IMPACT OF CLIMATE AND ENVIRONMENTAL CHANGES ON IDP HOUSEHOLDS

North-West and North-Central States of Nigeria

June 2024

1.0 INTRODUCTION

51,896 Number of Households

303,173 IDP Population

100 Number of camps

2,306 HHs Sample Size

In recent years, climate and environmental changes have increasingly affected various regions across Nigeria, leading to significant disruptions in the lives of internally displaced persons (IDPs). This report presents an assessment conducted to evaluate the impact of these changes on IDP households living in camps across 10 states in two regions: north-central (Benue, Plateau, Nasarawa, Niger, and Kogi states) and north-west (Kaduna, Kano, Katsina, Sokoto, and Zamfara states). The assessment aimed to understand how climate and environmental events such as floods, sandstorms, windstorms, droughts, and erratic rainfall patterns have influenced the livelihoods, migration patterns, and resource access of IDP households.

The findings provide valuable insights into the challenges faced by IDP households due to climate and environmental changes. The data collected highlights the prevalence of various climate events and their effects on household's access to resources and overall livelihood. Additionally, the report explores the coping mechanisms employed by these households and the resultant tensions and conflicts arising from increased competition for resources.

This assessment is significant because it can inform policymakers, humanitarian agencies, and stakeholders about the pressing needs of IDP households in the context of climate change, environmental degradation and disasters. By understanding the specific impacts and vulnerabilities, targeted interventions can be developed to mitigate the adverse effects and enhance the resilience of these communities.

This report is structured to provide a comprehensive analysis of the data collected, presenting findings in percentages to ensure clarity and precision. The subsequent sections detail the methodology, sample size, limitations, survey findings, and conclusions drawn from the assessment.

Map 1. displaying the surveyed camp locations.

2.0 METHODOLOGY

The assessment employed an approach to gather quantitative and qualitative data from IDP households in the targeted regions. A structured questionnaire was designed to capture detailed information on household demographics, climate event impacts, migration patterns, resource access, and coping mechanisms. The questionnaire was administered through face-to-face interviews with household heads or representatives.

The survey was conducted between 22 May 2024 and 02 June 2024 across 123 camps spread across 10 states, with data collection teams deployed in each state to ensure comprehensive coverage. Enumerators were trained on the survey tools and data collection techniques to maintain consistency and reliability in the data gathered. The survey included both closed-ended and open-ended questions, allowing household representatives to provide specific quantitative data and elaborate on their experiences.

Data collected were analyzed to generate descriptive statistics, including means, percentages, and frequencies. The analysis focused on understanding the distribution of responses across different IDP groups in camps and regions, highlighting significant patterns and trends. Qualitative data were thematically analyzed to complement the quantitative findings and provide deeper insights into the experiences of IDP households.

Quality control measures were implemented throughout the data collection and analysis process. Supervisors conducted regular checks to ensure data accuracy and completeness, and any discrepancies identified were addressed promptly. The findings presented in this report are based on the aggregated data from all 10 states, ensuring a comprehensive overview of the impact of climate and environmental changes on

2.1. Sample size

The sample size for the assessment was determined based on the estimated population of IDP households in the targeted states. A survey of 2,306 households was conducted, with the sample size allocated to each state based on the number of IDPs in camps. The sample included 956 households from Benue, four from Kaduna, 18 from Kano, and varying numbers from the other states as shown in the below chart, ensuring representation from both north-central and north-west regions.

The sampling strategy aimed to capture a diverse range of household types living in camps, including those with different socioeconomic status, household sizes, and experiences of climate events. This approach allowed for a comprehensive analysis of the impact of climate and environmental changes on different segments of the IDP population.

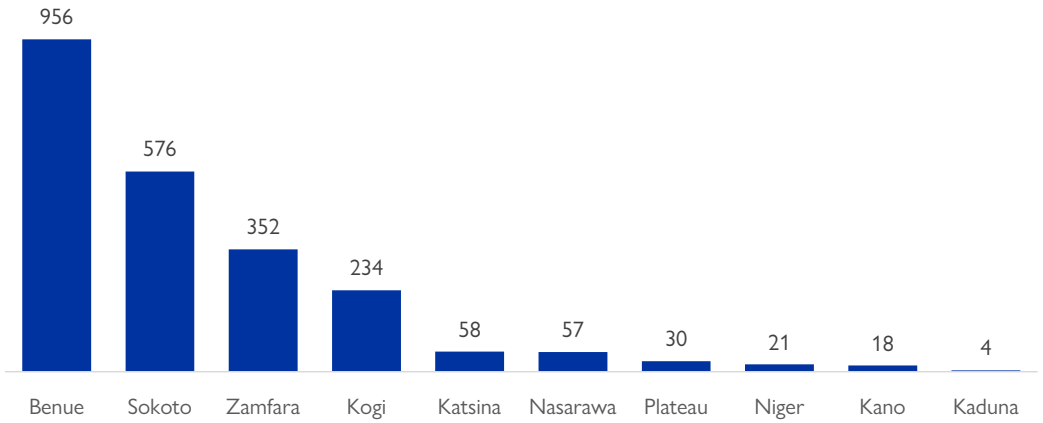


Figure 1. Sample size per state

3.0 LIMITATIONS

While the assessment provides valuable insights, several limitations should be noted.

First, the sample size in some states, such as Kaduna, could have been larger, which might have limited the generalization of the findings for those states. Efforts were made to ensure proportional representation, but logistical challenges in accessing certain areas may have affected the sample distribution.

Secondly, the reliance on self-reported data may introduce response biases, as households might underreport or overreport specific impacts due to recall issues or social desirability. However, trained enumerators and structured questionnaires aimed to minimize these biases and ensure data accuracy.

4.0 DISCLAIMER

All maps is for illustration purposes only. The boundaries and names shown, and the designations used on the maps do not imply official endorsement or acceptance by the International Organization for Migration.

5.0. SURVEY FINDINGS

5.1. Average household (HH) size

The demographic profile of the household representatives included a mix of ages, genders, and household compositions, 64 per cent of households male headed and 36 per cent female headed. The diverse demographics offered a strong foundation for examining how climate and evironmental changes affect different types of households.

The average household size across the surveyed states varied, with an average of five persons per household in Benue and higher averages in states like Kano (7) and Kaduna (7). These variations reflect the differing family structures and cultural practices across camps in different regions.

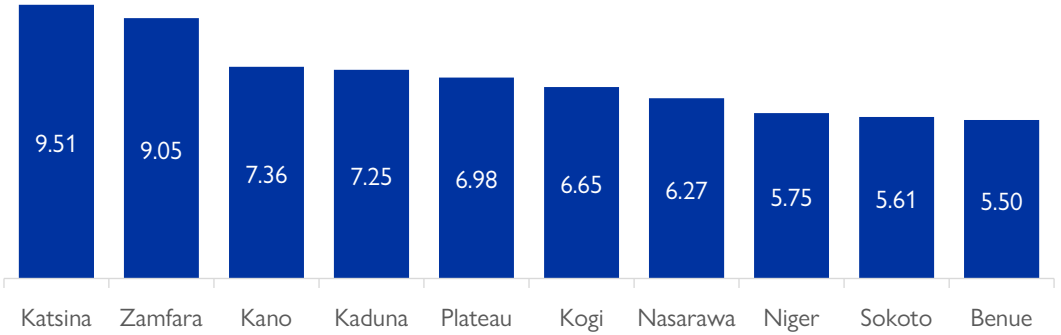


Figure 2. Average household size per state

5.2 Household representative age

The average age of household representatives was approximately 49 years, with slight variations across states. The median age of household representatives was 50 years. This demographic information is crucial for understanding the perspectives of household heads who are often the primary decision-makers.

5.3 Household demography

The demographic composition of households showed that children (0-17 years) made up a significant proportion of the population, with males representing 24 per cent and females 24 per cent, Adults aged (18-59 years) accounted for a substantial part of the population, with males at 22 per cent and females at 25 per cent, while the Elderly aged (60+ years) accounted for a small part of the population with three per cent male and two per cent female.

5.4 Common climate events

Households in camp across north-west and north-central reported experiencing various climate and environmental events, with floods at 74 per cent, windstorms at 43 per cent, droughts at 27 per cent, and erratic rainfall patterns at 18 per cent being the most common. Each event had different levels of impact on the households.

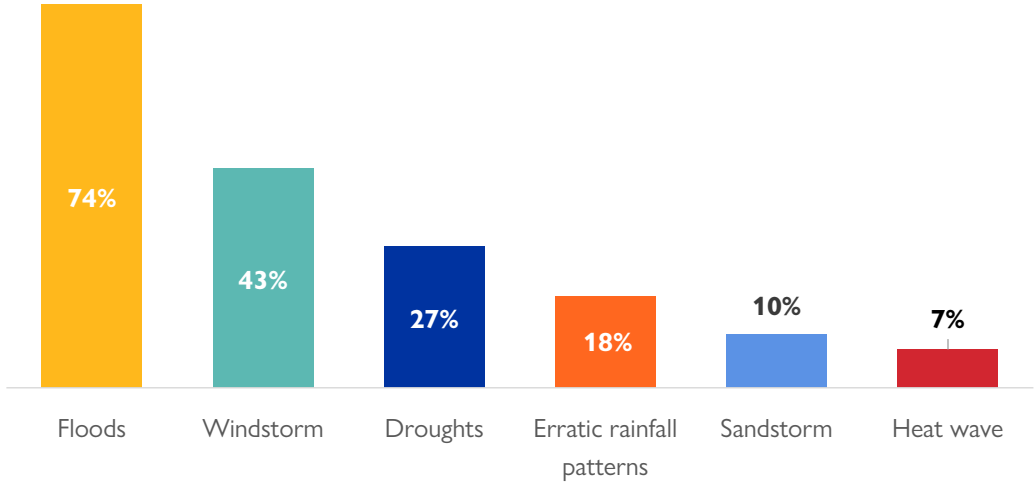
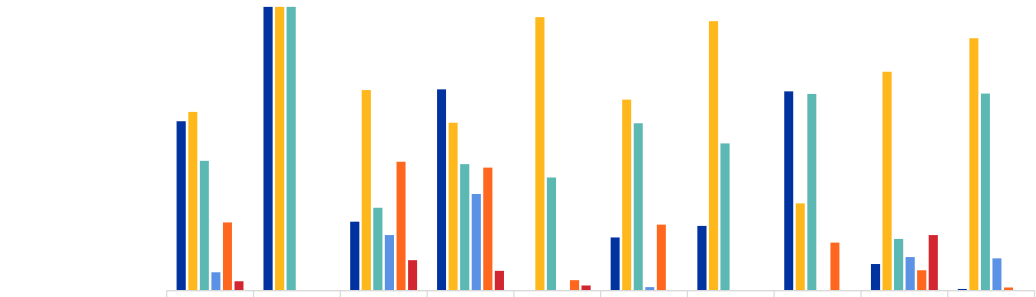


Figure 3. Common climate events*



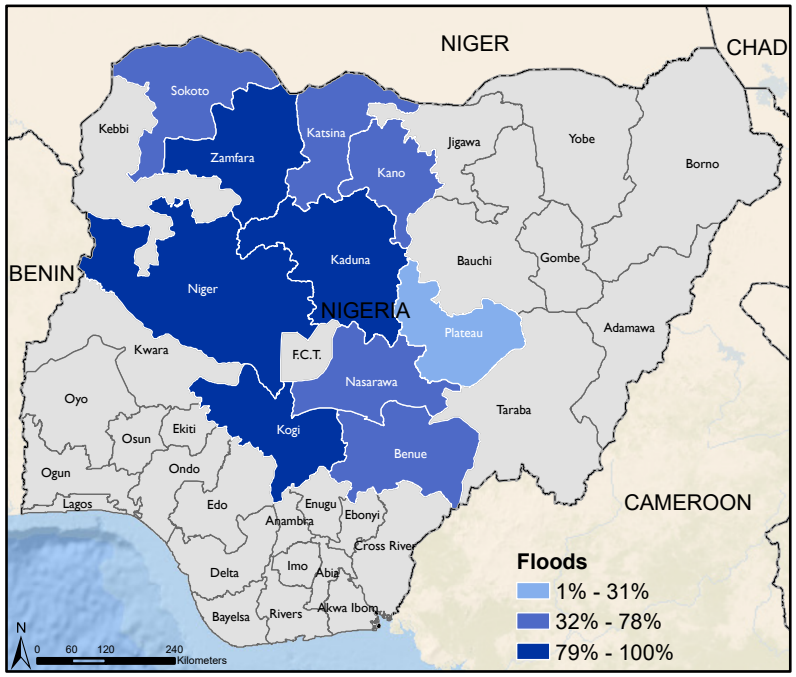
	Benue	Kaduna	Kano	Katsina	Kogi	Nasarawa	Niger	Plateau	Sokoto	Zamfara
Droughts	60%	100%	24%	71%	0%	19%	23%	70%	9%	1%
Floods	63%	100%	71%	59%	96%	67%	95%	31%	77%	89%
Windstorm	46%	100%	29%	45%	40%	59%	52%	69%	18%	69%
Sandstorm	6%	0%	20%	34%	0%	1%	0%	0%	12%	11%
Erratic rainfall patterns	24%	0%	45%	43%	4%	23%	0%	17%	7%	1%
Heat waves	3%	0%	11%	7%	2%	0%	0%	0%	20%	0%

Figure 4. Climate events per state*

*Multiple-choice response

5.4.1 Effect of Flood

The impact of floods on communities is severe, with 80 per cent of household representatives reporting shelter damage. Floodwater often leads to standing water inside homes (39%), creating breeding grounds for disease-carrying insects and exacerbating health risks. The loss of crops (60%) and arable land (28%) highlights the direct threat to food security, while the destruction of grain storage facilities (34%) disrupts long-term food preservation efforts.



Map 2. Flood events per state as reported

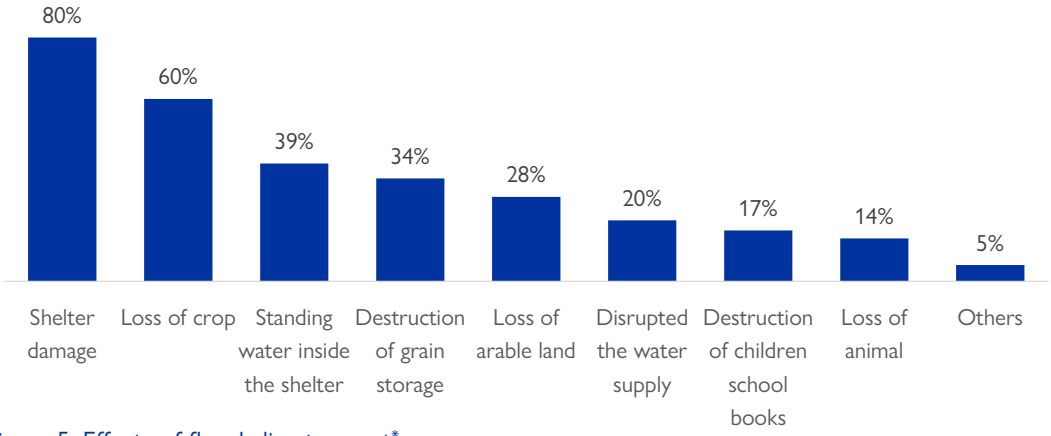


Figure 5. Effects of flood climate event*

Multiple-choice response

5.4.1.1 Frequency and severity of Flood

The frequency of floods is reported as frequent by 19 per cent of household representatives, occasional by 57 per cent, and rare by 20 per cent. This distribution suggests that while floods are a regular occurrence for many, they still pose significant challenges even in areas where they are less frequent.

The severity of these floods is noted as moderate by 40 per cent and severe by 39 per cent, indicating varying levels of impact across different regions.

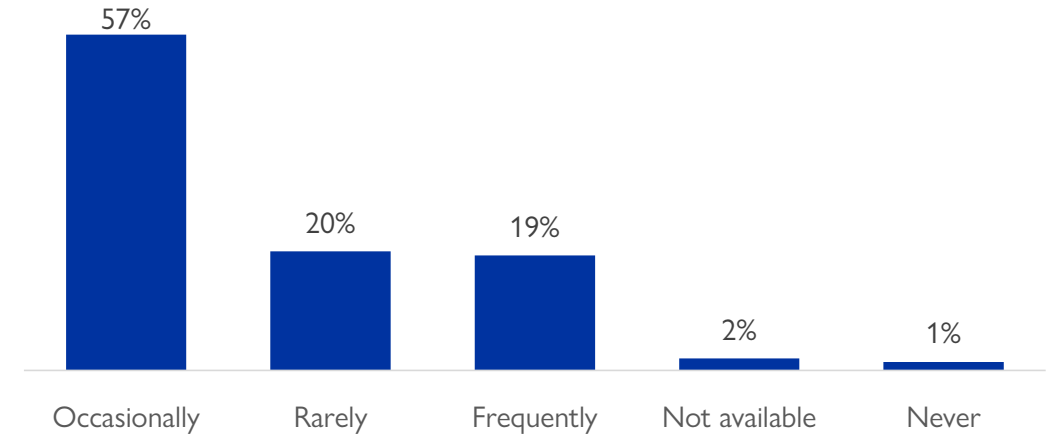


Figure 6. Frequency of flood climate event

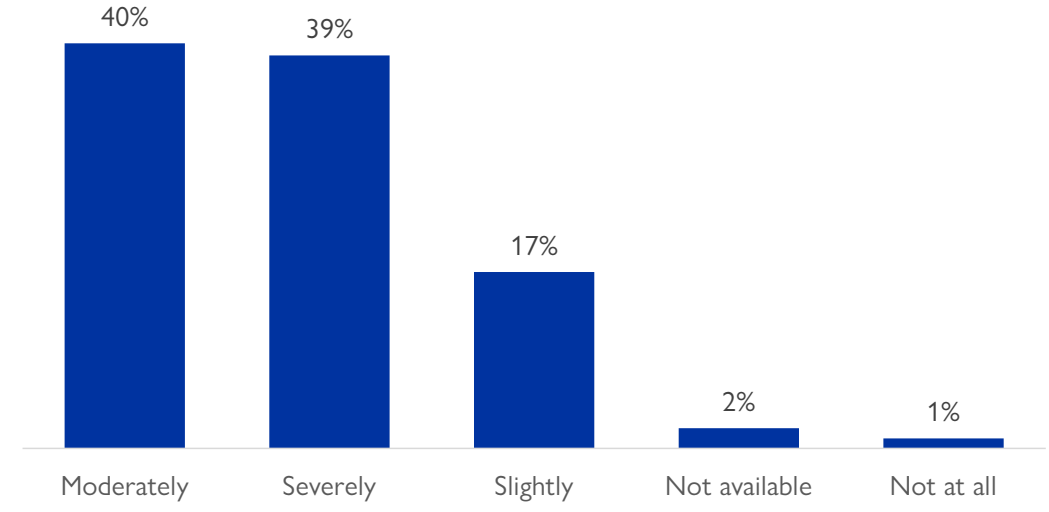
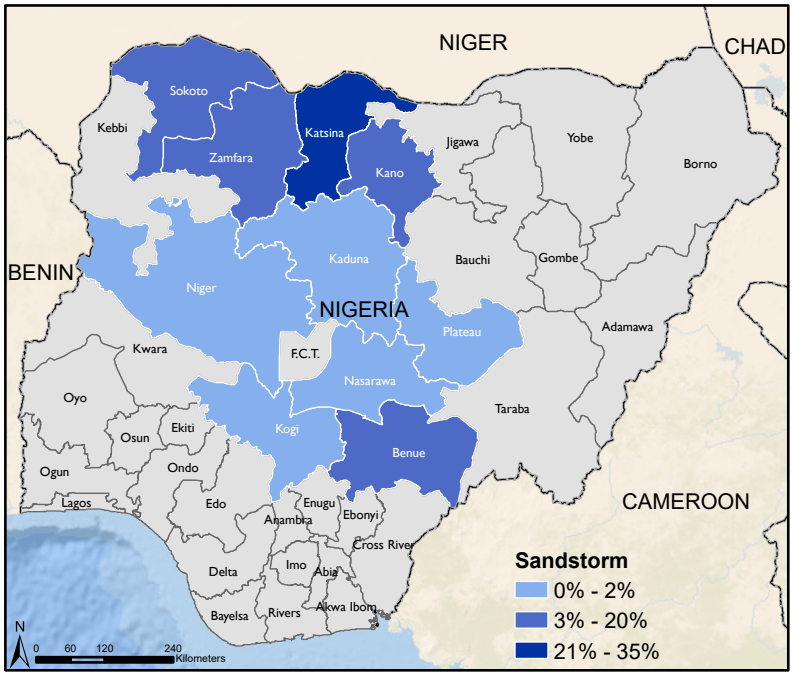


Figure 7. Severity of flood climate event

5.4.2 Effect of Sandstorm

Sandstorms, though less frequent than floods, have considerable impacts on communities, reported by 10 per cent of household representatives. These storms lead to the loss of crops (22%) and reduced crop yields (24%), directly affecting food security and agricultural productivity. The respiratory health issues caused by sandstorms are significant, with 19 per cent of household representatives reporting breathing problems or other health-related issues.



Map 3. Sandstorm event per state as reported

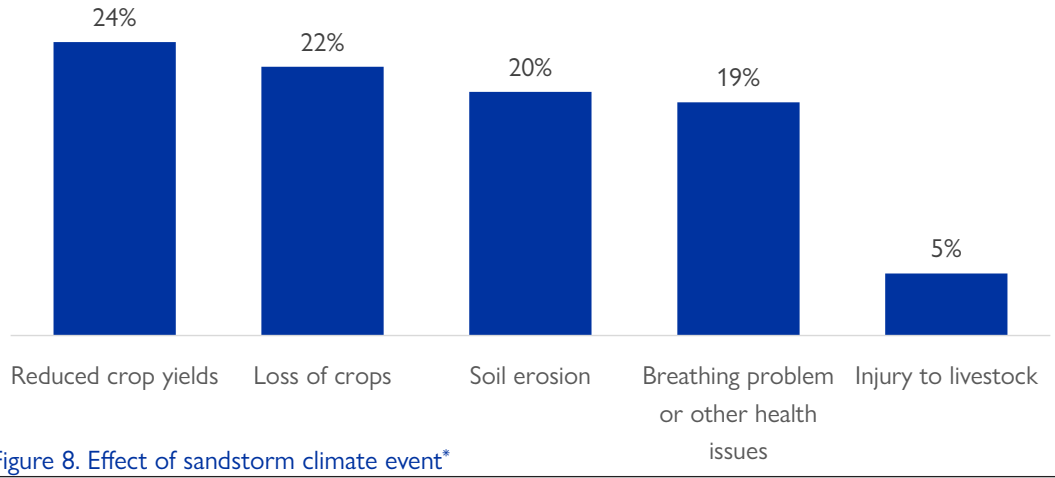


Figure 8. Effect of sandstorm climate event*

Multiple-choice response

5.4.2.1 Frequency and severity of Sandstorm

The frequency of sandstorms is reported as frequent by nine per cent, occasional by 24 per cent, and rare by 11 per cent. This distribution suggests that while sandstorms are not a daily occurrence, they are regular enough to cause significant concern and require adaptive measures.

The severity is noted as moderate by 18 per cent and severe by 12 per cent, indicating varying degrees of impact across different regions.

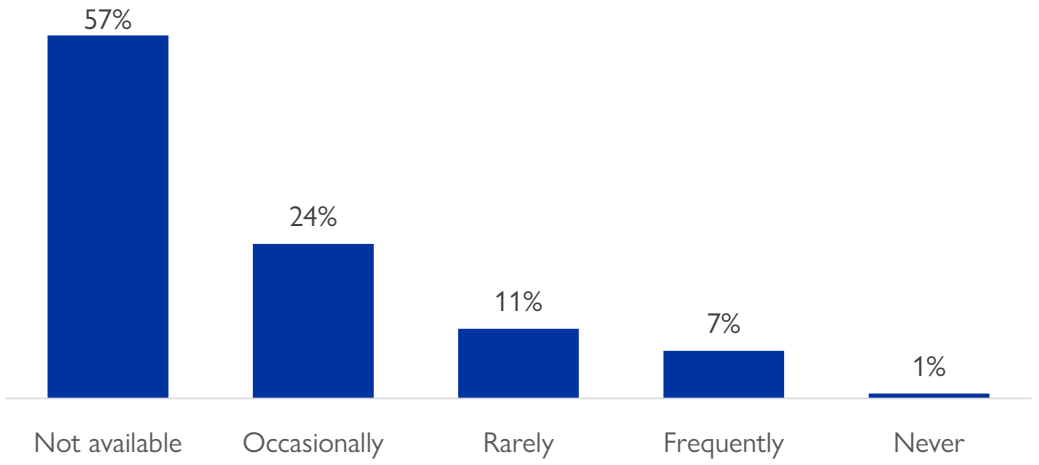


Figure 9. Frequency of sandstorm climate event

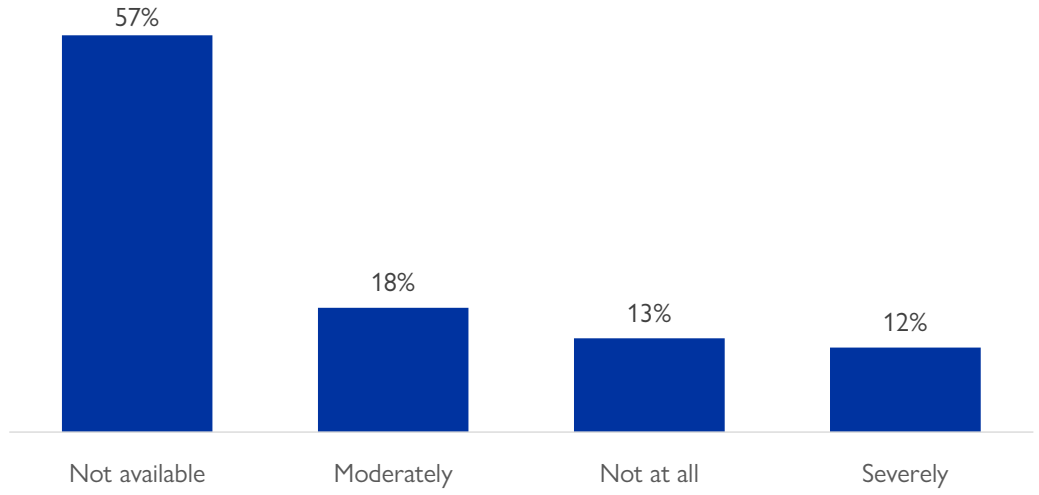
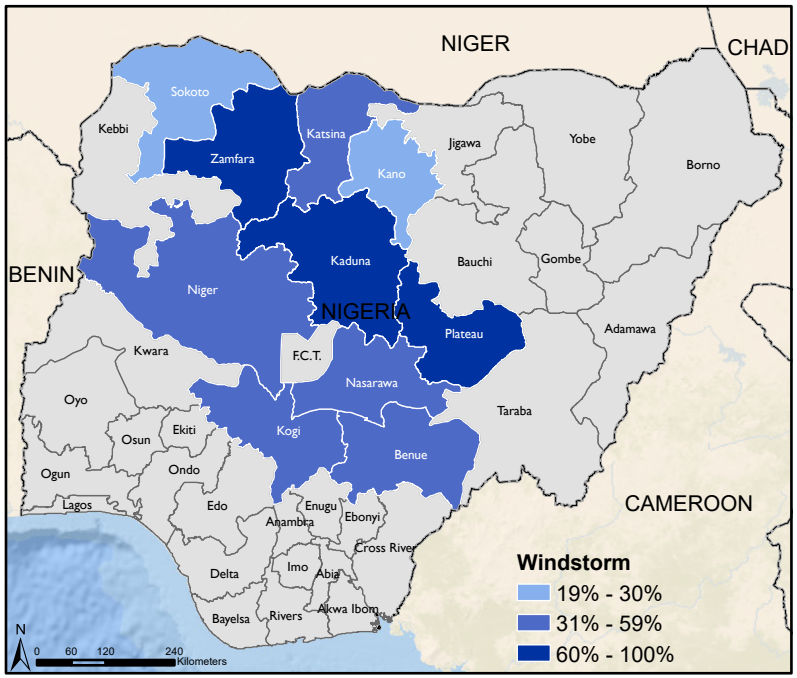


Figure 10. Severity of sandstorm climate event

5.4.3 Effect of Windstorm

Windstorms affect 43 per cent of household representatives, causing significant damage to shelters (54%) and resulting in injuries to livestock (13%). The loss of crops (44%) and reduced crop yields (34%) highlight the direct threat to food security posed by these storms. Additionally, windstorms contribute to soil erosion (24%), further exacerbating agricultural challenges.



Map 4. Windstorm climate event per state as reported

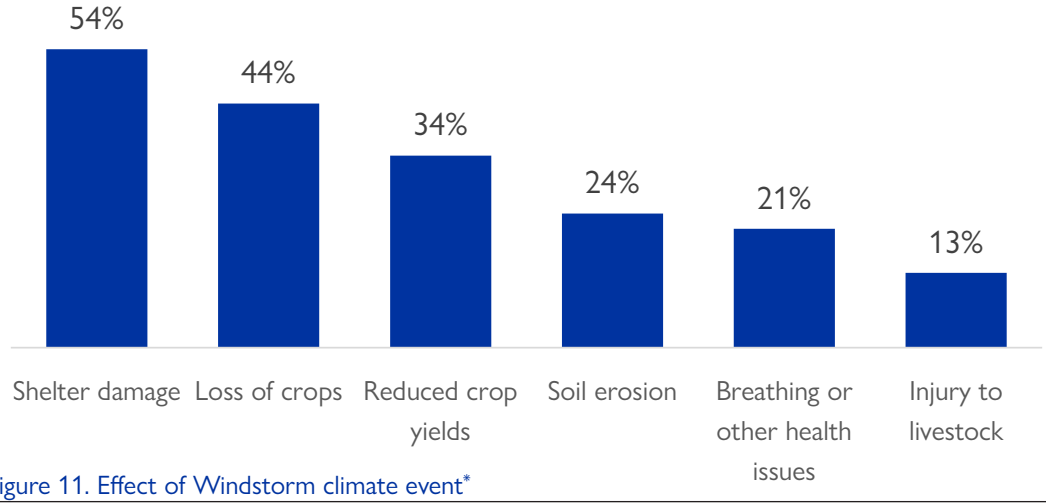


Figure 11. Effect of Windstorm climate event*

Multiple-choice response

5.4.3.1 Frequency and severity of windstorm

The frequency of windstorms is reported as frequent by 15 per cent, occasional by 45 per cent, and rare by 14 per cent. This distribution indicates that windstorms are a common occurrence in many regions, necessitating ongoing preparedness and adaptive measures.

The severity of windstorms is noted as moderate by 34 per cent and severe by 31 per cent, suggesting that while many windstorms are not catastrophic, they still pose significant risks.

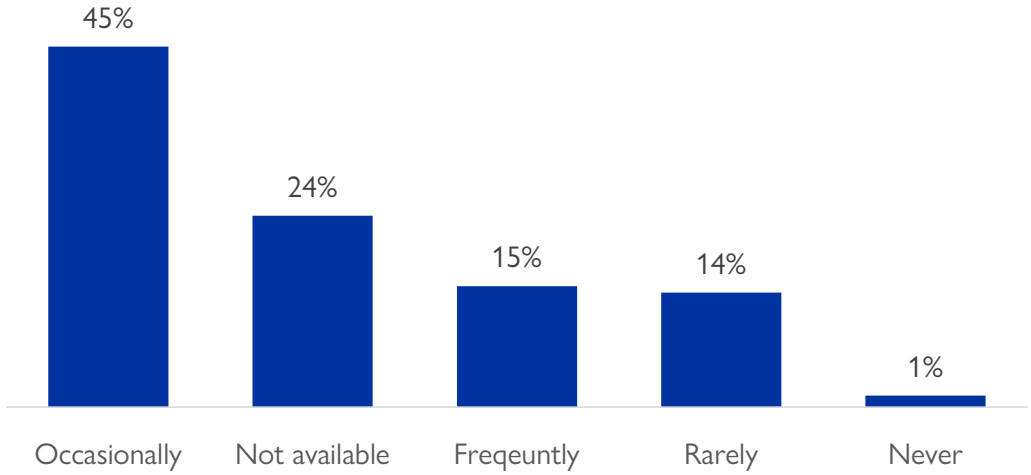


Figure 12. Frequency of Windstorm climate event

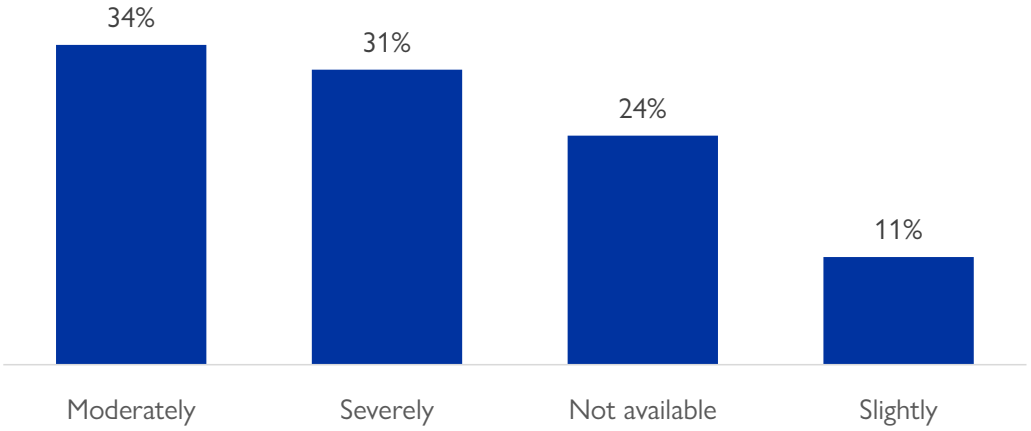
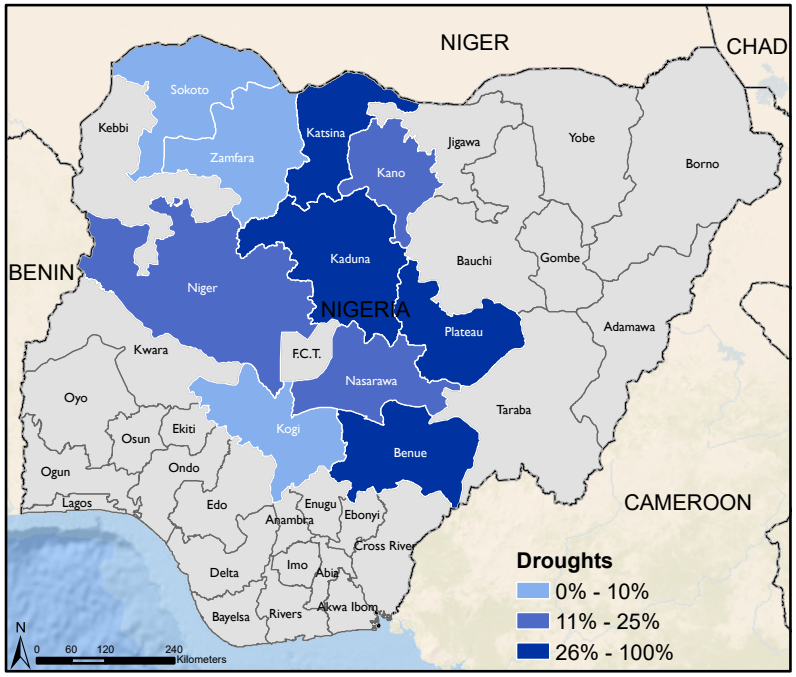


Figure 13. Severity of Windstorm climate event

5.4.4 Effect of Drought

Droughts are reported by 27 per cent of household representatives, with significant impacts on agricultural productivity and water supply. The loss of crops/pasture (45%) and economic hardship (41%) underscore the direct threat to food security posed by prolonged dry periods. Additionally, droughts contribute to decreased quantity of water (38%) and decreased quality of water (37%), further exacerbating agricultural challenges.



Map 5. Drought climate event per state as reported

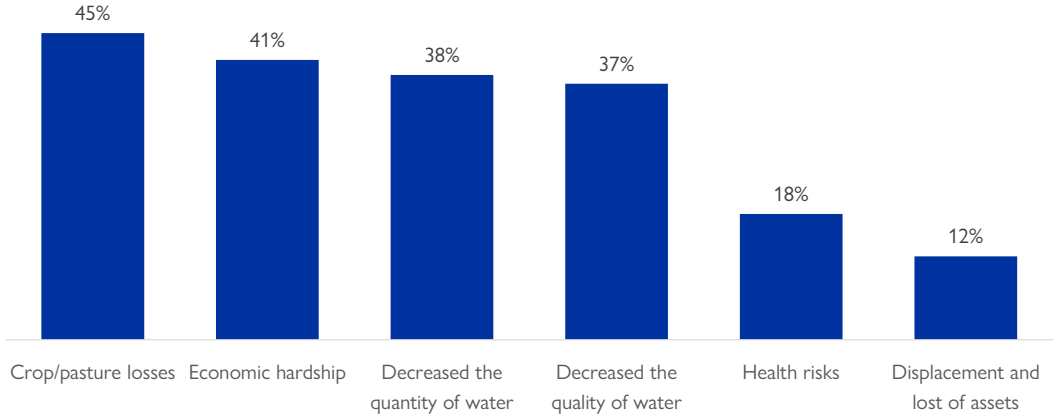


Figure 14. Effect of Drought climate event*

Multiple-choice response

5.4.4.1 Frequency and severity of drought

The frequency of droughts is reported as frequent by 17 per cent, occasional by 27 per cent, and rare by 13 per cent. This distribution indicates that droughts are a common occurrence in many regions, necessitating ongoing preparedness and adaptive measures.

The severity of droughts is noted as moderate by 22 per cent and severe by 26 per cent, suggesting that while many droughts are not catastrophic, they still pose significant risks.

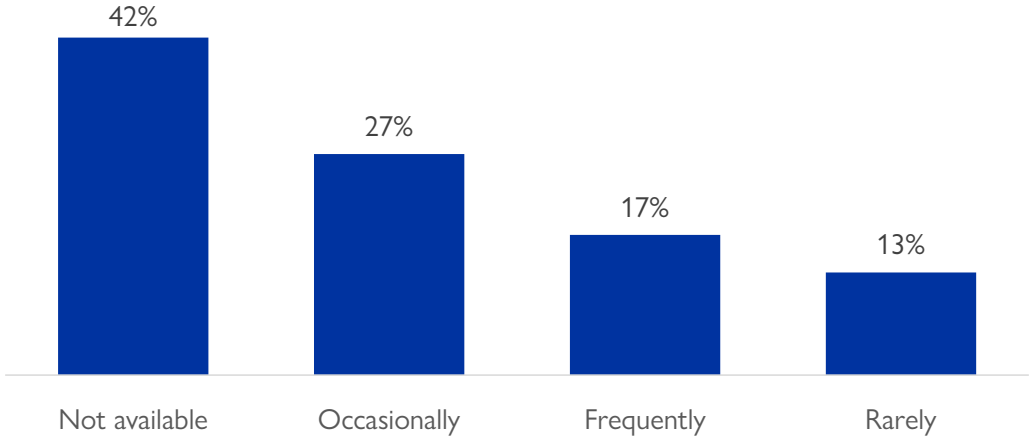


Figure 15. Frequency of Drought climate event

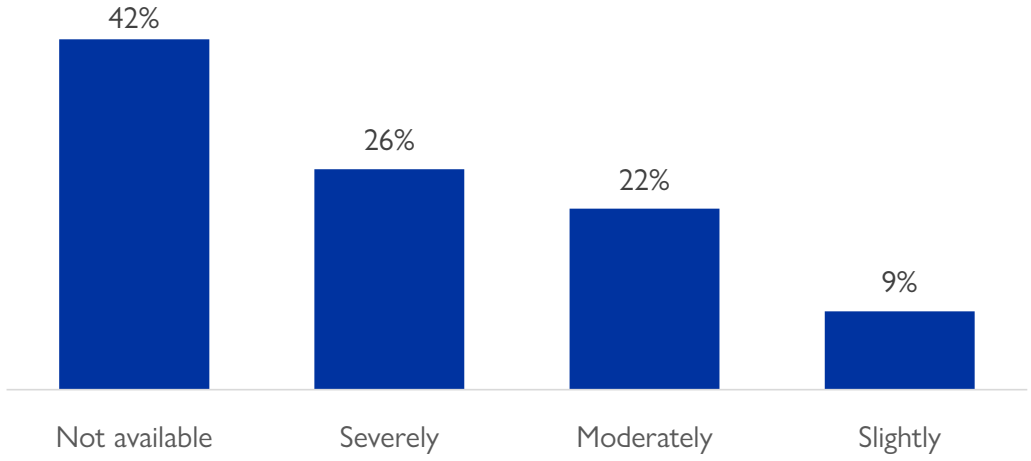
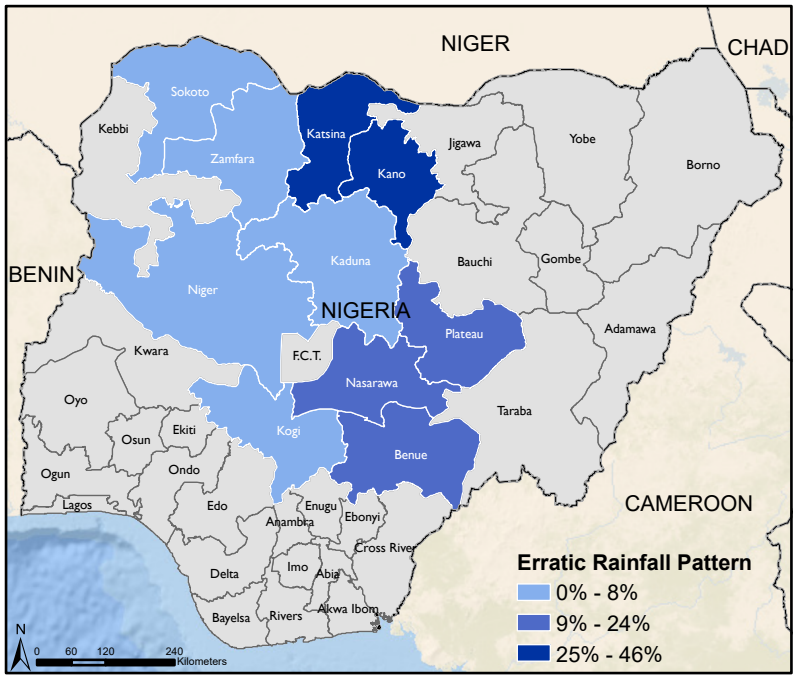


Figure 16. Severity of Drought climate event

5.4.5 Effect of Erratic Rainfall Patterns

Erratic rainfall patterns are reported by 18 per cent of household representatives, causing significant disruptions to agricultural activities and water management. The loss of crops/cattle (16%) and reduced crop yields (36%) highlight the direct threat to food security posed by unpredictable rainfall. Additionally, erratic rainfall contributes to water scarcity (41%), further exacerbating agricultural challenges.



Map 6. Erratic rainfall pattern climate event per state as reported

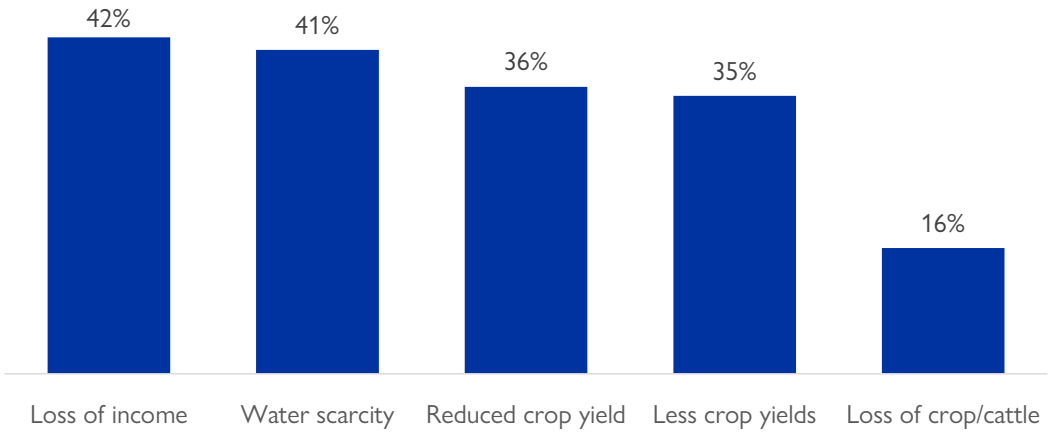


Figure 17. Effect of Erratic rainfall pattern climate event*

5.4.5.1 Frequency of erratic rainfall patterns

The frequency of erratic rainfall is reported as frequent by eight per cent, occasional by 42 per cent, and rare by 11 per cent. This distribution indicates that erratic rainfall is a common occurrence in many regions, necessitating ongoing preparedness and adaptive measures.

The severity of erratic rainfall is noted as moderate by 20 per cent and severe by 30 per cent, suggesting that while many erratic rainfall events are not catastrophic, they still pose significant risks.

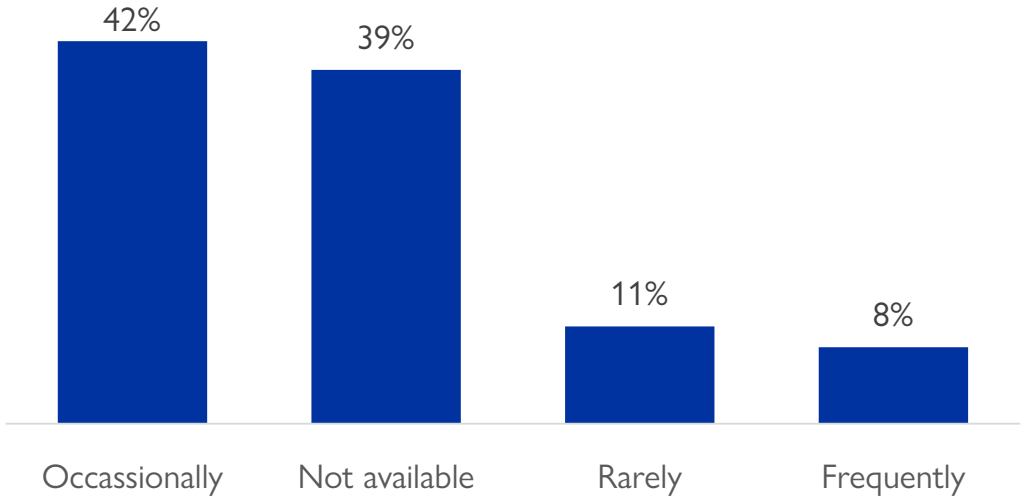


Figure 18. Frequency of Erratic rainfall pattern climate event

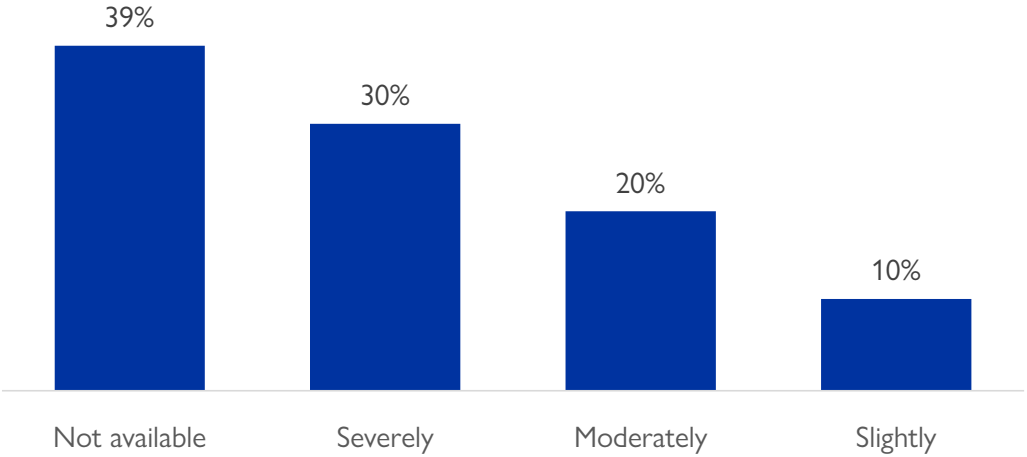


Figure 19. Severity of Erratic rainfall pattern climate event

Multiple-choice response

5.5 Migration due to climate change

Approximately 42 per cent of household representatives have considered moving from the camp, or know someone who has moved from the camp, due to climate change impacts. The primary factors driving this migration include loss of land productivity (85%), and water scarcity (42%). These factors highlight the severe socio-economic impacts of climate change on households.

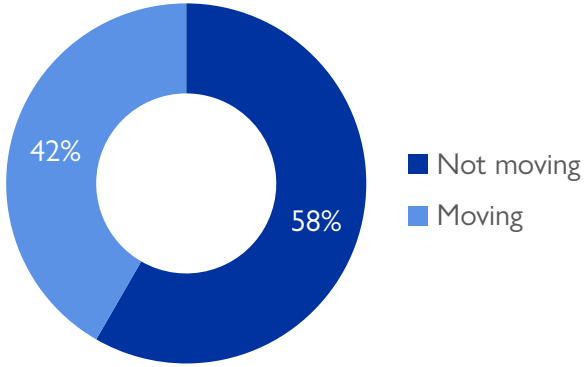


Figure 20. Migration intentions

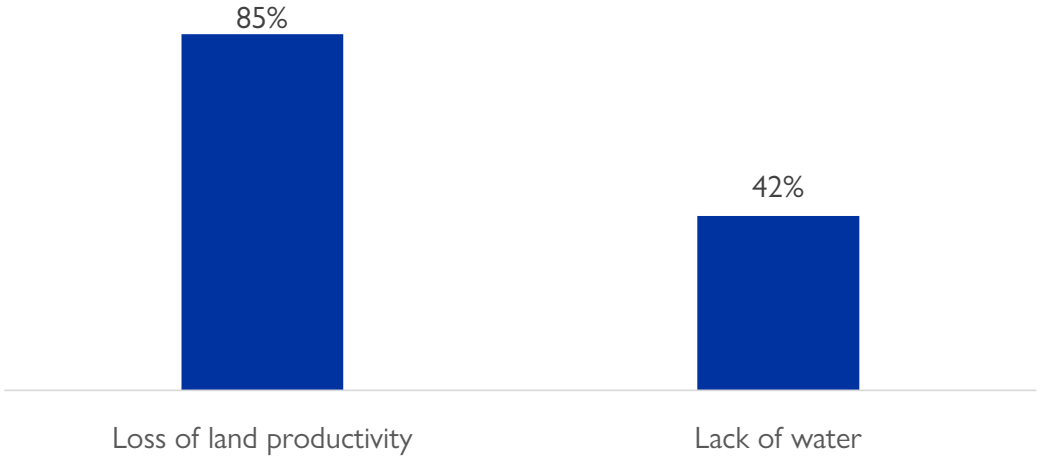


Figure 21. Major drivers of migration*

The survey indicated that out of those that moved out already, 12 per cent were considered permanent, while 36 per cent were seasonal, and 47 per cent were temporary. This distribution suggests that 12 per cent of households view migration as a long-term solution to climate impacts, while others see it as a temporary measure. The decision to migrate is influenced by the severity of climate impacts and the availability of resources in both the origin and destination areas.

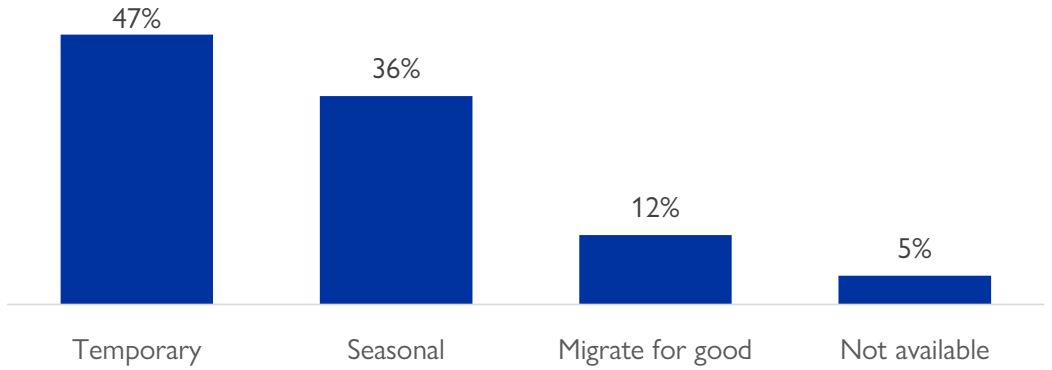


Figure 22. Migration type

Among those who have moved, 40 per cent have returned back to the camp, primarily due to improved conditions in their original location in camps (17%) or difficult conditions in their destination (3%). However, 47 per cent have not considered returning to the camp, citing better conditions in their destination area (28%) or ongoing challenges in their place of origin (19%).

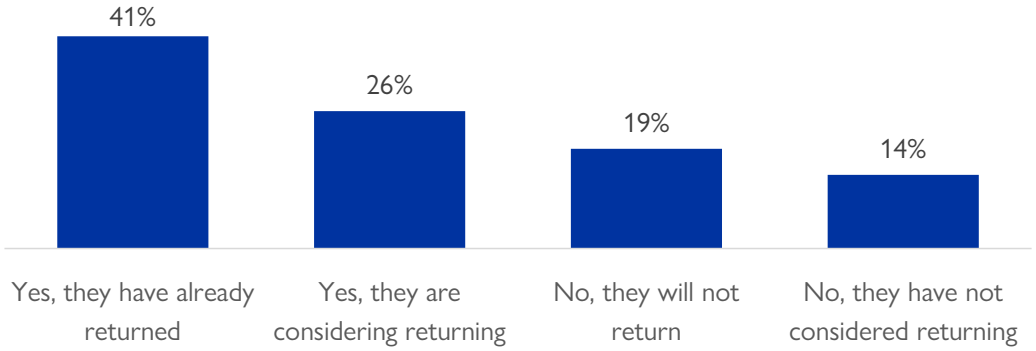


Figure 23. Return intention

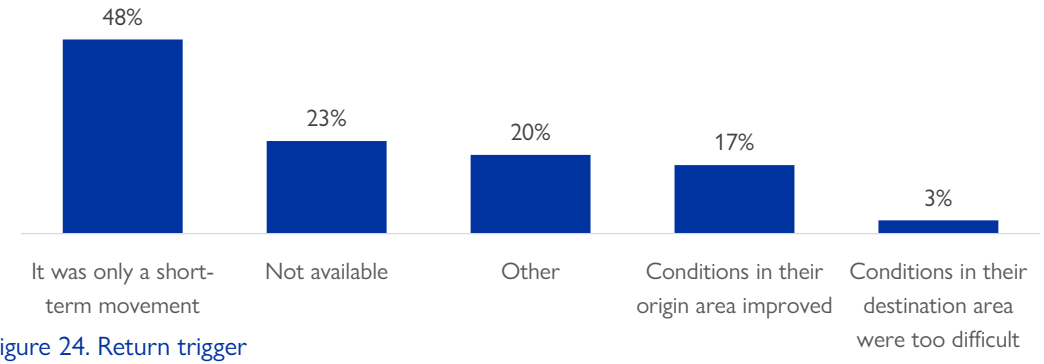


Figure 24. Return trigger

*Multiple-choice response

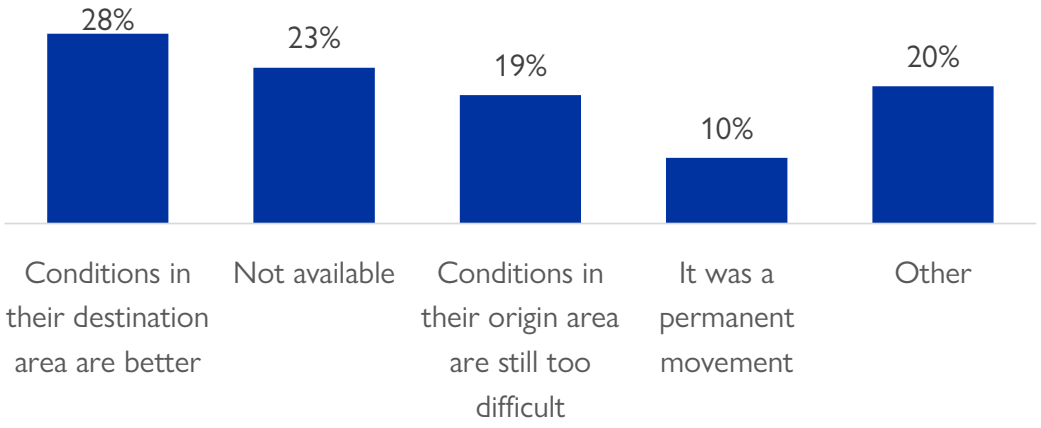


Figure 25. Reasons for not returning

5.6 Access to water

Water scarcity is a critical issue affecting household needs and agricultural activities. The reduced water availability for irrigation directly impacts crop yields and food security. Additionally, decreased water quality poses health risks, particularly waterborne diseases exacerbated by poor sanitation and hygiene practices.

Changes in water access are significant, with 35 per cent of household representatives reporting a decrease in water quantity over the past five years. This decrease is attributed to reduced rainfall, increased competition for water resources, and degradation of water sources. The decline in water quality is noted by 31 per cent of household representatives, highlighting issues such as pollution, sedimentation, and

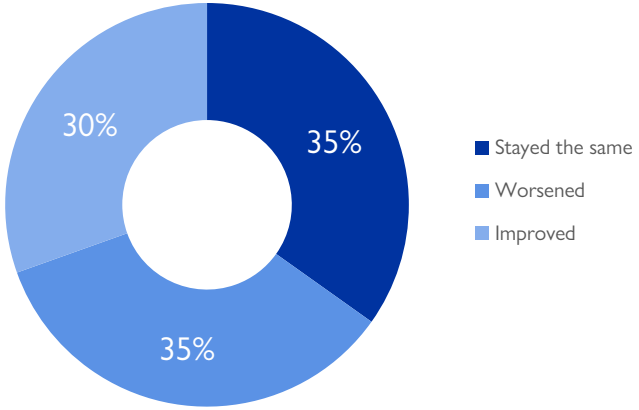


Figure 26. Effect of climate change on water quantity.

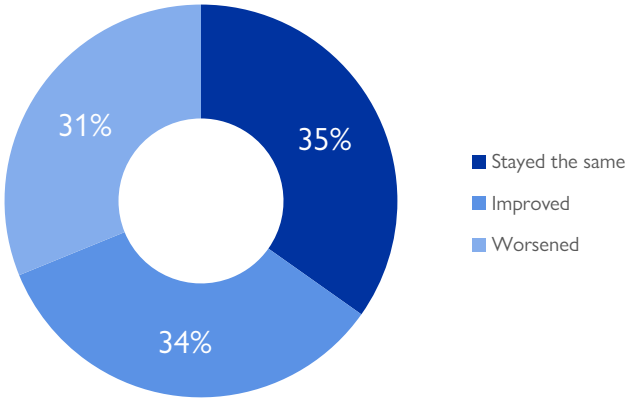


Figure 27. Effect of climate change on water quality.

The primary sources of income for household representatives include farming (73%), small business (41%), agriculture (22%), and herding (4%). These livelihoods are highly dependent on reliable water access, making communities particularly vulnerable to changes in water availability. The impact of climate change on water resources directly translates to economic hardships and reduced income opportunities.

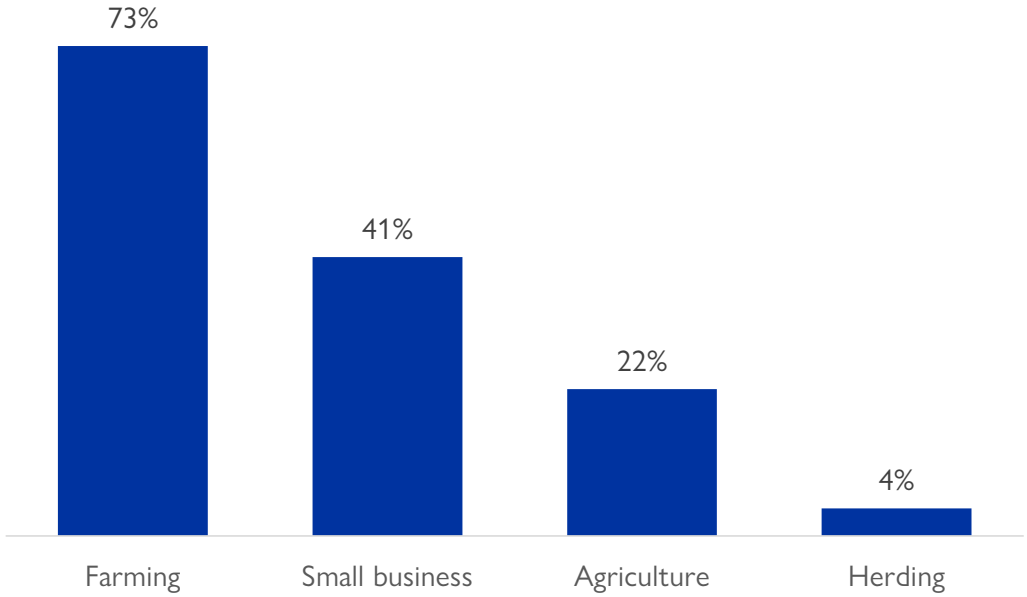


Figure 28. Livelihood reliable on water access*

*Multiple-choice response

5.7 Impact of climate change on livelihood

Climate change has significantly impacted livelihoods, with 60 per cent of household representatives reporting negative effects on their ability to earn a living. Loss of crops due to excessive rains or floods (45%), loss of daily labour jobs due to failure of agriculture (36%) and livestock death due to floods (19%) are major contributors to this impact. Additionally, reduced fishing yields and animal feed scarcity highlight the broader economic implications.

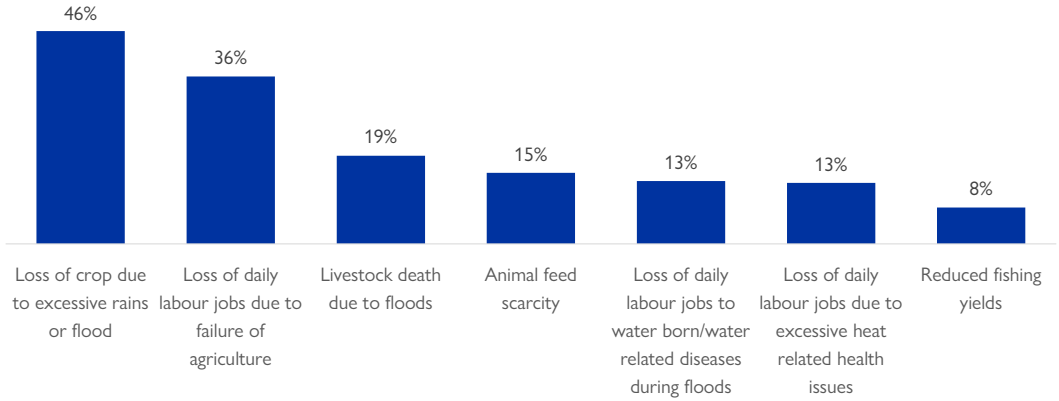


Figure 29. Impact of climate change on livelihood*

5.8 Coping mechanism

The survey indicates that 58 per cent of household representatives have adopted coping mechanisms to mitigate the impacts of climate and environmental events. These included diversifying livelihood activities (30%), reducing meal sizes (40%), and conserving water (14%).

Additionally, 23 per cent of households mentioned moving as a coping mechanism, while 15 per cent reported that at least one household member had moved to mitigate the effects. However, these strategies are often insufficient to fully offset the economic hardships caused by climate and environmental changes.

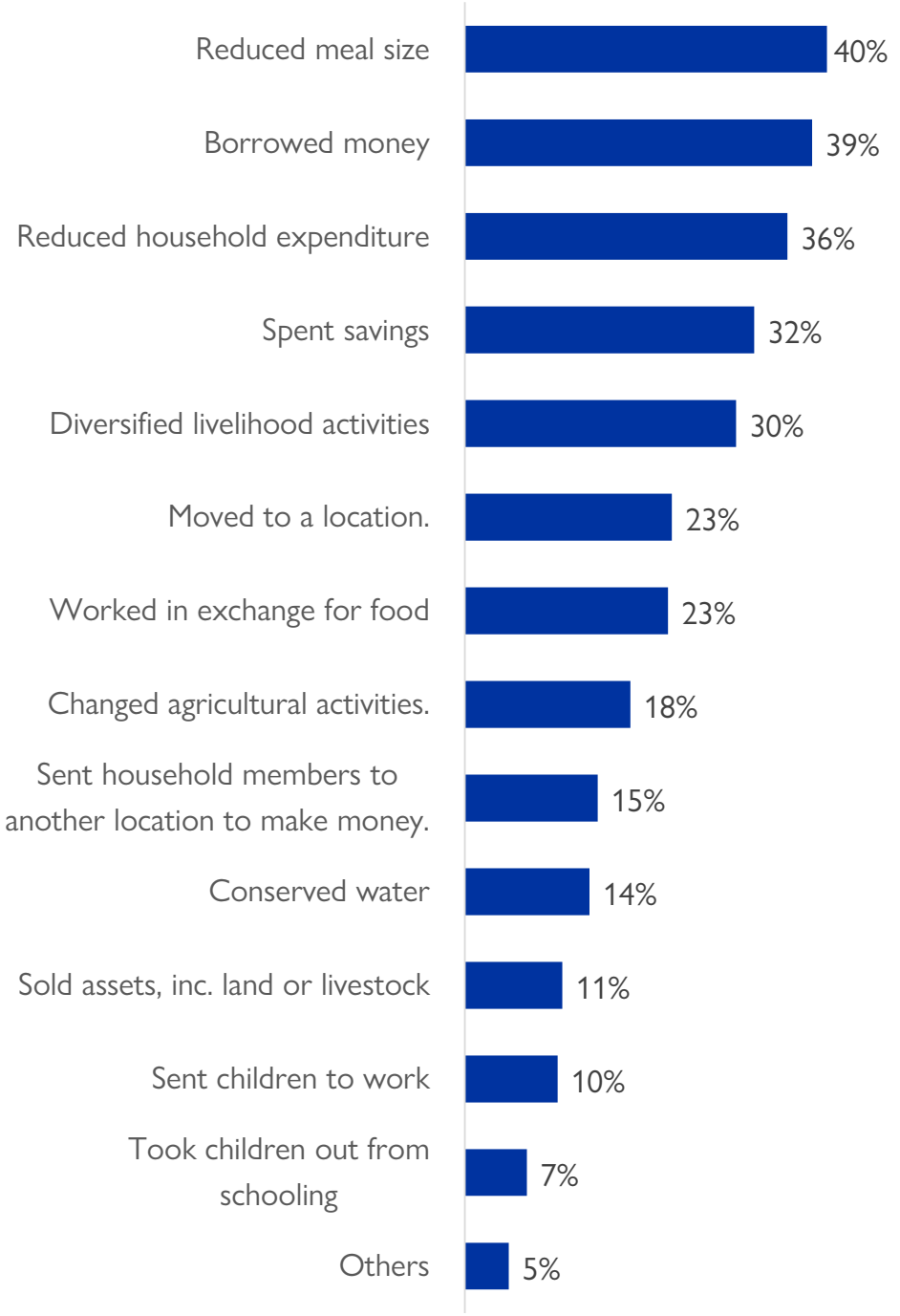


Figure 30. Coping mechanism*

*Multiple-choice response

5.9 Competition for Resources and Conflict

Competition for resources has also increased, with 42 per cent of household representatives noting heightened competition for arable land (32%), grazing land (22%), and water (51%). This competition has led to violent conflicts and communal tensions in some areas, further destabilizing communities and undermining development

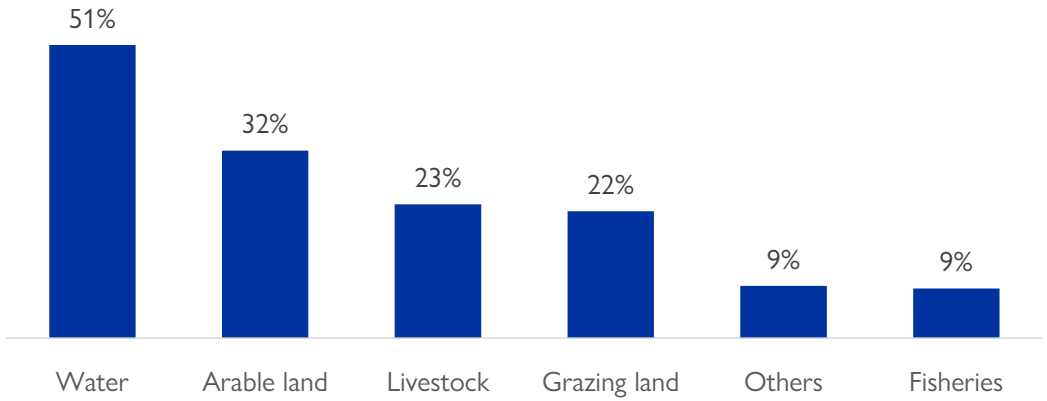


Figure 31. Competing resouces*

The survey indicates that 60 per cent of household representatives acknowledge that access to natural resources plays a role in conflicts or communal tensions, with 36 per cent indicating it as a contributing factor alonside other drivers and 24 per cent identifying it as the primary driver. This data underscores the importance of managing natural resources equitably to prevent conflicts and ensure sustainable development. Effective resource management and conflict resolution mechanisms are essential to address these issues.

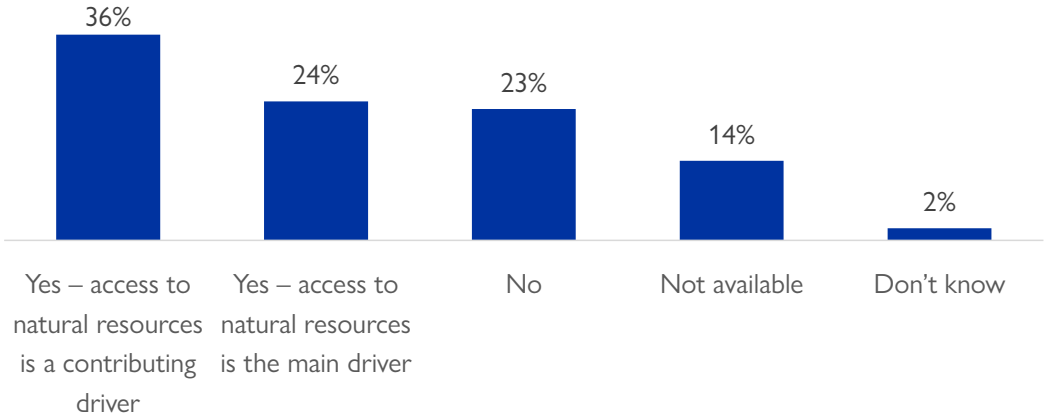


Figure 32. Triggers of conflict

6.0 Conclusion

Households have reported significant impacts from various climate events, with 74 per cent experiencing floods, 43 per cent dealing with windstorms, and 27 per cent affected by droughts. Floods have been particularly devastating, causing shelter damage for 80 per cent of household representatives, with 39 per cent experiencing standing water inside homes, leading to health risks. Additionally, floods have resulted in crop loss by 60 per cent and damaged grain storage by 34 per cent, highlighting the threat to food security. Sandstorms, although less frequent, have caused respiratory issues for 19 per cent and reduced crop yields for 24 per cent; windstorms have damaged shelters for 54 per cent and injured livestock for 13 per cent. Droughts have significantly reduced agricultural productivity and water supply, with 45 per cent reported crop loss and 41 per cent faced economic hardship.

Climate change has also driven migration, with 42 per cent of household representatives considering or experiencing relocation due to impacts like loss of land productivity (85%) and water scarcity (42%). While some migrations out of the camps are seasonal or temporary, 11 per cent are permanent. Access to water has worsened, with 35 per cent reporting decreased water quantity and 32 per cent noting deteriorating quality over the past five years. This scarcity affects livelihoods, as many depend on farming and agriculture. In response, 58 per cent of households have adopted coping mechanisms like diversifying activities and conserving water. Increased competition for resources, such as arable land and water, has led to conflicts/tension, further destabilizing affected communities.

*Multiple-choice response