Research Methodology Note

Greater Kapoeta Climate and Displacement Assessment

SSD1904

South Sudan

March 2022
Version number 1

1. Executive Summary

Country of intervention	*South Sudan*					
Type of Emergency	X	Natural disaster	□	Conflict	□	Other *(specify)*
Type of Crisis	X	Sudden onset	X	Slow onset	□	Protracted
Mandating Body/ Agency	*REACH*					
IMPACT Project Code	*32DPW/AIE, 32EFI/ANS*					
Research Timeframe *Add planned deadlines (for first cycle if more than 1)*	1. Pilot/ training: 07/03/2022		6. Preliminary presentation: N/A			
	2. Start collect data: 08/03/2022		7. Outputs sent for validation: 08/04/2022			
	3. Data collected: 18/03/2022		8. Outputs published: 15/04/2022			
	4. Data analysed: 25/03/2022		9. Final presentation: 22/04/2022			
	5. Data sent for validation: 25/03/2022					
Humanitarian milestones *Specify **what** will the assessment inform and **when** e.g. The shelter cluster will use this data to draft its Revised Flash Appeal;*	**Milestone**		**Deadline**			
	X	Donor plan/strategy	December 2022			
	X	Inter-cluster plan/strategy	June 2022			
	X	Cluster plan/strategy	June 2022			
	□	NGO platform plan/strategy				
	□	Other (Specify):				
Audience Type & Dissemination *Specify **who** will the assessment inform and **how** you will disseminate to inform the audience*	**Audience type**		**Dissemination**			
	□ Strategic		**X** General Product Mailing (e.g. mail to NGO consortium; HCT participants; Donors)			
	X Programmatic		□ Cluster Mailing (Education, Shelter and WASH) and presentation of findings at next cluster meeting			
	□ Operational		X Presentation of findings (e.g. at HCT meeting; Cluster meeting)			
	□ [Other, Specify]		X Website Dissemination (Relief Web & REACH Resource Centre)			
			□ [Other, Specify]			

Detailed dissemination plan required	□	Yes	X	No
General Objective	To understand the impact of climate shocks from a historical context on livelihoods, humanitarian needs, displacement and mobility restrictions for communities in Greater Kapoeta, to better inform the humanitarian support.			
Specific Objective(s)	Climate shocks A) **To understand the impacts of climate shocks on livelihoods and humanitarian needs.** *Understanding how drought (and flooding) have affected livelihoods and severity of humanitarian needs over the last 15+- years, as well as how this has changed over time.* **B) Understanding measures undertaken by community members to mitigate risks from climatic shocks.** *Gaining an understanding of how communities are planning to adapt to mitigate the impact of increased climate hazards, the sustainability of such measures, and how practices have already changed.* C) **Develop an understanding of drought exposure in Greater Kapoeta through remote sensing and ground-truth analysis.** *Increase understanding of drought exposure and its impact on agriculture and water levels through a comparison of remote sensing data on drought hazard and ground-truth analysis of exposed populations and land use.* Population movement **D) Assessment of 2021/2022 displacement triggered by climatic shocks.** *Understanding displacement as well as mobility restrictions triggered by climate shock event (drought in particular, but also flooding in some parts of Greater Kapoeta)* **E) Comparative analysis of 2021/2022 climate displacement vs historic displacement:** *Understanding whether the changes in the nature and severity of climatic shocks, if any, over the past 15 years have affected the dynamics of climate-driven displacement* **F) Potential for longer-term relocation driven by climate shocks:** *Understanding communities' perceptions of possible climate "tipping points" that would prompt decisions to relocate on a longer-term basis.*			
Research Questions	Climatic shocks *1)* What are the main livelihood or income-generating activities in the settlement? *2)* What are the impacts of recent climatic shocks on exposed communities and has this changed over time? *3)* How do communities perceive the occurrence of climatic shocks, including their severity and impacts? *4)* What coping capacities and mitigation measures are communities utilising to cope with the impacts of climate shocks? *5)* How do the physical extent and impacts of climatic shocks line up with detected drought and standing floodwater in satellite imagery? Population movement *6)* What is the historical context of climate population movement in this area? *7)* What is the current state of climate displacement and population movement in this area? *8)* What is the current state of mobility restrictions in this area caused by climate shocks and with other drivers, such as conflict, insecurity or tensions between groups? How does the current climate shock-driven displacement compare to past climate shock-driven displacement? *9)* What will the short and long-term future of climate displacement be for this area?			
Geographic Coverage	Greater Kapoeta (Kapoeta South, Kapoeta North and Kapoeta East counties), Eastern Equatoria, South Sudan.			
Population(s)	□	IDPs in camp	□	IDPs in informal sites

Select all that apply	X	IDPs in host communities	X	IDPs [returned]
	□	Refugees in camp	□	Refugees in informal sites
	□	Refugees in host communities	□	Refugees [Other, Specify]
	X	Host communities	□	[Other, Specify]
Data collection tool(s)	X	Structured (Quantitative)	**X**	Semi-structured (Qualitative)
	Sampling method		**Data collection method**	
Semi-structured data collection tool (s) # 1 *Focus Group Discussions related to climatic shocks with participatory mapping*	X Purposive □ Snowballing □ [Other, Specify]		□ Key informant interview (Target #):_ _ __ □ Individual interview (Target #):_ _ _ _ _ X Focus group discussion (Target #): 6-12 □ [Other, Specify] (Target #):_ _ _ _ _	
Semi-structured data collection tool (s) # 2 *Focus Group Discussions related to population movement with participatory mapping*	X Purposive □ Snowballing □ [Other, Specify]		□ Key informant interview (Target #):_ _ __ □ Individual interview (Target #):_ _ _ _ _ X Focus group discussion (Target #): 6-12 □ [Other, Specify] (Target #):_ _ _ _ _	
Semi-structured data collection tool (s) # 3 *Key Informant interviews related to climatic shocks and population movement with participatory mapping*	X Purposive X Snowballing □ [Other, Specify]		X Key informant interview (Target #):_ _ _6_ □ Individual interview (Target #):_ _ _ _ _ □ Focus group discussion (Target #): ___ □ [Other, Specify] (Target #):_ _ _ _ _	
Structured data collection tool # 1 *Direct geospatial observations*	x Purposive □ Probability / Simple random □ Probability / Stratified simple random □ Probability / Cluster sampling □ Probability / Stratified cluster sampling □ [Other, Specify]		□ Key informant interview (Target #):_ _ _ _ _ □ Group discussion (Target #):_ _ _ _ _ □ Household interview (Target #):_ _ _ _ _ □ Individual interview (Target #):_ _ _ _ _ x Direct observations (Target #): 20[1]□ [Other, Specify] (Target #):_ _ _ _ _ *[1] In each settlement to be assessed, at least five measurements of coordinates, photos, and other relevant details are to be taken using ODK Collect (grazing land and agricultural land affected / not affected by drought, plus water point(s) and infrastructure).*	
Data management platform(s)	X	IMPACT	□	UNHCR

	□	[Other, Specify]				
Expected output type(s)	□	Situation overview #: _ _	X	Report #: 1	□	Profile #: _ _
	□	Presentation (Preliminary findings) #: _ _	□	Presentation (Final) #: _ _	□	Factsheet #: _ _
	□	Interactive dashboard #:_	□	Webmap #: _ _	□	Map #: _ _5
	□	[Other, Specify] #: _ _				
Access	X	Public (available on REACH resource center and other humanitarian platforms)				
	□	Restricted (bilateral dissemination only upon agreed dissemination list, no publication on REACH or other platforms)				
Visibility *Specify which* ***logos*** *should be on outputs*	***REACH*** *[By default unless specified otherwise]*					
	Donor: *FCDO, BHA*					
	Coordination Framework: *N/A*					
	Partners: *N/A*					

2. Rationale

2.1 Background

Greater Kapoeta of Eastern Equatoria state (EES) is one of the areas of South Sudan most susceptible to drought. This is partly due to its location within the Southeastern semi-arid pastoral livelihood zone[1]. As the name suggests, this area is characterised by semi-arid conditions and lower rainfall than other parts of South Sudan. Despite the high frequency of drought conditions in the region, there is limited information on the implications these shocks may have on humanitarian needs and on population movement.[2] Recent reports indicate hunger-induced displacement occurred throughout Greater Kapoeta in January 2022, particularly from Jie payam to Kapoeta North and from Lotimor and Kauto payams into Ethiopia[3]. Lack of water access appears to be another key driver, with groundwater being too deep in Jie payam for boreholes to reach, whilst access to surface water is very limited3. In addition to current reports of population movement in Greater Kapoeta, similar patterns of population movement were also identified in REACH`s Population Movement Baseline Database in 2019,[4] indicating drought-related displacement could be becoming a more common occurrence in Greater Kapoeta.

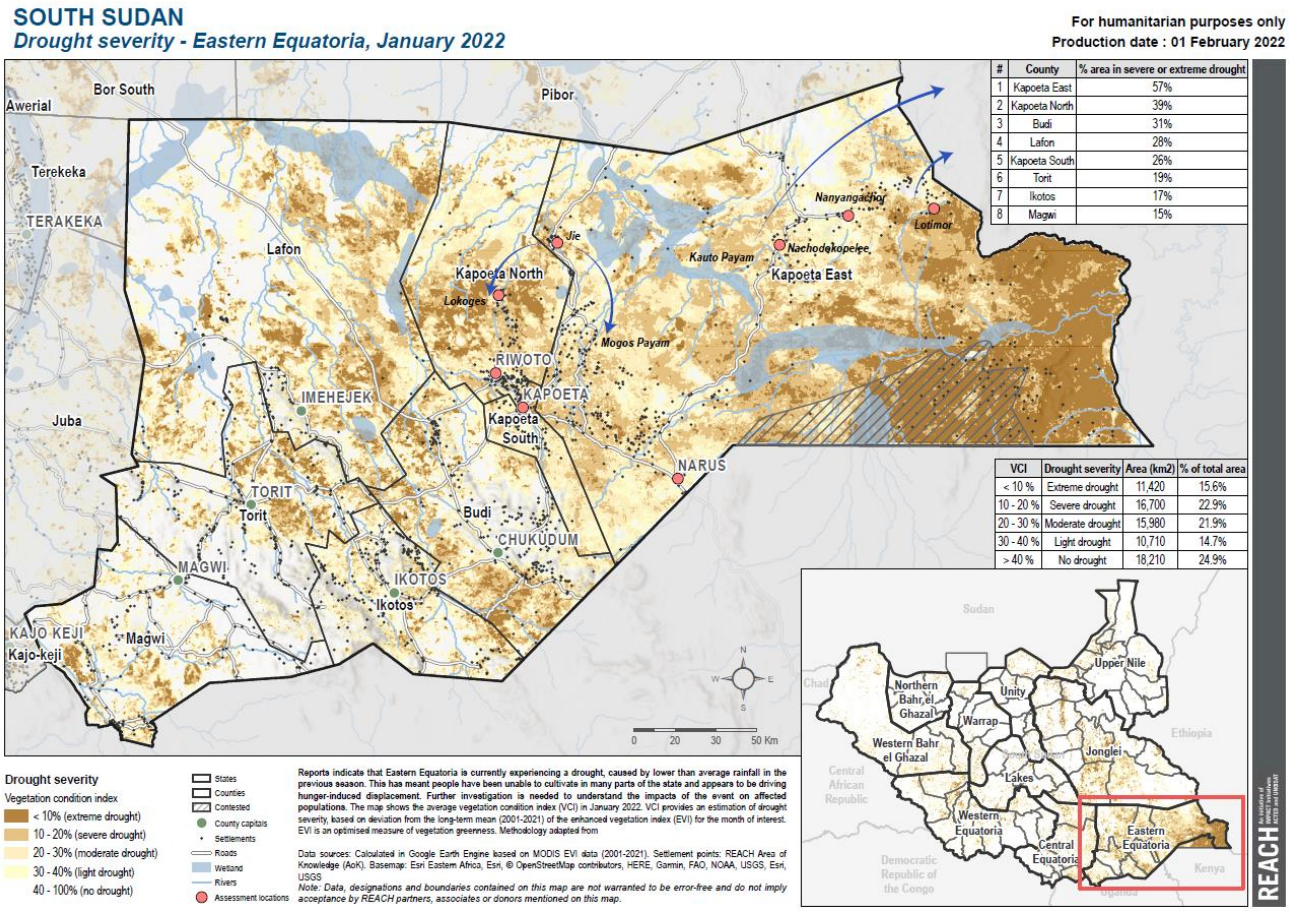
In some parts of South Sudan, such as in Northern Bahr el Ghazal (NBeG) in 2020, dual climate shocks have been attributed as causing a particularly complex humanitarian situation. In this particular case, it was reported that due to drought, farmers were unable to plant crops in the typical planting season (May-June), and subsequent flooding adversely affected large areas of cropland leading to complications in the typical cultivation season (Oct-Nov).[5] In recent years, flooding has also occurred in some parts of the Greater Kapoeta region, particularly in Jie payam (Kapoeta East) and Karukomuge payam (Kapoeta North).1 It will therefore also be important to understand if such conditions could occur here.

Throughout the process of data collection for the Population Movement Baseline database and report, a gap in reporting on displacement resulting from climate shocks such as drought or flooding was apparent. Back-to-back years of flooding in 2019, 2020 and 2021 have triggered both displacement and movement restrictions, and compounded food insecurity (which has also prompted movement) across South Sudan. This indicates that filling this information gap on displacement driven by climatic shocks is crucial to informing the humanitarian response in a context in which multiple years of shocks often layer

[1] Famine Early Warning Systems Network (FEWS NET) – Livelihood Zone Map and Descriptions for the Republic of South Sudan
[2] Food and Agriculture Organization of the United Nations (FAO) – Global Information and Early Warning System (GIEWS)
[3] IRNA Report: Karukomuge Payam, Eastern Equatoria State, 26 January 2022
[4] OCHA - South Sudan Situation Report, June 2019.
[5] Famine Early Warning Systems Network (FEWS NET) – Livelihood Zone Map and Descriptions for the Republic of South Sudan

upon each other to increase the needs of affected populations.[6,7] Whilst there has been more research into the impacts of floods in South Sudan, studies into the impacts of drought are particularly limited. .

With the ongoing impacts of climate change, rainfall records point to increasingly erratic weather patterns in many parts of South Sudan. This assessment aims to develop an understanding of long-term climatic trends, historic drought severity and expected future trends due to climate change. With the occurrence of droughts and flooding likely to become more common, this study will in addition aim to improve the understanding of communities most exposed and at risk of drought conditions in the region. This will help to prioritise future interventions and advocate for the further development of mitigation measures.



Map shows drought severity across Eastern Equatoria in January 2022 and reported population movements. Produced by REACH.

2.2 Intended Impact

Given the scale of shocks and the severity of humanitarian needs that drive population movements, it is important to understand ongoing and near-term displacement and mobility restriction dynamics and how recent climatic events such as drought and flooding have contributed to atypical movement in Greater Kapoeta, while additionally exploring the historical context in which such shocks and movement dynamics are occurring. Through developing an understanding of current and future humanitarian needs and displacement patterns in response to climatic shocks, the study aims to better inform humanitarian anticipatory and emergency action in the region and more widely across South Sudan. Greater Kapoeta was

[6] OCHA -- South Sudan: Seasonal Flooding Update #4, 29 November 2019

[7] OCHA – South Sudan: Flooding Snapshot, 21 October 2020

chosen for this assessment due to the drought currently occurring there, the occurrence of flooding in recent years, and the limited information available on climatic shocks and population movement in the region.

The county was also flagged as of high concern in January 2022 by the REACH Shocks Monitoring Index (SMI), whilst maps produced by REACH indicating drought severity showed the occurrence of drought across most of Eastern Equatoria, with large areas of severe and extreme drought in Greater Kapoeta in January. This assessment can therefore help to validate and ground-truth REACH`s satellite-based information to understand the actual impacts on communities on the ground, as well as the applicability of such tools in providing early / remote warning systems of deteriorating situations.

This climate displacement assessment builds upon the pilot undertaken by REACH in Northern Bahr el-Ghazal in 2020. Given the relative absence of other shocks (such as conflict) in Greater Kapoeta, there is the opportunity to explore the impact of climatic shocks on displacement and mobility restriction in greater detail. The assessment report will be disseminated to humanitarian partners to improve their understanding of the current situation in Greater Kapoeta, in order to inform planned humanitarian interventions and longer-term disaster risk reduction programmes.

3. Methodology

3.1 Methodology Overview

Primary qualitative data collection will be conducted over 7 days (9-10 days including travel and mobilisation for interviews) in Greater Kapoeta within the state of Eastern Equatoria, South Sudan. Qualitative data collection will be conducted in the form of focus group discussions (FGDs) and key informant (KI) interviews. FGDs will be disaggregated by theme, with separate FGDs being conducted for climate shocks and population displacement. The population groups targeted for the climate shocks and population displacement FGDs will be the same, but these discussions will take place simultaneously so the actual respondents will be different for each theme. Where present, separate FGDs will be conducted for IDPs. Quantitative collection of GPS data will also be carried out in locations of displacement and arrival.

3.2 Population of Interest

Greater Kapoeta consists of three counties; Kapoeta South, Kapoeta North and Kapoeta East. In order to understand the implications of the aforementioned climate shocks and their impact on displacement across the wider area, data collection will be conducted in all counties, subject to operational constraints and security clearances. These will be undertaken in Kapoeta (Kapoeta South county); Riwoto and Lokoges (Kapoeta North county); and Narus, Jie and Mogos (Kapoeta East county), targeting IDPs and host communities, as well as returned IDPs and non-displaced persons from these source settlements where people were reportedly displaced from. If IDPs are present, FGDs will be conducted separately for these population groups. These locations were chosen because they remain severely affected by drought and there are reports of substantive displacements either to or from these locations.

Since the primary aim of this assessment is to understand the impact of climate shocks on livelihoods and displacement / displacement intentions for the general community, FGDs will include (adults above 18 years) men and women residing in and/or with knowledge of each county of coverage. As mentioned, separate FGDs will be conducted for population movement and climate shocks. Wherever possible, FGDs will be conducted with separate groups of men and women, with a minimum of at least one male and one female FGD in each county. Genders will only be mixed in the event that not enough participants are available to create separate gender groups in a targeted location. Participants will be selected in coordination with local partner NGOs and the South Sudan Relief & Rehabilitation Commission (RRC) based on the necessary criteria for that location, including IDPs, returnees, and host communities as well as both male and female participants.

In addition, KI interviews will be conducted where possible in the county / payam HQs with key stakeholders including staff working for relevant local authorities, RRC and NGOs, community leaders. The questionnaires for KIs will include both climatic shocks and displacement themes with a broader geographic scope than the FGDs and with a limited number of questions. These stakeholders have been identified as they are perceived to have in-depth knowledge of the context in the

respective areas. KI interviews will be prioritised to be conducted in the following towns: Kapoeta in Kapoeta South county, Riwoto in Kapoeta North county and Narus in Kapoeta East county, given that these towns are the respective headquarters of each county. The KI interviews will help to gain an overall understanding of the situation, especially across the wider county and will help guide other parts of the assessment (FGDs and quantitative data collection). However, additional KI interviews will be undertaken in other assessed settlements if community leaders are available. Quantitative data collection including the collection of GPS data on water points and land use zones will also be conducted in assessed settlements (source and target settlements only rather than county HQs).

3.3 Secondary data review

Recent reports and assessments will be collected and analysed to understand what has been done already and to get a situation overview. REACH will engage with partners on the ground to get more information on the situation to help guide the assessment. GIS analysis will also be conducted using satellite imagery from Google Earth Engine, in order to develop a better understanding of the climatic and environmental context. Some of this has been done already, such as the creation of a drought severity map as shown below. Some of these sources are provided below:

- IRNA Report: Karukomuge Payam, Eastern Equatoria State, 26 January 2022
- Famine Early Warning Systems Network (FEWS NET) – Livelihood Zone Map and Descriptions for the Republic of South Sudan
- REACH Integrated Needs Tracking System and Shocks Monitoring Index
- REACH Population Movement Baseline
- MODIS enhanced vegetation index (EVI) data
- Sentinel 2 satellite imagery and normalised difference water index (NDWI) data

3.4 Primary Data collection:

Qualitative: FGDs and KI interviews

Between 6-12 FGDs will be conducted for the displacement component of the assessment and 6-12 for the climate shocks component across seven days in each of the six settlements mentioned previously, with additional days interspersed for travel and preparation. Around 6 KI interviews will also be conducted, including at least 1 in each of the county capitals, with additional interviews where possible if relevant KIs are available. These will be purposively sampled, targeting RRC, NGOs and community leaders. A snowballing approach will also be used in case there are additional KIs which could be targeted.

In order to reduce gendered bias of the data collection, half of the FGDs will be conducted solely with male participants, and the other half solely with female participants. FGDs will be collected using the Climate Displacement and Intentions Mapping tool and the Climate Shocks tool. Given that the same key informants will most likely be targeted for both climate shocks and displacement, a combined Climate Shocks and Displacement KI tool was developed. This is because availability of KIs will likely be limited in many locations given the remoteness so the combined tool will ensure we are not taking too much of their time. These tools are shown in the Data Analysis Plan section.

Both FGDs and KI interviews will involve participatory mapping exercises. This will aim to better understand:

- Displacement routes
- Land use zones (arable / grazing land)
- Areas impacted by current drought and areas that were or are inundated with water
- Water points / sources that community members rely on for meeting their daily needs

For the displacement component of the tool, the Population Movement (PM) Senior Assessment Officer (who is the focal point responsible for supervising data collection) and the Population Movement Assessment Officer will be FGD moderators.

For the climate shocks component of the tool, the Climate Assessment Analyst and Senior FSL Assessment Officer will be the FGD moderators. Where FGD moderators are splitting up to simultaneously conduct separate FGDs, following the conclusion of these FGDs, the PM Senior Assessment Officer and Assessment Officer will debrief each other on particular findings of note/relevance to the next day's FGDs as well as any challenges encountered during data collection. KI interviews will be conducted jointly between the two units to avoid assessment fatigue amongst KIs.

Quantitative: collection of geospatial data

Physical mapping of water sources (and if possible, ground-truthing of land use zones, in particular exposed land such as cropland and grazing land, where drought will affect food security) will also be undertaken by the GIS officer in all settlements except in county HQs, given that we are most interested in the source and target settlements of IDPs for this purpose (communities which have moved due to the impact of drought). GPS data on other key infrastructure such as key landmarks/geographical features, health facilities, local authorities and NGO offices etc across the settlement will also be collected. ODK Collect will be used to collect geospatial information due to its ability to store information to collect GPS points, tracks and polygons, as well as auxiliary information on the features. Photos will also be taken to supplement the ground-truth analysis and add to the report itself.

3.4 Data Processing & Analysis

For qualitative data processing and analysis, IMPACT Minimum Standards for Qualitative Data processing will be followed; field teams will ensure that KIIs and FGDs are transcribed in English as soon as possible after they have been conducted. They will then be typed and saved into a central server at the end of each day. To process and analyse the content of the KIIs and FGDs, a data saturation grid will be developed continuously throughout the data collection. The saturation grid will be developed using an inductive approach where discussion points (DPs) falling under discussion topics (DTs) (based on questions in the data collection tools) will be noted as they are identified from the FGDs and KIIs. Data saturation grids will be developed separately for both the KI and FGD data but the information from both will complement each other in the write up. KI interviews will also help guide quantitative data collection in some cases; for example, KIs may help to identify approximate locations of water points or grazing land which would help narrow down locations to collect GPS data and other further information.

After conducting participatory mapping, the maps will be photographed and the data will later be digitized using QGIS or ArcGIS Pro. For population movement maps, Adobe Illustrator will be used to demarcate movement routes indicated during the participatory mapping exercises. GPS data and additional information collected in the field using ODK Collect will be collected offline and then uploaded to the server at the end of each day. Drought exposure and risk maps will also be created by combining remote sensing data on accumulated annual drought severity data (based on vegetation condition index (VCI)), which will be overlaid with data from participatory maps and ground-truth data collected on actual drought-affected land use to verify the remote sensing data. GPS data collected on critical infrastructure such as water points will also be included in these maps.

Remote sensing data on long-term environmental variables such as precipitation, temperature, soil moisture and annual drought severity (based on VCI) for assessed areas will also be analysed for assessed areas to understand long-term trends and drought frequency across Greater Kapoeta. VCI will be calculated in Google Earth Engine using MODIS enhanced vegetation index (EVI) data based on UNSPIDER methodology. Other environmental variables will be taken from GLDAS using the Giovanni platform. Additional indices such as normalised difference water index (NDWI) may also be utilised if necessary to better understand the distribution of surface water across the area. NDWI can be calculated rapidly in Google Earth Engine from recent Sentinel 2 images.

4. Key ethical considerations and related risks

The proposed research design meets / does not meet the following criteria:

The proposed research design…	*Yes/ No*	*Details if no (including mitigation)*
… Has been coordinated with relevant stakeholders to **avoid unnecessary duplication** of data collection efforts?	Yes	
… **Respects respondents, their rights and dignity** (*specifically by: seeking informed consent, designing length of survey/ discussion while being considerate of participants' time, ensuring accurate reporting of information provided*)?	Yes	
… Does not **expose data collectors to any risks as a direct result** of participation in data collection?	Yes	
… Does not **expose respondents / their communities to any risks as a direct result** of participation in data collection?	Yes	
… Does not involve **collecting information on specific topics which may be stressful and/ or re-traumatising** for research participants (both respondents and data collectors)?	Yes*	Arguably any research collecting information on impacts of the type of shocks which humanitarians respond to may be stressful for participants, even if the topic is natural disasters that do not involve acute or physical insecurity; however, every effort will be made to ask questions sensitively and to redirect to less stressful topics if participants appear stressed during data collection.
… Does not involve **data collection with minors** i.e. anyone less than 18 years old?	Yes	
… Does not involve **data collection with other vulnerable groups** e.g. persons with disabilities, victims/ survivors of protection incidents, etc.?	No	As FGD participants will be mobilised from the general community by the RRC, and given South Sudan's extensive history in which the average person has lived through one or more protection incidents at some point, data collection that does not include such victims/survivors cannot be guaranteed and would in fact prevent a population currently experiencing a separate set of shocks driving high needs from getting information on their needs to humanitarian actors. However, the current assessment in no way asks about past protection incidents that might re-traumatise participants with those experiences.

… Follows IMPACT SOPs for management of **personally identifiable information**?	Yes*	While FGD participants are always informed that they are not required to give their names, introductions by name are a matter of respect in South Sudan and most participants usually want to give their names to FGD moderators and see them written down. However, moderators will not include participants' names in e-copy transcripts, and will ensure hard copy transcripts are stored securely at all times.

5. Roles and responsibilities

For Climate displacement, roles and responsibilities are divided as below.

Table 3: Description of roles and responsibilities

Task Description	*Responsible*	*Accountable*	*Consulted*	*Informed*
Research design	**Senior Assessment Officer, Assessment Officer**	**Senior Assessment Officer**	**SSD Country Coordinator; HQ Research Department**	**SSD Country Coordinator, NAWG, Relevant partners**
Supervising data collection	**Assessment Officer, Senior Assessment Officer**	**Senior Assessment Officer**	**Relief and Rehabilitation Commission, Partner NGOs**	**SSD Country Coordinator**
Data processing (checking, cleaning)	**Assessment Officer**	**Senior Assessment Officer**	**Impact Data Unit (HQ)**	**SSD Country Coordinator**
Data analysis	**Assessment Officer, Senior Assessment Officer**	**Senior Assessment Officer**	**SSD Country Coordinator; HQ Research Department**	**SSD Country Coordinator**

Output production	Assessment Officer, Senior Assessment Officer	Research Manager	SSD Country Coordinator; HQ Research Department	SSD Country Coordinator
Dissemination	Senior Assessment Officer	Research Manager	SSD Country Coordinator	Local Partners
Monitoring & Evaluation	Senior Assessment Officer	Research Manager	Local partners	SSD Country Coordinator
Lessons learned	Assessment Officer	Research Manager		Donors, Research Unit (HQ)

Responsible: the person(s) who executes the task

Accountable: the person who validates the completion of the task and is accountable of the final output or milestone

Consulted: the person(s) who must be consulted when the task is implemented

Informed: the person(s) who need to be informed when the task is completed

6. Data Analysis Plan

Please see the data analysis plans below.

A. Climate shocks:

Research Questions	SUBQ#	Data collection method	Sub-research question group	Sub-research Question	Questionnaire QUESTION	Probes	Key disaggregations
What are the main livelihood or income-generating activities in the settlement?	***A.1.1.***	*FGD/KI*		*What does the cultivation calendar usually look like? What are the main livelihoods in the settlement?*	*What are the main livelihood or income generating activities in your settlement?* *a. What does the usual cultivation calendar look like (months of sowing/growing/harvesting, livestock movement)?*	*i. How does this align with weather patterns?* *ii. When is the dry season?* *iii. When is the rainy season?* *iv.When does cultivation take place? (List cultivation of all different types of crops)* *v. When does harvest take place?* *vi. When does cattle migration take place?*	
What are the impacts of recent climatic shocks on exposed communities and has this changed over time?	***B.1.1.***	*FGD /KI*		*Have recent climatic shocks led to population displacement?*	*Where have you been displaced from?*	*What was your primary reason for displacement?* *Please name the settlement / payam and mark on the map if possible.*	*To ask IDPs only*
	B1.2	*FGD/KI*		*What climatic shocks are communities currently exposed to?*	*What difficulties or shocks has your community encountered in the last year?* *When did these occur?*	*E.g. drought, flooding, conflict-related, disease, pests, others - please specify…*	
	B1.4	*FGD/KI*		*Has exposure to climatic shocks changed over time?*	*What do you think is the main cause of the drought this year?* *How does this differ from droughts in previous years?*	*Eg. Is it much drier now, are the groundwater levels deeper than in previou years, is there less healthy vegetation compared to previous years?*	
	B1.5.	*FGD/KI*			*Has the settlement been affected by flooding in the past ten years?*	*a.If yes, What years? When was it most severe? [Ask if relevant]*	

	B1.7.	*FGD/KI*			*Have there been changes in weather patterns in recent years?*	*a. Have you noticed a change in the dry season over the past 15+- years?* *i. How frequently do droughts occur? Has the severity of droughts changed over time? More common? Longer? How does the current drought compare?* *b. Have you noticed a change in the rainy season conditions over the past 15+- years?* *ii. Has flooding become worse? More common? Longer?*	
	B.1.8.	*FGD/KI*		*How do communities expect the frequency and severity of climatic shocks to change in the future?*	*Do you think that extreme weather events such as flooding and drought will happen more often in the future?*	*If yes, why?*	
				Has flooding occurred consecutively and what has been the impact of this on food and livelihoods?	*Have there been years recently where flooding has occurred in the rainy season followed by drought in the dry season?*	*If yes, which years?*	
	B1.9.	*FGD/KI*			*What has been the impact of this on access to food and livelihoods?*	*i. Did these consecutive climatic shocks affect crop / vegetation health?* *Was the amount of food/cereal available in the harvest period affected?* *Ii. Were there impacts on the food available at market?*	
	B1.10.	*FGD/KI*		*To what extent has there been a degradation in the environment and what are the impacts of this on livelihoods?*	*Have you noticed any degradation of the environment in recent years? (For example, deforestation, changes in natural resource availability, changes in wetland extent, changes in soil fertility, etc.)*	*i. Has there been a change in soil fertility or quality?* *ii. Has there been a reduction in natural vegetation?* *iii. Has there been a reduction in the availability of natural resources?* *iv. Has the extent of wetlands in your area changed in recent years?*	

						b. What do you think these changes are driven by? *c. What is the impact of environmental degradation on livelihoods?*	
What is the current impact of climatic shocks on humanitarian needs?	***C.1.1.***	*FGD/KI*		*Which climatic shocks are currently affecting the community?*	*Is drought currently affecting you or your community?*	*a. How is it affecting you or your community? Eg lack of water, poor or failed crop production, lack of grazing land, etc.* *b. Specify any other ways drought is impacting the community?* *C. When did the recent drought become a concern?*	
	C1.2.	*FGD/KI*		*What impact are climatic shocks currently having on humanitarian needs?*	*What impact is drought currently having on access to water? How does this differ from previous years of drought?*	*a. What are the main water sources in the community?* *b. What are the water levels like currently? How does this compare to previous years?* *c. What are the different water sources used for (drinking, washing, livestock, etc.)?* *d. How long does it take to reach the nearest water source? Are there any difficulties in reaching the water source?*	

	C1.3.	*FGD/KI*			*What impact is drought currently having on agricultural livelihood opportunities? How does this differ from previous years of drought?*	*a. Agriculture:* *i. Has drought impacted the amount of food/cereal available in the most recent harvest period?* *Ii. Were farmers able to plant staple crops such as sorghum last year? If not, why not? Was the soil too dry? Conditions too hot?* *iii. How was crop health affected?* *iv. When are you expecting existing food stocks to run out? Is this earlier than last year?* *v. How are the current conditions expected to affect planting conditions this year?* *b. Pastoralists:* *i. How has drought affected livestock? If there has been a reduction in livestock numbers, please indicate by how much?* *ii. Has there been an increase in livestock disease?* *iii. Has reduced access to drinking water had an impact on livestock health?* *iv. Have livestock migration patterns been altered?* *a. Has access to wild foods been affected by drought?* *b. Have the levels of food stocks kept by households been affected? If so, how?* *c. How do you expect access to livelihoods to change in the next year?*	
	C1.4.	*FGD/KI*			*Which population groups remain the worst affected by drought?*	*Please specify all groups, e.g. female-headed households, older population groups, children, people*	

						with disabilities, IDPs, returnees, host communities.	
	C1.5.	*FGD/KI*			*Has the drought this year had any other significant implications?*	*a. To what extent has drought affected supply of goods?* *b. Have there been any changes to goods available in the market? Please specify which goods are most affected?* *c.Is there less availability of key goods at market than is typical for this time of year?* *d. Have market prices risen more than is typical for this time of year?* *e. Has there been any changes in access to WASH, health and nutrition services? How is this affecting the community?* *f.Has there been an increase in the level of disease and illness?* *g. Have there been any changes in access to services/resources? If yes, how?* *h. Has drought increased competition in accessing resources such as water sources and grazing land?* *i. Have there been any changes to security in the community?*	
	C1.6.	*FGD/KI*			*If flooding occurred in the last ten years, what was the impact on access to food and agricultural livelihood opportunities?*		*Ask if flooding is a relevant hazard in the community*
	C1.7.	*FGD*			*How have needs changed in the community in response to the drought?*	*WASH, food access, shelter, protection, etc.*	

	C1.8.	*FGD*			*How do conditions in the settlement you are currently in compare to the conditions in your original settlement?*	*a. Are you facing any issues with access to food in your current settlement?* *b. Are you facing any issues with access to water in your current settlement?* *c. Are you facing any other issues in your current settlement?* *d. Are conditions better, worse or similar in your current settlement to in your home settlement?*	*To ask IDPs only*
How do communities perceive the occurrence of climatic shocks, including their severity and impacts?	**D1.1.**	*FGD/KI*		*How do communities perceive the occurrence of climatic shocks, including their severity and impacts?*	*How is drought defined by the community?*	*a. Do certain conditions or impacts on the community need to be seen before a drought is said to be occurring? Reduced water availability, impacts on household ability to meet their needs, impacts on livelihoods?* *b. What local names, if any, are given to drought? What about different levels of drought severity? How is drought severity defined?*	
	D1.2.	*FGD/KI*			*How is flooding defined in the community? [Ask if relevant]*	*a. Do certain conditions or impacts on the community need to be seen before a flood is said to be occurring?* *b.What local names are given to different types/levels of flood severity?*	
What coping capacities and mitigation measures are communities utilising to cope with the impacts of climate shocks?	**E1.1.**	*FGD/KI*		*Has the community received humanitarian aid in response to recent climatic shocks?*	*Has the community received humanitarian aid or livelihood support?*	*What kind? Food aid, livelihood support, non-food items, shelter, WASH hygiene items, cash voucher assistance, water, etc.* *b. Is there an increased reliance on humanitarian assistance to address gaps in food availability due to the shock?*	

	E1.2.	*FGD/KI*		*Have food and water consumption habits changed in the community?What coping strategies have been employed?*	*How have normal food consumption habits changed over the last 3 months in response to the drought?*	*a. Has there been a change to the type of food people eat? If so, what has been the change?* *b. Has there been a change in how many meals people consume per day?* *c. How has food consumption been affected by (the absence/presence of) humanitarian food aid?* *d. If people are facing a shortage of food, what strategies are they using to cope (sharing food, selling/slaughtering more livestock, skipping meals, begging,)?* *e. Are people eating wild foods that are known to make them sick?* *f. Are these strategies normal in your area?* *g. What are barriers to using coping strategies?*	
	E1.3.	*FGD/KI*			*How have normal water consumption habits changed in the last 3 months in response to the drought?*	*a. Have there been any changes to the primary water sources utilised by the community? Are these water sources share by other communities / animals? Do households now have to travel further to reach a water source?* *b. Have communities employed any other measures to cope with lower water supply, such as extracting drinking water from plants / grasses, reducing consumption, etc.? Please specify other measures undertaken*	

	E1.4.	FGD/KI		Are any physical or social mitigation measures taken to limit the impact of climatic shocks in the settlement?	Are any measures employed in your settlement to limit the impact of drought, or flooding (if relevant)? These could include physical infrastructure such as rainwater retention structures, water tanks, haffirs, dykes, ponds, ditches, etc., or social mitigation measures.	a. Are they sufficient? b. In case of physical infrastructure, where is it located? i. Who erected it? ii. Who is responsible for maintenance? iii. Is the expertise to maintain it available in the community? iv. Are the tools to maintain it available in the community? c. In case of social measures: how do they work? Do community members support each other in carrying out their livelihood activities? i. Who is responsible? ii. Who participates? d. What else is needed?	
	E1.5.	FGD/KI		If climatic shocks worsen in the future, what plans do communities have to adapt to climate change?	If extreme weather were to take place more frequently in the future, what strategies are you planning to employ / would you consider employing to ensure that you will be able to maintain your livelihoods and access to food?	a. Are you planning to change agricultural practices? i. Are you looking to employ more environmentally-friendly agricultural practices? ii. Are you planning on changing rotation policies? iii. Are you looking to change when you plant and harvest crops? Are you looking to change which crops you plant? b. For pastoralists, are you looking to change livestock migration patterns? Or are you planning to sell more livestock?	For KIs, this question will focus on measures that NGOs/local authorities etc are planning to implement

	E1.6.	*FGD/KI*			*What strategies are you planning to employ to keep yourself and your household prepared for future climatic events?*	*a. Are you planning to relocate your dwelling/shelter to somewhere in the nearby area less exposed to floods/droughts? [micro-displacement]* *b. Are there any plans to improve drought mitigation mechanisms such as storing water during the rainy season?* *c. Are there any plans to improve flood prevention mechanisms such as digging dykes and banks to mitigate future flooding?* *d. Are there any plans to change livelihood activities in response to future risks?*	*For KIs, this question will focus on measures that NGOs/local authorities etc are planning to implement*
How does the physical extent of climatic shocks line up with detected drought, standing water and water-logged ground in satellite imagery?	**F.1.1.**	*FGD (participatory mapping exercise)*		*Where have drought and flooding occurred? How does this relate to critical infrastructure in the settlement?*	*Show a map of the local area to participants; point out where the FGD is taking place; draw features on the map including water points, food distribution sites, cropland, drought-affected cropland, areas of floodwater inundation, dykes, etc.*		
	F.1.2	*KI (participatory mapping exercise)*		*Where have drought and flooding occurred? How does this relate to critical infrastructure in the settlement?*	*To be carried out during KI interviews to understand areas worst affected by drought and flooding and locations of water points and other relevant features / infrastructure*		
	F.1.3.	*Physical mapping*		*Where are the nearest water points? What condition are they currently in?*	*Physical collection of GPS data /photos on water points and information on condition*		
	F1.4.	*Physical mapping*		*Where are the main areas of grazing land and cropland around assessed settlements? Which areas have been worst affected by climatic shocks?*	*Physical collection of GPS data /photos on grazing land, cropland (including areas affected and unaffected by drought), as well as areas of flood inundation if relevant.*		

B. Population movement

Research Questions	SUBQ#	Data collection method	Sub-research question group	Sub-research Question	Questionnaire QUESTION	Probes	Key disaggregations
1. What is the historical context of climate displacement in this area?	***A.1.1.***	*FGD*	Historic climate shocks	*What were the major climate shocks over the past 15 years?*	1. Have there been any major years of climate displacement and population movement, such as major flooding, drought, or a combination, in the last 15+/- years in this county?	*Flooding? Drought? Or combination of both? Did any of these drivers cause or exacerbate other drivers (i.e. flooding causing food insecurity causing displacement?)*	*Gender grouping (male; female)*
	A.1.2.	*FGD*	Historic climate displacements	*Where did people go if/when these shocks triggered large-scale movement?*	*2. Did any of these shocks cause "large scale" movements [ideally, movement of 5,000 people or more]?*	*[Map where people went and mark lines with year the movements occurred]*	*Gender grouping (male; female)*
2. What is the current state of climate displacement in this area?	***B.1.1.***	FGD	recent climate displacements	Have recent climate shocks triggered large-scale movement, and if so, when and to where?	3. Has there been large-scale movement out of the area in the last 9 months due to drought, flooding, or a combination? [Map all directions/locations people moved to; label with shock type and month movement started]	*When did these movements happen (month)? Is it still ongoing now?* *Where did people go? What routes did people take?* *Has this year's drought or flooding caused or worsened food insecurity or lack of resources? Disease? Others?* *If yes, which areas are most affected by food insecurity/lack of resources/disease/other shocks? [shade the most affected area on map, specifying shock(s)]*	*Gender grouping (male; female)*

	B.1.2.	FGD	Vulnerable HHs' displacement status	Where are the most vulnerable HHs after the recent climate shock?	4. Where did the most vulnerable HHs move, if they moved anywhere? [Mark on map locations where most vulnerable are]	*What makes these HHs vulnerable? PWDs? Female-headed? HH members such as elderly or PWDs that can't travel easily? Where did the HHs with access to money/resources move? Means of transport/distance able to travel different for vulnerable HHs?*	*Gender grouping (male; female)*
	B.1.3.	FGD	Push/pull factors of climate shocks	Why did HHs move to these destinations?	5. Why did people move to this/these particular location(s) specifically?	Access to resources/services in certain areas? Relatives in/near the destination? Cost of transportation? HH wealth?	*Gender grouping (male; female)*
	B.1.4.	FGD	HH-level movements	How did HHs move-- splitting up or moving as entire HHs?	6. Did all members of the HH move, or did members of the same HH travel to different locations? (i.e. diversify coping strategies9	Which (type of) HH members moved/stayed where? Why did they travel to different locations/travel to the same location? Is the approach HHs took normal or unusual?	*Gender grouping (male; female)*
	B.1.5.	FGD	Impact of climate displacements	What was the impact of recent climate displacement on people's access to food and livelihoods?	7. What was the impact of these movements on food/water access and livelihoods for most HHs (if any)?	On those who remained? On those who left?	*Gender grouping (male; female)*
3. What is the current state of mobility restrictions caused by climate shocks in this area?	***C.1.1.***	FGD	Mobility restrictions	Have recent climate or other shocks limited or fully cut off movement for some HHs?	8. In the last 9 months, did drought, flooding, or other shocks such as conflict or insecurity, restrict some HHs' ability to move to certain locations? Where? [Mark "X" on areas/routes with restricted access/mobility and label what kind of climate shock is preventing movement]	Which type of shock? Timeframe of restricted movement? Were there any HHs or groups who were completely cut off from movement? If yes, who and why were they cut off (compared to others)? What challenges did those who	*Gender grouping (male; female)*

						remained behind or were cut off face?	
	C.1.2.	FGD	Mobility restriction impacts	What was the impact of recent mobility restrictions on access to food and livelihoods?	9. What was the impact of the restriction in movement on food/water/health access and livelihoods (if any)?	n/a	*Gender grouping (male; female)*
4. How do the current climate shocks and climate shock-driven displacement compare to past climate shocks/displacement?	*D.1.1.*	FGD	Comparative climate shock severity	How did the severity of recent climate SHOCKS compare to past years of climate shocks?	10. How has the severity of the [flooding/drough/combination] over the last 9 months compared to the past years of [flooding/drought]? [Bring in example years already mentioned in Q1]	How do you think that the climate/weather conditions are changing, if at all? How have they been changing overall [improving/worsening/staying the same]?	*Gender grouping (male; female)*
	D.1.2.	FGD	Comparative climate displacements	How did this year's climate shock-driven DISPLACEMENT compare to that of past years of climate shocks?	11. How did this year's movement compare to [most severe historic event/s mentioned]? What has changed and why?	Because of changes in type or severity of climate shocks then vs. now? Changes in HH resilience over time? Changes in routes available/accessible then vs. now? Resources available in destination then vs. now? Changes in the type of household that has been restricted from movement? Changes in the number of HH that have not been able to move? Changes in severity of impact for HH that could not move?	*Gender grouping (male; female)*

3. What will the short and long-term future of climate displacement be for this area?	***E.1.1.***	FGD	Short-term climate displacement	Will people move/displace in the near future (next 3 months)?	12. What are HHs' intentions for movement, if any, in the near future (next 3 months) and why?	Which type of HHs will move? Do you expect any new movement restrictions to emerge during this time period? Will the current restrictions continue? Who will be most impacted by new displacement? Who will be most impacted by existing or new mobility restrictions over the next 3 months?	*Gender grouping (male; female)H25F25H24:H25*
	E.1.2.	FGD	Long-term climate displacement/relocation	In terms of climate shocks, what is the tipping point (if any) that would cause people to relocate for the longer term?	13. Do you think climate shocks such as flooding and/or drought would ever cause people to relocate from your community for the longer term (multiple years)? Under which conditions would they relocate, and which conditions would prevent relocation?	Multiple years of severe flooding? Multiple years of severe drought?	*Gender grouping (male; female)*

Question routes

The proposed question route for population displacement FGDs, climate shocks FGDs and KI interviews is below.

Focus Group Discussion Question Route (population movement and displacement):

Historical Context of Displacement and Population Movement

1. Have there been any major years of climate displacement and population movement , such as major flooding, drought, or a combination, in the last 15+/- years?
   - Flooding? Drought? Or combination of both? **Did any of these drivers cause or exacerbate other drivers** (i.e. flooding causing food insecurity causing displacement?)

2. Did any of these shocks cause "large scale" movements [ideally, movement of 5,000 people or more]?
   [Map where people went and mark lines with year the movements occurred]

Current Movements

3. Has there been large-scale movement out of the area in the last **9 months** due to drought, flooding, or a combination?
   - When did these movements happen (month)? Is it still ongoing now?
   - Where did people go? What routes did people take? **[Map all directions/locations people moved to; label with shock type and month movement started]**
   - Has this year's drought or flooding caused or worsened food insecurity or lack of resources? Disease? Others?
   - If yes, which areas are **most affected by food insecurity/lack of resources/disease/other shocks**? [shade the most affected area on map, specifying shock(s)]

4. Where did the most vulnerable HHs move, if they moved anywhere? [*Mark on map locations where most vulnerable are]*
   - What makes these HHs vulnerable? PWDs? Female-headed? HH members such as elderly or PWDs that can't travel easily?
   - Where did the HHs with access to money/resources move? (If different)
   - Was the means of transport/distance able to travel different for vulnerable HHs?

5. Why did people move to this/these particular location(s) specifically? **(Decision making)**
   - Access to resources/services in certain areas? Relatives in/near the destination? Cost of transportation? HH wealth?

6. Did all members of the HH move, or did members of the same HH travel to different locations (*i.e. diversify coping strategies*?
   - Which (type of) HH members moved/stayed where?
   - Why did they travel to different locations/travel to the same location?
   - Is the approach HHs took (splitting up or staying together) normal or unusual?

7. What was the impact of these movements on food/water access and livelihoods for most HHs (if any)?

   - Impact on those who remained?
   - Impact on those who left?

Restricted Mobility

8. In the last 9 months, how did drought, flooding, or other shocks such as conflict, insecurity or tensions between groups restrict some HHs' [if any] ability to move to certain locations? Where? **[Mark "X" on areas/routes with restricted access/mobility and label what kind of shock is preventing movement]**
    - Which type of shock?
    - Timeframe of restricted movement?
    - Were there any HHs or groups who were completely cut off from movement?
        - If yes, who and why were they cut off (compared to others)?
        - What challenges did those who remained behind or were cut off face?
9. What was the impact of the restriction in movement on food/water access and livelihoods (if any)?

Comparative Context

10. How has the severity of the [drought/flooding/combination] over the last 9 months compared to the past 15 years of [flooding/drought]? **[Bring in example years already mentioned in Q1]**
    - How do you think that the climate/weather conditions are changing, if at all? How have they been changing overall [improving/worsening/staying the same]?
11. How did this year's movement compare to [most severe historic event/s mentioned]? **What has changed and why?**
    - Changes in type or severity of climate shocks then vs. now? Changes in HH resilience over time?
    - Changes in routes available/accessible then vs. now? Resources available in destination then vs. now?
    - Changes in the type of household that has been restricted from movement? Changes in the number of HH that have not been able to move? Changes in severity of impact for HH that could not move?

[Note: Facilitator may move straight to "why" and ask about the specific difference between the current movement and past movements during severe climate shocks if the difference is already clear]

Intentions/Future projections

12. What are HHs' intentions for movement in the near future (next 3 months) and why?
    - Which type of HHs will move?
    - Do you expect any new movement restrictions to emerge during this time period?
    - Will the current restrictions continue?
    - Who will be most impacted by new displacement?
    - Who will be most impacted by existing or new mobility restrictions over the next 3 months?
13. Do you think climate shocks such as flooding and/or drought would ever cause people to relocate from your community for the longer term (multiple years)? Under which conditions would they relocate, and which conditions would prevent relocation?

- Multiple years of severe flooding? Multiple years of severe drought?

Focus Group Discussion Question Route (climate shocks):

For IDPs, questions about their settlement refer to their original settlement, unless otherwise stated.

Participatory mapping

Show a map of the local area to participants; point out where the FGD is taking place; draw features on the map

1)	Where are prominent landmarks/geographic features?
2)	Please identify locations of key infrastructure:
a.	Water points / sources: boreholes, rivers, wetlands, watering holes, ponds, haffirs, etc
b.	Health facilities
c.	Educational facilities
d.	Local authorities
e.	NGO offices
f.	Distribution sites
g.	Markets
h.	Cattle grazing areas
i.	Fishing camps
j.	Road/river routes
k.	Dykes/flood barriers
3)	What is the land in surrounding areas normally used for? (Wetland, agriculture, livestock, etc.) Please draw areas of different land use on the map.
a.	In the dry season
b.	In the rainy season
c.	Please also indicate areas of failed crops.
4)	If relevant, please indicate which areas were inundated with water at the peak of the 2021 flooding.
a.	If relevant, please indicate level of inundation (waterlogged soil, flooded, etc.)
a.	If greater, please indicate the maximum extent of floodwater in the past 10-20 years and indicate the year.

Shocks and climate change

1. [For IDPs only]: **where have you been displaced from? What was your primary reason for displacement?**

    a. Please name the settlement / payam and mark on the map if possible.

2. What difficulties or shocks has your community encountered in the last year? When did these occur? *E.g. drought, flooding, conflict-related, disease, pests, others - please specify…*

3. Is drought currently affecting you or your community?

[Probing questions]

a. How is it affecting you or your community? Eg lack of water, poor or failed crop production, lack of grazing land, etc.
b. Specify any other ways drought is impacting the community?

4. How is drought defined in the community?

[Probing questions]

a. Do certain conditions or impacts on the community need to be seen before a drought is said to be occurring? *Reduced water availability, impacts on household ability to meet their needs, impacts on livelihoods?*
b. What local names, if any, are given to drought? What about different levels of drought severity? How is drought severity defined?

5. What do you think is the main cause of the drought this year? Does this differ from previous years? E.g. Is it much drier now, are the groundwater levels deeper than before, there is less vegetation compared to previous years?

6. Has the settlement been affected by flooding in the past ten years?

a. What years? When was it most severe? [Ask if relevant]

7. How is flooding defined in the community? [Ask if relevant]

[Probing questions]

a. Do certain conditions or impacts on the community need to be seen before a flood is said to be occurring? What local names are given to different types/levels of flood severity?

8. Have there been changes in weather patterns in recent years?

[Probing questions]

a. Have you noticed a change in the dry season over the past 15+- years? i. How frequently do droughts occur? Have droughts become worse? More common? Longer? How does the current drought compare?

b. Have you noticed a change in the rainy season conditions over the past 15+- years? ii. Has flooding become worse? More common? Longer?

9. Do you think that extreme weather events such as flooding and drought will happen more often in the future?

<u>Livelihoods</u>

10. What are the main livelihood or income generating activities in your settlement? [*1]

a. What does the usual cultivation calendar look like (months of sowing/growing/harvesting, livestock movement)?

i. How does this align with weather patterns?
ii. When is the dry season?
iii. When is the rainy season?
iv. When does cultivation take place? (List cultivation of all different types of crops)
v. When does harvest take place?
vi. When does cattle migration take place?

Impact of drought and flooding

11. What impact is drought currently having on access to water?

[Probing questions]

a. What are the main water sources in the community?
b. What are the water levels like currently? How does this compare to previous years?
c. What are the different water sources used for (drinking, washing, livestock, etc.)?
d. How long does it take to reach the nearest water source? Are there any difficulties in reaching the water source?

12. What impact is drought currently having on agricultural livelihood opportunities?

[Probing questions]

a. Agriculture:

i. Has drought impacted the amount of food/cereal available in the most recent harvest period?

ii. Were farmers able to plant staple crops such as sorghum last year? If not, why not? Was the soil too dry? Conditions too hot?

iii. How was crop health affected?

iv. When are you expecting existing food stocks to run out? Is this earlier than last year?

v. How are the current conditions expected to affect planting conditions this year?

b. Pastoralists:

i. How has drought affected livestock? If there has been a reduction in livestock numbers, please indicate by how much?

ii. Has there been an increase in livestock disease?

iii. Has reduced access to drinking water had an impact on livestock health?

iv. Have livestock migration patterns been altered?

a. Has access to wild foods been affected by drought?

b. Have the levels of food stocks kept by households been affected? If so, how?

c. How do you expect access to livelihoods to change in the next year?

13. Which population groups remain the worst affected by drought? Please specify all groups, e.g. female-headed households, older population groups, children.

14. If flooding occurred in the last ten years, what was the impact on access to food and agricultural livelihood opportunities? [Ask if relevant]

15. Has the drought this year had any other significant implications?

[Probing questions]

a. To what extent has drought affected supply of goods?

b. Have there been any changes to goods available in the market? Please specify which goods are most affected?

c. Is there less availability of key goods at market than is typical for this time of year?

d. Have market prices risen more than is typical for this time of year?

e. Has there been any changes in access to WASH, health and nutrition services? How is this affecting the community?

f. Has there been an increase in the level of disease and illness?

g. Have there been any changes in access to services/resources? If yes, how?

h. Has drought increased competition in accessing resources such as water sources and grazing land?

i. Have there been any changes to security in the community?

Environmental degradation

16. Have you noticed any degradation of the environment in recent years? *For example, deforestation, changes in natural resource availability, changes in wetland extent, changes in soil fertility, etc.*

[Probing questions]

a. Has there been a change in soil fertility or quality?

b. Has there been a reduction in natural vegetation?

c. Has there been a reduction in the availability of natural resources?

d. Has the extent of wetlands in your area changed in recent years?

e. What do you think these changes are driven by?

f. What is the impact of environmental degradation on livelihoods?

g. Has there been a change in wildlife abundance?

Comparison of conditions

17. [for IDPs only]: **how do conditions in the settlement you are currently in compare to the conditions in your original settlement?**

a. Are you facing any issues with access to food in your current settlement?
b. Are you facing any issues with access to water in your current settlement?
c. Are you facing any other issues in your current settlement?
d. Are conditions better, worse or similar in your current settlement to in your home settlement?

Interconnected shocks

18. Have there been years recently where flooding has occurred in the rainy season followed by drought in the dry season? What has been the impact of this on access to food and livelihoods?

Coping mechanisms and mitigation measures

19. Has the community received humanitarian aid or livelihood support in response to recent drought or flooding?

a. What kind? *Food aid, livelihood support, non-food items, shelter, WASH hygiene items, cash voucher assistance, water, etc.*

b. Is there an increased reliance on humanitarian assistance to address gaps in food availability due to the flooding or drought?

20. How have normal food consumption habits changed due to the drought?

a. Has there been a change to the type of food people eat? If so, what has been the change?
b. Has there been a change in how many meals people consume per day?
c. How has food consumption been affected by (the absence/presence of) humanitarian food aid?
d. If people are facing a shortage of food, what strategies are they using to cope (sharing food, selling/slaughtering more livestock, skipping meals, begging)?
e. Are people eating wild foods that are known to make them sick?
f. Are these strategies normal in your area?
g. What are barriers to using coping strategies?

21. How have normal water consumption habits changed due to the drought?

[Probing questions]

a. Have there been any changes to the primary water sources utilised by the community? Are these water sources share by other communities / animals? Do households now have to travel further to reach a water source?

b. Have communities employed any other measures to cope with lower water supply, such as extracting drinking water from plants / grasses, reducing consumption, etc.? Please specify other measures undertaken

22. Are any measures employed in your settlement to limit the impact of drought, *or flooding (if relevant)*? These could include physical infrastructure such as rainwater retention structures, water tanks, haffirs, dykes, ponds, ditches, etc., or social mitigation measures.

[Probing questions]

a. Are they sufficient?
b. In case of physical infrastructure, where is it located?
    i. Who erected it?
    ii. Who is responsible for maintenance?
    iii. Is the expertise to maintain it available in the community?
    iv. Are the tools to maintain it available in the community?
c. In case of social measures: how do they work? Do community members support each other in carrying out their livelihood activities?
    i. Who is responsible?
    ii. Who participates?
c. What else is needed?
d. What are the main needs in the community?

23. If extreme weather were to take place more frequently in the future, what strategies are you planning to employ / would you consider employing to ensure that you will be able to maintain your livelihoods and access to food?

[Probing questions]

a. Are you planning to change agricultural practices?

i. Are you looking to employ more environmentally-friendly agricultural practices?

ii. Are you planning on changing rotation policies?

iii. Are you looking to change when you plant and harvest crops? Are you looking to change which crops you plant?

b. For pastoralists, are you looking to change livestock migration patterns? Or are you planning to sell more livestock?

24. What strategies are you planning to employ to keep yourself and your household prepared for future climatic events?

[Probing questions]

a. Are you planning to relocate your dwelling/shelter to somewhere in the nearby area less exposed to floods/droughts? [micro-displacement]
b. Are there any plans to improve drought mitigation mechanisms such as storing water during the rainy season?
c. Are there any plans to improve flood prevention mechanisms such as digging dykes and banks to mitigate future flooding?
d. Are there any plans to change livelihood activities in response to future risks?

[*1] Question route may have to be altered depending on audience as identified in question 2.

Key informant interview Question Route (climate shocks and displacement):

1. Is drought currently affecting the area?

[Probing questions]

a. How is it affecting livelihoods in the area? E.g. lack of water, poor or failed crop production, lack of grazing land, competition for resources, security issues, impacts on markets etc.

b. Please mark on the map main water sources, areas worst affected by the drought (settlements lacking access to water, failed crops, affected grazing land, etc.)

2. What do you think is the main cause of the drought this year? Does this differ from previous years? E.g. Is it much drier now, are the groundwater levels deeper than before?

3. Has the area been affected by flooding in the past ten years?

4. If flooding occurred in the last ten years, what was the impact on access to food and agricultural livelihood opportunities? [Ask if relevant]

5. Have there been years recently where flooding has occurred in the rainy season followed by drought in the dry season / vice versa? What has been the impact of this on access to food and livelihoods?

6. Have there been changes in weather patterns in recent years? Have floods and droughts become more common?

7. Do you think that extreme weather events such as flooding and drought will happen more often in the future?

8. What are the main livelihood or income generating activities in the area? [*1]

a. What does the usual cultivation calendar look like (months of sowing/growing/harvesting, livestock movement)?

ii. When is the dry / rainy season?
iv. When does cultivation take place? (List cultivation of all different types of crops)
v. When does harvest take place?
vi. When does cattle migration take place?

9. Which population groups remain the worst affected by drought? Please specify all groups, e.g. female-headed households, older population groups, children.

10. Have you noticed any degradation of the environment in recent years?

[Probing questions]

a. Has there been a change in soil fertility or quality?
b. Has there been a reduction in natural vegetation?
c. Has there been a reduction in the availability of natural resources?
d. Has the extent of wetlands in your area changed in recent years?
e. What do you think these changes are driven by?
f. What is the impact of environmental degradation on livelihoods?

11. Has the community received humanitarian aid or livelihood support?

a. What kind? *Food aid, livelihood support, non-food items, shelter, WASH hygiene items, cash voucher assistance, water, etc.*

b. Is there an increased reliance on humanitarian assistance to address gaps in food availability due to the shock?

12. How have normal food consumption habits changed due to the drought?

a. Has there been a change to the type of food people eat? If so, what has been the change?
b. Has there been a change in how many meals people consume per day?
c. How has food consumption been affected by (the absence/presence of) humanitarian food aid?
d. If people are facing a shortage of food, what strategies are they using to cope (sharing food, selling/slaughtering more livestock, skipping meals, begging,)?
e. Are people eating wild foods that are known to make them sick?
f. Are these strategies normal in your area?
g. What are barriers to using coping strategies?

13. How have normal water consumption habits changed due to the drought?

[Probing questions]

a. Have there been any changes to the primary water sources utilised by the community? Are these water sources share by other communities / animals? Do households now have to travel further to reach a water source?

b. Have communities employed any other measures to cope with lower water supply, such as extracting drinking water from plants / grasses, reducing consumption, etc.? Please specify other measures undertaken

14. Are any measures employed in the area to limit the impact of drought, *or flooding (if relevant)*? These could include physical infrastructure such as rainwater retention structures, water tanks, haffirs, dykes, ponds, ditches, etc., or social mitigation measures.

[Probing questions]

a. Are they sufficient?
b. In case of physical infrastructure, where is it located?
    i. Who erected it?
    ii. Who is responsible for maintenance?
    iii. Is the expertise to maintain it available in the community?
    iv. Are the tools to maintain it available in the community?
c. In case of social measures: how do they work? Do community members support each other in carrying out their livelihood activities?
    ii. Who is responsible?
    iii. Who participates?
d. What are the current needs of the community??

15. If extreme weather were to take place more frequently in the future, what strategies are authorities / NGOs / other actors planning to employ to ensure to help maintain livelihoods and access to food?

[Probing questions]

a. Are there plans to implement projects or advocate for changes in agricultural practices? For example, projects related to more environmentally-friendly agricultural practices, advice on changing rotation policies, changes to timing of harvesting crops, changes to crops planted, etc.

b. For pastoralists, are there plans to implement projects or advocate for changes related to livestock management and migration patterns?

16. What strategies are authorities / NGOs / other actors planning to employ to keep the community prepared for future climatic events?

[Probing questions]

a. Are there any plans to improve drought mitigation mechanisms such as storing water during the rainy season?
b. Are there any plans to improve flood prevention mechanisms such as digging dykes and banks to mitigate future flooding?

Population Movement

17. Has there been large-scale movement out of the area in the last 9 months due to drought, flooding, or a combination? [Map all directions/locations people moved to; label with shock type and month movement started]

[Probing questions]

a. Timeframe of movement? Directions and routes? Caused/worsened food insecurity? Disease? Other shocks?

18. Has there been any restriction of movement in the last 9 months due to drought, flooding, or other barriers? [Map all reported movement barriers, label with shock type and month movement started]

19. Where did the most vulnerable HHs move, if they moved anywhere?

[Probing questions]

a. What makes these HHs vulnerable? PWDs? Female-headed? HH members such as elderly or PWDs that can't travel easily? Where did the HHs with access to money/resources move? Means of transport/distance able to travel different for vulnerable HHs?

20. What was the impact of these movements on food/water/health service access and livelihoods for most HHs (if any)?

21. Do you think climate shocks such as flooding and/or drought would ever cause people to relocate from your community for the longer term (multiple years)? Under which conditions would they relocate, and which conditions would prevent relocation?

a. Multiple years of severe flooding? Multiple years of severe drought?
