the livelihoods and basic services scale.



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### 4. Analysis of Main Indicators Influencing Variability Between Localities

The Stability Index uses Principal Component Analysis to understand the impact of each indicator on the variability in the dataset. The indicators with the largest weight have the most influence in determining the Stability Score.

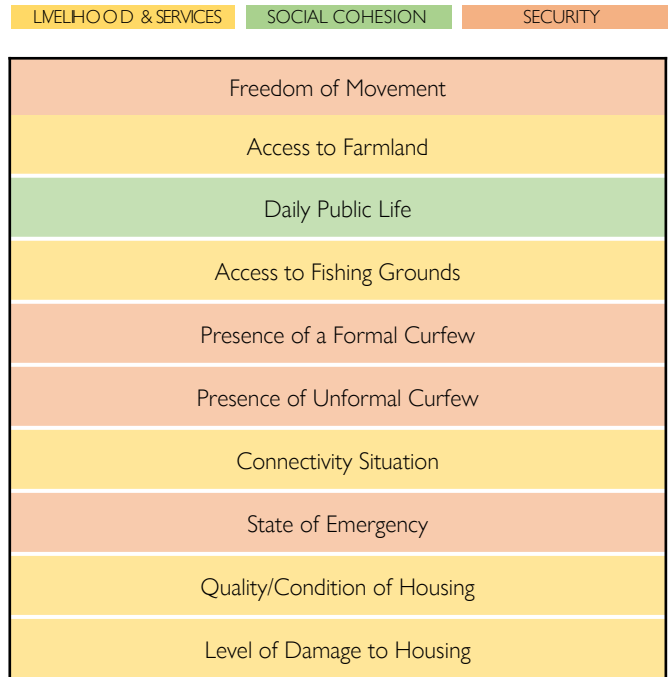
The exploration of these key indicators allows for the identification of important factors that may impact the perception of stability in a locality. For a more detailed overview of what each indicator measures, see *Appendix*.

#### 4.1 Top indicators in north-east Nigeria

This analysis provides insight into the possible programmatic and policy responses that need to be implemented in the target communities in order to improve the perception of stability. The most influential indicators in north-east Nigeria are predominantly situated in the areas of **safety and security** and access to **livelihood and services**.

Access to livelihoods and basic services make up half of the top 10 of most influential variables, with access to farmland and fishing grounds both situated in the top five. Four of the top 10 indicators are situated in the safety and security scale, with 'freedom of movement' as the most influential variable for the perception of stability in the BAY states. Other top indicators related to safety and security are: the presence of a curfew (both formal and informal) and whether there is a state of emergency in the locality.

Notably, 'daily public life' is the only indicator from the **social cohesion** scale that is included in the top 10 of most influential variables in north-east Nigeria. This indicates that programming may be the most impactful if it focuses on the relevant indicators related to access to livelihoods and basic services and safety and security.

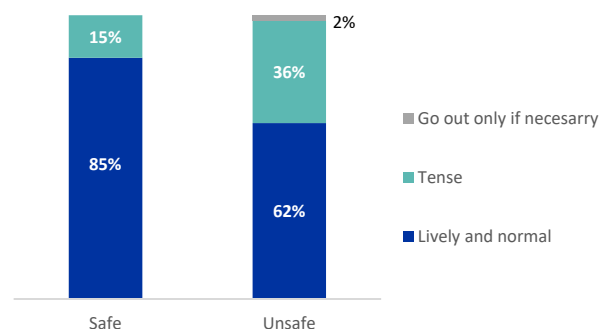
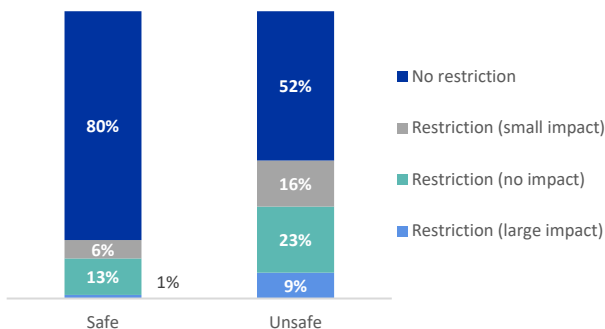


#### Freedom of Movement and Stability

The correlation between 'freedom of movement' and the perception of stability is clearly indicated in the graph below. Across the BAY states, 80 per cent of localities that reported to be safe and stable have no restriction of movement in place. In localities where key informants indicated to feel unsafe, this number was reported at 52 per cent. Moreover, key informants in 56 per cent of localities that reported restrictions with a large impact on their daily lives also reported feeling unsafe or unstable.

#### Daily Life and Stability

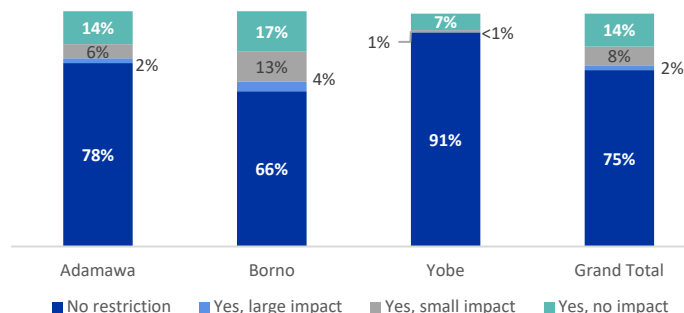
As one of the most influential variables, the correlation between 'daily public life' and the perception of stability is illustrated in the graph below. In 85 per cent of the localities that are considered safe and stable, daily life was described as normal and lively. Conversely, in localities are considered unsafe and not stable, 36 per cent reported that daily life was tense and two per cent reported that they only left the house if necessary.



### 4.2 Analysis of Key Stability Index Indicators

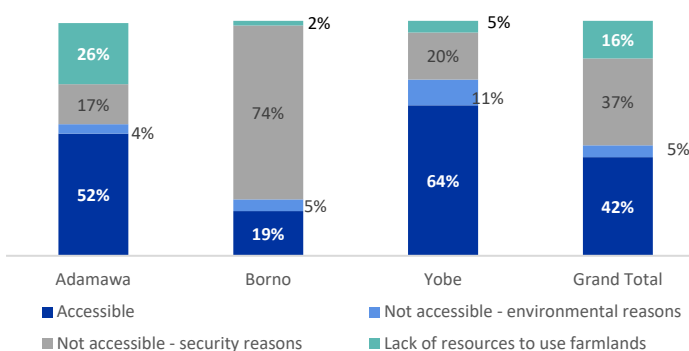
#### 1. Freedom of movement - *Safety and security*

Freedom of movement and the presence of restrictions plays a key role in the perception of stability among key informants. In 75 per cent of the localities, there are no restrictions in residents' movements. In the state of Yobe, this number is reported at 91 per cent. Yobe is also the state with the highest average stability score among the BAY States, demonstrating the correlation between freedom of movement within the community and the perception of the location's stability. The state of Borno counts the highest percentage of localities with restrictions on the freedom of movement (34% of the localities surveyed).



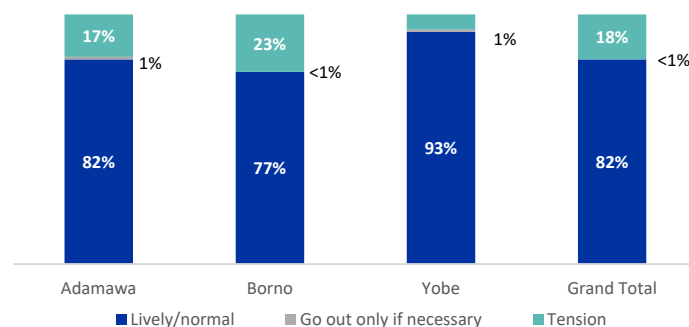
#### 2. Access to farmland - *Livelihoods and basic services*

Access to farmland is the second most influential variable for the perception of stability in Nigeria's BAY states. In the state of Yobe, the state with the highest Stability Index score, farmland is reported to be accessible in 64 per cent of the localities assessed. On the contrary, in the state of Borno, a state with a considerably lower average SI score, farmland is reported to be accessible in only 19 per cent of the localities assessed. As Borno is significantly more impacted by the conflict in north-east Nigeria, it is reported that in 74 per cent of its localities, farmland is inaccessible for security reasons.



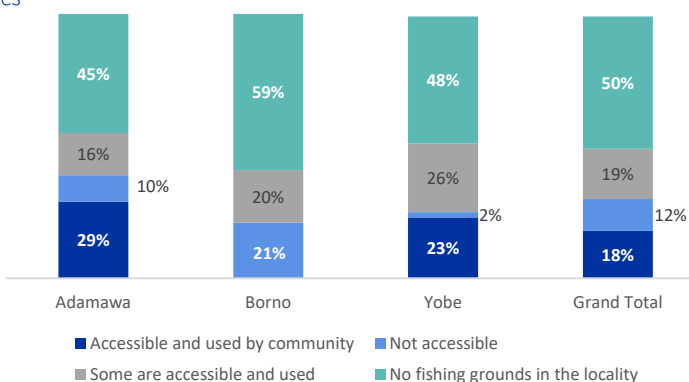
#### 3. Daily public life - *Social Cohesion*

In the BAY states of north-east Nigeria, the experience of current daily public life is the third most influential indicator on the perception of stability in the assessed localities. In 82 per cent of the localities, daily life was described as lively and normal. In 18 per cent of the localities, residents were able to carry out their daily activities, despite the situation remaining tense. In less than one per cent of the localities, very few people were in the streets, and people left their homes only when absolutely necessary. It is to be noted that 'daily public life' is the only indicator from the social cohesion scale that ranks among the top ten of most influential indicators.



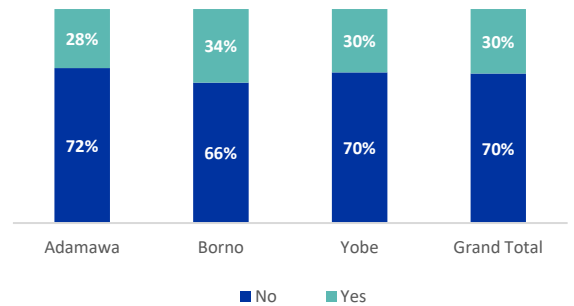
#### 4. Access to fishing grounds - *Livelihoods and basic services*

Similar to the access to farmlands, the presence and accessibility of fishing grounds is an important indicator to determine the stability in the assessed localities. Fishing grounds are not accessible and used by the community in any of the localities assessed in the state of Borno. This is reflected in a relative low average score for the livelihoods and basic services scale in the state (65/100). Conversely, in 29 per cent of the localities in the state of Adamawa, fishing grounds are reported to be accessible and used by the residents of the community. It is noteworthy that fishing grounds were present in only half of the assessed localities in the BAY states.



### 5. Presence of a formal curfew - *Safety and security*

Directly linked with freedom of movement, the presence of a formal curfew also was an important indicator for the perception of stability in the assessed localities. A minority or 30 per cent of the localities in the BAY states reported to be under formal curfew. No major differences were recorded at the state level. A curfew oftentimes goes hand in hand with the disruption of local transport and economic and commercial activities affecting the general well-being to the residents of the community.



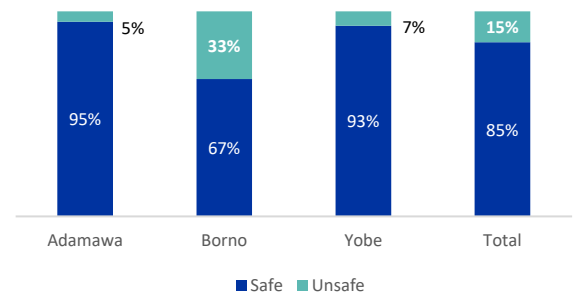
### 4.3 Analysis of Anchor Questions

The first section of the questionnaire is focused on the key informants' perception of stability in the assessed localities. These "anchor questions" were used to validate Stability Index findings against self-reported perceptions in the community. Key informants were asked three main questions to measure the perception of stability in their communities:

#### Feeling of stability

*Does the locality feel safe or unsafe?*

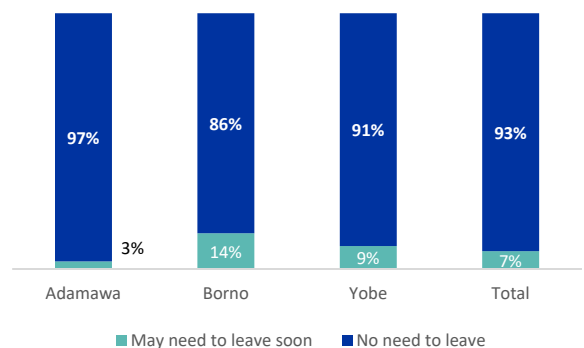
Most of the key informants (85%) in the assessed communities reported that their locations feel safe, while 15 per cent reported their locations were unsafe. When disaggregating by state, the largest percentage of localities where key informants reported to feel unsafe was recorded in the state of Borno with 33 per cent. In contrast, only in five per cent of the localities in Adamawa State, key informants indicated to feel unsafe.



#### Future intentions of the population

*Do people in the locality feel that they need to leave soon due to safety concerns?*

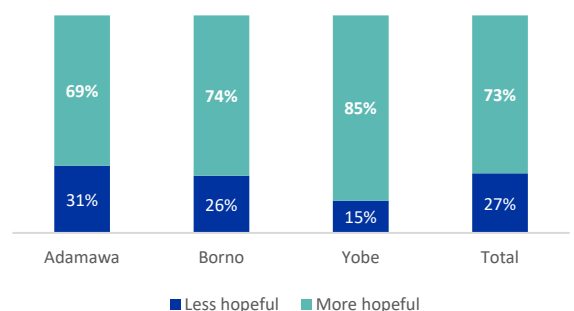
Only seven per cent of the key informants in Nigeria's BAY states feel that they might need to leave their locality in the near future due to safety concerns. In the most conflict-affected state of Borno, this number was reported at 14 per cent. Interestingly, when comparing with the feeling of stability described in the paragraph above, it can be concluded that there is clear correlation between the safety and stability of a location and the future intentions of its residents.



#### Changes in perception over the last 6 months

*Do people feel more or less hopeful about the state of community compared to six months ago?*

In response to the question on how feelings of the situation in their locality changed over the past 6 months, only 27 per cent of localities are less hopeful about the future state of their communities compared to 6 months prior to data collection. Out of the three states assessed in north-east Nigeria, Adamawa State had the largest proportion of localities reporting that they are less hopeful about the future with 31 per cent.





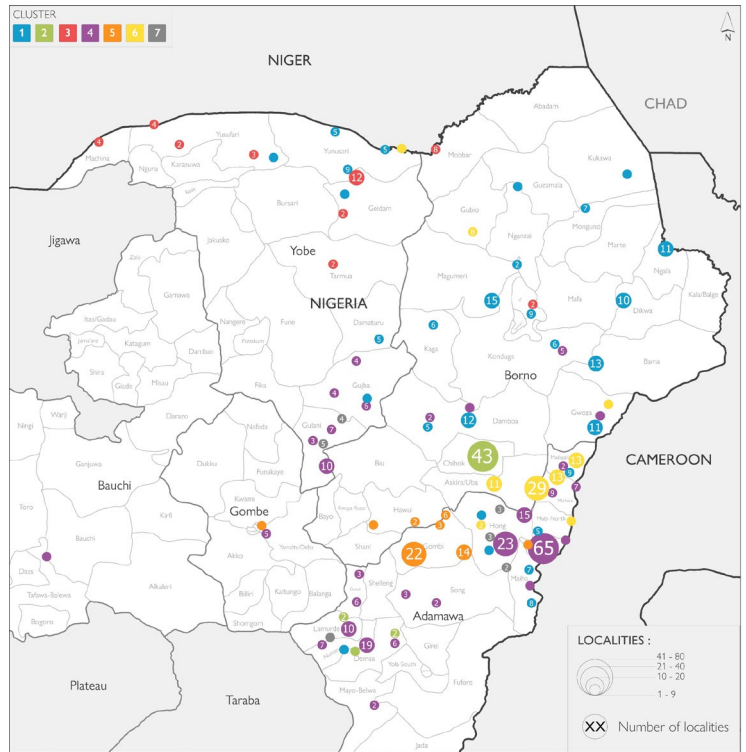
### 5. CLUSTER ANALYSIS

#### 5.1 Cluster Generation

Grouping similar localities into clusters can help to uncover the distinctive profiles of geographic regions in order to facilitate targeted programming. (See Appendix for details on cluster generation.) The map to the right visualizes the assessed localities in the BAY states divided into seven clusters. Each color represents a grouping of localities with similar sets of answers to the Stability Index survey. The table below provides a breakdown of the average Stability Index and sub-index scores for each of these clusters. It is noteworthy that clusters with similar average SI scores have markedly different scores on sub-indices.

Two sets of high SI clusters, Cluster 4 and 5, center around the north of Adamawa State. Cluster 5 includes the LGAs Girei and Shelleng while Cluster 4 includes the LGAs Mubi South, southern Hong and Maihi in north-east Adamawa and the LGAs with the highest SI scores in north-west Adamawa (Guyuk, Lamurde and Shelleng). Localities belonging to Cluster 4 are also situated in southern Yobe, more specifically in the LGAs Gulani and Gujba. Despite having both high SI scores, localities in Cluster 5 score considerably lower in the livelihoods and services area compared to localities in Cluster 4. Cluster 6 gathers a distinctive set of localities in Adamawa State between situated between the Far North region in Cameroon and Borno State. This cluster has the lowest average stability score and reported several security incidents, restrictions on freedom of movement and difficult access to livelihood opportunities.

Clusters of Localities with Similar Characteristics



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	Stability Index	Services Sub-Index	Security Sub-Index	Cohesion Sub-Index
Cluster 1	75	58	77	81
Cluster 2	78	78	75	63
Cluster 3	78	78	73	81
Cluster 4	88	82	82	88
Cluster 5	82	68	88	86
Cluster 6	64	64	63	73
Cluster 7	84	79	80	78

#### 5.2 CASE STUDY: Comparison of Lowest and Highest Average SI Clusters

Average Scores per Cluster	Cluster 4	Cluster 6
Security Trends - NSAGs	9	2
Freedom of Movement	10	6
Formal Curfew	9	2
Informal Curfew	10	4
Access to Fishing Grounds	7	4
Connectivity	7	3
Participation in Public Affairs	8	6

Comparing the clusters with the highest and lowest average SI scores, it is worth noting that they diverge sharply on a few important characteristics. Cluster 6, composed primarily of low SI localities along the border with Cameroon, reported repeated security incidents by NSAGs and residents were to respect a formal curfew. Conversely, it is interesting to note that the cluster of highest-scoring localities has high levels of freedom of movement with little activities of NSAGs and a significant better telecoms connectivity than clusters with low scoring localities.

## 6. CONCLUSION

The results of the second round of the Stability Index data collection presented in this report reveal that a number of key indicators have a direct association on the perception of stability in locations hosting displaced and returned populations in north-east Nigeria. Findings suggest that the perception of stability in the BAY states of Nigeria is highly dependent on indicators on the safety and security and livelihood and basic services scales, and to a lesser extent indicators in the social cohesion scale.

The ten most influential indicators on the perception of stability by order of impact, were: freedom of movement, access to farmland, daily public life, access to fishing grounds, the presence of a formal curfew, the presence of an informal curfew, the connectivity situation, state of emergency and the quality/conditions of housing. With the exception of daily public life (social cohesion scale), all the most influential indicators are within the safety and security scale or livelihoods and basic services scale.

This highlights that stability in a location is likely to improve by transition, recovery and development programmes that have an impact on the access to livelihoods and basic services, and the safety and security situation of the location. The great advantage of the Stability Index tool is that it allows for the programming of targeted strategies based on the factors that have the largest impact on the perception of stability in a specific locality. It highlights the main influential indicators and provides a better understanding of the dynamics of stability in the BAY states and insights into possible programmatic and policy responses that are needed in the targeted communities.

### 6.1 Key Take-Aways

- Programming along the Humanitarian-Development Nexus: Analysing the differences between the localities with the highest and lowest scores on the Stability Index (section 3) can provide useful insights into programme priorities. Different programmes are needed in localities on opposite sides of the stability spectrum. For example, in localities with rather low stability scores, immediate humanitarian assistance might be needed to improve daily public life and access to farmlands, while in localities with higher stability scores development programming may be more relevant to further strengthen resilience that may spin off on surrounding communities.
- Focus programming on safety & security indicators and access to livelihoods: In the BAY states of north-east Nigeria, out of the five most influential variables, two are indicating the importance of the freedom to move around the locality without restrictions or a curfew in place. Another two out of the top indicators point out the significance of access to livelihoods as a precondition for stability. More specifically, the access to farmland and fishing grounds. This highlights the need to develop responses that positively impact the variables on the freedom of movement, in addition to the more “traditional” recovery programmes that promote livelihoods and access to basic public services.

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## 7. APPENDIX

### 7.1 Selection of Localities

The selection of localities was as broad as possible in areas affected by displacement and/or returns in the north-east region of Nigeria. A list of localities to be surveyed was created based on data collected by IOM on displacement/returns and other existing data systems (census, administrative lists, etc.). The objective was to have a large enough number of localities at both the country and regional level to ensure a solid foundation for statistical analysis. A total of 657 locations in Borno, Adamawa and Yobe, were covered. A locality is the administrative level 4 (lowest possible level). The level has a representation, whether formal (State) or informal (Chef de village).

### 7.2 Stability Index Calculation

The Stability Index calculation begins with survey design: this tool was developed with substantive input from community stabilization and HDPN experts. It includes a set of questions assessing the conditions in a locality that were determined to be 1) potential indicators of stability and 2) possible to rank in terms of their stability implications. Questions were divided into four categories: anchor questions (perceptions about stability), safety and security, social cohesion, and access to basic services.

Before index calculation, responses were ranked ordinally from best to worst case scenario. Then, Principle Component Analysis (PCA) was run using all indicators *except for the “anchor questions”*, which are used instead to validate index results. The **weight** for each variable, determined via PCA, was combined with the ranked survey-responses for each locality to generate its overall **Stability Score**.

### 7.3 Sub-Index Calculation

In addition to the Stability Score, three separate **sub-indexes** were generated using the variables from each of the three themes in the survey: Security, Social Cohesion, Services. The sub-indexes were calculated by separately combining the **weights** from the Stability Index calculation with the variables for each theme, and then rescaled between 1-100. **The overall Stability Index is *not* an average of these three sub-indexes.** The sub-indexes facilitate the identification of localities that may need specific attention in one of these sectors.

### 7.4 Stability Index Validation

The Stability Index and the sub-indexes are **validated against the key questions on the perception of stability**. This ensures that there is a statistically significant relationship between the Stability Scores and the perception of stability. The relationship was validated via logistic regressions which indicate that a locality's Stability Index score has a statistically significant, positive correlation with both the community's feeling of stability and their feelings of whether they will need to leave soon. However, there is no discernable relationship between Stability Score and the perception about whether the situation is improving or getting worse.

### 7.5 Principal Component Analysis

The Stability Index is calculated using a dimensionality reduction technique called Principal Component Analysis (PCA), which **essentially condenses the information from over 30 variables into a single, easily comparable Stability Score**. PCA gives more weight to the factors that have a greater impact on the variability in the data, meaning that those factors make up a larger proportion of the Stability Score.

While each of the indicators assessed is clearly important for informing programming along the humanitarian-development-peace nexus, **PCA is particularly useful for demonstrating the impact of different indicators on one another, and the proportional influence of a given indicator on a given dataset**. For example, while the availability of electricity and access to health care are both individually important factors, they also heavily influence one another (this is called collinearity). PCA helps to see beyond the collinearity and drives at influence in a more coherent way, which is critical to understanding complex phenomena like the nature and conditions of return.

### 7.6 Cluster Generation

To facilitate the analysis of groups of localities, **clusters** were created using the K Nearest Neighbors (KNN) machine learning algorithm, weighted by geographic distance. KNN allows for the identification of groups of localities that are the most similar across all of the provided inputs. The inputs included the first five dimensions from the Principle Component Analysis results generated during the Stability Index calculation, as well as the geographic distance between the latitude-longitude points of each locality.

### 7.7 Limitations

Some localities that were not accessible during the data collection period were not assessed due to security or logistical reasons. This may have introduced bias as data points from some of the least secure locations were excluded from the analysis. This limits the generalizability of the Stability Index findings in extremely insecure localities.

It is important to note that the Stability Index is based on informants' perceptions of stability and reports of the conditions in their locality and does not claim to provide an objective measure of this complex topic. Key informants are not randomly selected and may have different opinions about the stability in their locality than some of their neighbors.

## 75 – Survey Indicators

### ANCHOR QUESTIONS: PERCEPTION OF STABILITY

These key indicators were used to measure the perception of stability in each locality. The key indicators were then tested against each of the thematic indicators below to identify the most influential thematic indicators on the perception of stability.

#### Feeling of Stability in the Locality

*Does the locality feel safe and stable or unsafe and unstable?*

#### Ability to Continue Living in Locality

*Do people in the locality feel that they need to leave within the next six months?*

#### Changes in Perception in the Last 6 Months

*Do people feel more or less hopeful about the state of the community than they did six months ago?*

### SCALE 1: LIVELIHOOD & SERVICES

#### Shelter Access and Quality

*Proportion of the community that has access to shelter and conditions of shelter.*

#### Damage to Homes

*Level of damage to homes due to conflict, and whether reconstruction is underway.*

#### Primary Education

*Access to primary education and availability of schools in the locality or in neighbouring towns*

#### Health Center and Medical Care

*Access to functioning health center in the locality or in neighboring town*

#### Local Market

*Whether markets are open regularly and supplied*

#### Electricity

*Electricity access and reliability in the locality*

#### Drinking Water

*Drinking water access and availability in the locality.*

#### Farmland & Fishing Grounds

*Extent of fishing grounds and farmland being used in the locality*

#### Presence of Public Sector Employees

*Whether public sector employees are present and how they reacted to the conflict.*

#### Internet and Communications Technology

*Access and reliability of internet or phone services.*

### 75 – Survey Indicators

#### SCALE 2: SOCIAL COHESION

##### Illegal Occupation of House, Land and Property

*Land, habitat or property occupied illegally (without authorization from family, neighbors, local authorities)*

##### Robbery Personal Effects

*Robbery of personal belongings reported in locality in the last 6 months*

##### Cattle Theft Reported

*Cattle theft reported in the locality in the last 6 months*

##### Daily Public Life

*Whether residents are able to carry out basic activities without worry (going to the market, letting children play outside, street vendors, etc.)*

##### Community Support

*Likelihood of cooperation between neighbors in case of problems (such as with the supply of water or food) in the locality*

##### Community Tension

*Incidents or clashes involving two groups (religious, ethnic, herders/farmers, displaced/returnee/host communities) in the locality*

##### Equal Access to Services

*Populations in the locality have equal access basic services and resources no matter their age, sex or group (ethnicity, clan, displacement status)*

##### Identity Documents

*Level of identity document possession or access in the locality*

##### Participation in Public Affairs

*Level of participation in local public and political life (civil society organizations, unions, committees, social gatherings, religious groups)*

#### SCALE 3: SAFETY AND SECURITY

##### Recent Security Incidents

*Whether there have been serious security incidents in recent months*

##### Security Incidents – Resources

*Trends in the number of security incidents linked to resource tensions (cattle raiding, land conflict, etc.) over past three months.*

##### Security Incidents – Non-State Armed Groups

*Trends in the number of security incidents linked to NSAG activities (kidnapping, terrorist attacks, raids, etc.) over past three months.*

##### Petty Crime

*Trends in the number of petty crimes (theft, pickpocketing, vandalism, public intoxication, etc.) over past three months.*

##### Community Concerns About Security

*How concerned residents feel about their security (kidnapping, crime, fighting between armed groups, etc.).*

##### Police Presence

*Presence of police/gendarmerie in the locality*

##### Security Forces Presence

*Presence of security forces in the locality*

##### Non-State Armed Groups Presence

*Presence of Non-State Armed Groups in the locality*

##### Informal Militias/ Vigilante Group Presence

*Presence of informal self-defense militias and vigilante groups in the locality*

##### Freedom of Movement

*Residents' freedom of movement (to markets, to their homes, to workplaces, to farms, etc.) in the locality*

##### Formal Curfew

*Formal curfew for security reasons enforced by State*

##### Informal Curfew

*Informal curfew enforced by Non-State Armed Groups*

##### State of Emergency

*Whether the locality is under a state of emergency*

##### Legal Remedies

*Whether residents have access to legal remedies to resolve disputes*