

## Research Terms of Reference

### Integrated Public Health Rapid Assessment of Galkacyo IDPs at Risk of Cholera SOM 2405 Somalia

May 2024  
v.1

**REACH** Informing  
more effective  
humanitarian action

## 1. Executive Summary

<b>Country of intervention</b>	Somalia					
<b>Type of Emergency</b>	<input checked="" type="checkbox"/>	Natural disaster	<input type="checkbox"/>	Conflict	<input checked="" type="checkbox"/>	Disease outbreak
<b>Type of Crisis</b>	<input checked="" type="checkbox"/>	Sudden onset	<input type="checkbox"/>	Slow onset	<input type="checkbox"/>	Protracted
<b>IMPACT Project Code</b>	27AQC					
<b>Overall Research Timeframe</b>	31/03/2024 to 30/06/2024					
<b>Research Timeframe</b>	1. Pilot/ training: 8 May 2024			6. Preliminary presentation: TBD		
	2. Start collect data: 12 May 2024			7. Outputs sent for validation: 6 June 2024		
	3. Data collected: 15 May 2024			8. Outputs published: 13 June 2024		
	4. Data analysed: 20 May 2024			9. Final presentation: 16 June 2024 (tentative)		
	5. Data sent for validation: 20 May 2024					
<b>Humanitarian milestones</b> <i>Specify what will the assessment inform and when</i> <i>e.g. The shelter cluster will use this data to draft its Revised Flash Appeal;</i>	<b>Milestone</b>		<b>Deadline (can be tentative)</b>			
	<input type="checkbox"/>	Donor plan/strategy	--/ /----			
	<input checked="" type="checkbox"/>	Inter-cluster plan/strategy	TBD			
	<input checked="" type="checkbox"/>	Cluster plan/strategy	TBD			
	<input type="checkbox"/>	NGO platform plan/strategy	--/ /----			
	<input type="checkbox"/>	Other (Specify):	--/ /----			
<b>Audience Type &amp; Dissemination</b> <i>Specify who will the assessment inform and how you will disseminate to inform the audience</i>	<b>Audience type</b>			<b>Dissemination</b>		
	<input checked="" type="checkbox"/> Strategic			<input type="checkbox"/> General Product Mailing (e.g. mail to NGO consortium; HCT participants; Donors)		
	<input checked="" type="checkbox"/> Programmatic			<input checked="" type="checkbox"/> Cluster Mailing (Education, Shelter and WASH) and presentation of findings at next cluster meeting		
	<input checked="" type="checkbox"/> Operational			<input checked="" type="checkbox"/> Presentation of findings to ICCG; WASH, Nutrition, and Health Clusters (pending Cluster, OCHA confirmation)		
	<input type="checkbox"/> [Other, Specify]			<input checked="" type="checkbox"/> Website Dissemination (Relief Web & REACH Resource Centre)		
				<input type="checkbox"/> [Other, Specify]		

<b>Stakeholder mapping</b> Has a detailed stakeholder mapping been conducted during research design to identify all actors that could <b>contribute</b> to and/or <b>benefit from</b> the research?	X	Yes	<input type="checkbox"/>	No
<b>General Objective</b>	To assess the severity of Health; Shelter; Nutrition; Food Security; and Water, Sanitation, and Hygiene (WASH) needs and outcomes and to identify initial public health priorities for prevention and response to mitigate excess morbidity and mortality in IDP sites of North and South Galkacyo district at risk of a cholera outbreak over the next two months.			
<b>Specific Objective(s)</b>	<p><b>Population Demographics</b></p> <ul style="list-style-type: none"> <li>To understand the demographic (sex and age) composition of the target population.</li> </ul> <p><b>Health and Nutrition</b></p> <ul style="list-style-type: none"> <li>To estimate the proportion of the population with health care needs in the two weeks prior to data collection (any health care needs, unmet needs, needs by sex/age/symptom)To understand the main barriers for the target population in accessing health and nutrition services.</li> <li>To assess the availability and functionality of health and nutrition facility services.</li> <li>To estimate the coverage of Vitamin A supplementation among children 6-59 months of age</li> <li>To estimate the coverage of measles vaccination among children 9-59 months of age</li> <li>To estimate the coverage of deworming among children 12 to 59 months</li> <li>To assess proxy infant and young child feeding practices (IYCF) (exclusive breastfeeding, timely complementary feeding, meal frequency, and dietary diversity) indicators, among children aged 0 – 23 months.</li> </ul> <p><b>Water, Sanitation, and Hygiene (WASH)</b></p> <ul style="list-style-type: none"> <li>To estimate the proportion of the target population experiencing water consumption gaps, both in terms of quantity and quality (Liters per person per day, main source of drinking water).</li> <li>To estimate the proportion of the target population with access to improved sanitation facilities</li> <li>To estimate the proportion of the target population with access to handwashing facilities with soap and water in their dwelling/yard/plot</li> <li>To estimate the proportion of the target population practicing daily hygiene management</li> <li>To understand the main barriers for the target population in accessing water.</li> <li>To assess the functionality of water points used by the target population at health or nutrition facilities.</li> <li>To assess the functionality of latrines used by the target population at health or nutrition facilities.</li> </ul>			

	<ul style="list-style-type: none"> <li>To identify gaps in solid waste management at health facilities.</li> </ul> <p><b>Food Security</b></p> <ul style="list-style-type: none"> <li>To estimate the proportion of the target population experiencing food consumption gaps, both in terms of quantity and diversity</li> <li>To estimate the proxy coverage of emergency food security interventions in the target population.</li> <li>To understand the availability and utilization of food at the household level</li> <li>To understand the main barriers for the target population in accessing food.</li> </ul> <p><b>Shelter</b></p> <ul style="list-style-type: none"> <li>To assess the main shelter types being used by the target population.</li> <li>To assess the proportion of households reporting shelter damage</li> </ul>
<p><b>Research Questions</b></p>	<p><b>Population Demographics</b></p> <ul style="list-style-type: none"> <li>What is the sex and age distribution of the assessed population?</li> </ul> <p><b>Health and Nutrition</b></p> <ul style="list-style-type: none"> <li>What proportion of the population is experiencing unmet health care needs in the two weeks prior to data collection?</li> <li>How do these unmet needs differ by sex, age, and symptom?</li> <li>What are the self-reported perceptions of health and nutrition needs and access to care in the assessed population?</li> <li>What are the basic breastfeeding and food consumption patterns for under-2 children?</li> <li>What challenges are caregivers having in breastfeeding and complementary feeding for under-2 children?</li> <li>What proportion of children 6-59 months have received Vitamin A supplementation in the last 6 months?</li> <li>What proportion of children 9-59 months have received any measles vaccination?</li> <li>What proportion of children 12-59 months have received deworming treatment?</li> <li>What if any gaps are there with human resources, infrastructure, supplies, and equipment of health facilities serving the assessed population?</li> </ul> <p><b>Water, Sanitation, and Hygiene</b></p> <ul style="list-style-type: none"> <li>What proportion of households have access to safe, improved drinking water in the assessed population?</li> <li>What is the average and median liters per person per day consumed in the assessed population?</li> <li>What proportion of households can collect water within 30 minutes, including travel to, from, and queuing time?</li> <li>What types of water treatment methods are households in the assessed population using?</li> <li>What are the self-reported perceptions of water needs and barriers to access in the assessed population?</li> <li>What proportion of households in the assessed population have access to improved sanitation facilities?</li> </ul>

	<ul style="list-style-type: none"> <li>What proportion of households in the assessed population have access to handwashing facilities with soap and water in their dwelling/yard/plot?</li> <li>What is the frequency of daily handwashing among households with access to handwashing facilities, and how does this contribute to understanding hygiene practices?</li> <li>What if any gaps are there with human resources, infrastructure, supplies, equipment, and WASH environment of health facilities serving the assessed population?</li> </ul> <p><b>Food Security</b></p> <ul style="list-style-type: none"> <li>What is the proportion of households in the assessed population experiencing food consumption gaps in terms of quantity and diversity?</li> <li>What are the self-reported perceptions of food needs in the assessed population?</li> <li>What is the household coverage of emergency food security interventions in the assessed population?</li> <li>What are the main sources of food utilized by the assessed population in the last 7 days?</li> <li>What are the main sources of water and fuel utilized by households for cooking in the assessed population?</li> <li>What are the main barriers to accessing food for the assessed population?</li> </ul> <p><b>Shelter</b></p> <ul style="list-style-type: none"> <li>What types of shelter are the assessed population living in?</li> <li>What is the proportion of households reporting shelter damage?</li> </ul>
<b>Geographic Coverage</b>	Admin 0 – Somalia Admin 1 – Galmudug state (South Galkacyo) / Puntland state (North Galkacyo) Admin 2 – Mudug region Admin 3 – Galkacyo (North and South) district
<b>Secondary data sources</b>	<a href="#">REACH. Integrated Public Health Rapid Assessment toolkit. March 2024.</a> <a href="#">REACH Somalia MSNA, September 2023.</a> <a href="#">REACH Somalia Detailed Site Assessment - February 2024 Gaalkacyo, Somalia.</a> <a href="#">IPC Somalia Acute Food Insecurity and Acute Malnutrition Analysis. Feb 2024.</a> <a href="#">Somalia 2024 Humanitarian Needs and Response Plan (HNRP). Jan 2024.</a> <a href="#">REACH Somalia. Rapid Multi-sectoral Needs Assessment of Populations Affected by Deyr Flooding. Belet Weyne district. November 2023.</a> <a href="#">Health Cluster. Somalia: WASH in Health Care Facilities - WHO/UNICEF JMP WASH in healthcare facilities Assessment 2022/2023. 9 Nov 2023.</a> <a href="#">Somali MoH. AWD/Cholera Weekly Epidemiological Report EPI Week 14 (1 April – 7 April 2024). 14 April 2024.</a> <a href="#">SWALIM. Somalia Climate Outlook for the 2024 Gu “Long Rains” Season - Issued on 7th March 2024.</a> <a href="#">FEWS NET. Somalia Food Security Outlook, February - September 2024: Gradual drought recovery continues, though millions still need assistance. 30 Mar 2024.</a> <a href="#">Health Cluster Somalia. Health facilities stakeholders mapping dashboard. February 2024.</a> <a href="#">IFRC. Somalia Cholera Response: DREF Operational Update (MDRSO017). 15 April 2024.</a> <a href="#">CCCM Cluster Somalia. List of IDP sites in Somalia (Q2 2023). 21 August 2023.</a>

	<a href="#">CCCM Cluster Somalia. Verified IDP Sites in South Galkayo as at March 2024. 23 April 2024.</a> <a href="#">FSNAU Somalia Post-Deyr Acute Malnutrition Prevalence, 15 Feb 2024.</a> <a href="#">Somalia MoH. Somalia Immunization Policy. July 2020.</a>			
<b>Population(s)</b> <i>Select all that apply</i>	<input checked="" type="checkbox"/> IDPs in camp <input type="checkbox"/> IDPs in host communities <input type="checkbox"/> Refugees in camp <input type="checkbox"/> Refugees in host communities <input type="checkbox"/> Host communities	<input type="checkbox"/> IDPs in informal sites <input type="checkbox"/> IDPs [Other, Specify] <input type="checkbox"/> Refugees in informal sites <input type="checkbox"/> Refugees [Other, Specify] <input type="checkbox"/> [Other, Specify]		
<b>Stratification</b> <i>Select type(s) and enter number of strata</i>	<input checked="" type="checkbox"/> Geographical #: 2 (district – North and South Galkacyo) Population size per strata is known? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Group #: 0 Population size per strata is known? <input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> [Other Specify] #: __ Population size per strata is known? <input type="checkbox"/> Yes <input type="checkbox"/> No	
<b>Data collection tool(s)</b>	<b>Sampling method</b>		<b>Data collection method</b>	
<b>Household Survey Module</b> <i>Select sampling and specify target # interviews</i>	<input type="checkbox"/> Probability / Simple random <input checked="" type="checkbox"/> Probability / Stratified simple random <input type="checkbox"/> Probability / Random Location Sampling (RLC) <input type="checkbox"/> [Other, Specify]		X Household interview: 204 interviews total 102 households in North Galkacyo 102 households in South Galkacyo	
<b>Target level of precision if probability sampling for household survey</b>	95% level of confidence		+/- 10% margin of error for household indicators, 10% buffer	
<b>Health Facility Observation Tool</b>	X Purposive <input type="checkbox"/> [Other, Specify]		X Health facility observations: 4 checklists across the district	
<b>Disaggregation by gender and age</b> <i>Are you planning to conduct sex/age disaggregated analysis?</i>	Gender		Age	
	<input checked="" type="checkbox"/> Yes	<input checked="" type="checkbox"/> Yes	<input checked="" type="checkbox"/> Yes	
	<input type="checkbox"/> No	<input type="checkbox"/> No	<input type="checkbox"/> No	
<b>Data management platform(s)</b>	<input checked="" type="checkbox"/> IMPACT	<input type="checkbox"/> UNHCR		
	<input type="checkbox"/> [Other, Specify]			
<b>Expected output type(s)</b>	<input checked="" type="checkbox"/> Situation overview #: 1 <input checked="" type="checkbox"/> Presentation (Preliminary findings) #: 1 <input type="checkbox"/> Interactive dashboard #: __	<input type="checkbox"/> Report #: __ <input type="checkbox"/> Presentation (Final) #: __ <input type="checkbox"/> Webmap #: __	<input type="checkbox"/> Profile #: __ <input type="checkbox"/> Factsheet #: __ <input checked="" type="checkbox"/> Map #: 1	
	<input checked="" type="checkbox"/> Advocacy brief #: 1			
<b>Access</b>	<input checked="" type="checkbox"/> Public (available on REACH resource center and other humanitarian platforms) <input type="checkbox"/> Restricted (bilateral dissemination only upon agreed dissemination list, no publication on REACH or other platforms)			
	<b>REACH</b>			
	<b>Donor: BHA</b>			

<b>Visibility</b> Specify which <b>logos</b> should be on outputs	<b>Partners:</b> Nutrition Cluster, WASH Cluster, Health Cluster
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## 2. Rationale

### 2.1 Background

Cholera has been endemic to southern Somalia for years, but in the aftermath of historic flooding during the Deyr 2023 rainy season, cholera and acute watery diarrhea (AWD) cases have increased exponentially. From October to December 2023, flash and riverine flooding displaced communities, destroyed latrines, contaminated water sources, damaged health facilities, and increased the transmission of water-borne diseases.<sup>1</sup> From 1 January to 7 April 2024, there have been 7,235 cholera/AWD cases (58% of those being children <5) and 75 cumulative deaths (Case Fatality Rate (CFR) 1.0%) across 28 districts in Somalia.<sup>2</sup> The globally recognized emergency threshold of 1% CFR has been met and exceeded in some districts, prompting the need for immediate action to strengthen health service access and decrease mortality. High rates of malnutrition among children under 5 are common in many of the areas concurrently seeing outbreaks of cholera, further increasing the vulnerability of children to worsened morbidity and mortality outcomes.<sup>3</sup> A rapid needs assessment in Belet Weyne district in November 2023, conducted within 48 hours of large-scale riverine flooding and subsequent displacement to higher ground, found that 18/26 of displacement sites reported open defecation as the primary latrine practice, and a further 14/26 sites reported surface water or no safe drinking water as the primary source of drinking water among flood-affected people, creating ideal conditions for the cholera outbreak subsequently observed in December.<sup>4</sup> There is a moderate (55%) likelihood of above average rainfall and subsequent flooding during the 2024 Gu rainy season (April – June), which could engender similar effects on sanitation and health infrastructure as seen in the Deyr season and hamper the early recovery efforts in communities still reeling from the previous flooding.<sup>5</sup> Though flooding is not anticipated to be as widespread as the previous Deyr season (October – December), the Gu rainy season is expected to cause upticks in cholera cases, due to flood-induced displacement, lack of sanitation facilities in displacement sites, limited access to primary health care, and the use of contaminated water for drinking and cooking.<sup>6</sup> Galkacyo is prioritized by the recent Humanitarian Needs and Response Plan (HNRP) as a target district for flood response during the Gu season, due to its risk of flash flooding during heavy rainfall.<sup>7</sup>

Galkacyo district is divided into two administrative states: Galmudug State, which controls South Galkacyo, and Puntland State, which controls North Galkacyo. Historically, cholera has not been seen in central and northern Somalia, including Galmudug State. However, cholera rates have spiked in the broader region in the past month, and recent reports of AWD in Galkacyo district specifically signal a possible emergence of cholera outbreaks in the district.<sup>8</sup> For Acute Food Insecurity, IDPs populations in Galkacyo are currently in Crisis (Phase 3) and expected to remain so through June 2024. The district is projected to remain in Critical (Phase 4) Acute Malnutrition classification from March to June 2024, perpetuating high vulnerability of children under 5 to infectious diseases such as cholera/AWD.<sup>9</sup> Furthermore, the 2024 Humanitarian Needs Response Plan (HNRP) classifies WASH, Health, and Nutrition needs severity in Galkacyo as Extreme (Inter-Cluster Severity Category 4).<sup>10</sup> The onset of a cholera outbreak in a district that has not experienced such outbreaks in years may

<sup>1</sup> WHO. Somalia: Health Cluster Bulletin January 2024. 12 March 2024.

<sup>2</sup> Somali MoH. AWD/Cholera Weekly Epidemiological Report EPI Week 14 (1 April – 7 April 2024). 14 April 2024.

<sup>3</sup> IPC Somalia Acute Food Insecurity and Acute Malnutrition Analysis. Feb 2024.

<sup>4</sup> REACH Somalia. Rapid Multi-sectoral Needs Assessment of Populations Affected by Deyr Flooding. Belet Weyne district. November 2023.

<sup>5</sup> SWALIM. Somalia Climate Outlook for the 2024 Gu “Long Rains” Season - Issued on 7th March 2024.

<sup>6</sup> OCHA. Somalia Monthly Humanitarian Update, February 2024. 17 March 2024.

<sup>7</sup> Somalia 2024 Humanitarian Needs and Response Plan (HNRP). Jan 2024.

<sup>8</sup> IFRC. Somalia Cholera Response: DREF Operational Update (MDRSO017). 15 April 2024.

<sup>9</sup> IPC Somalia Acute Food Insecurity and Acute Malnutrition Analysis. Feb 2024.

<sup>10</sup> Somalia 2024 Humanitarian Needs and Response Plan (HNRP). Jan 2024.



put significant strain on the local health system. Unidentified drivers of transmission and individual vulnerabilities may lead to an increased risk of excess morbidity and mortality, especially in internally displaced persons (IDPs) camps, which are more vulnerable to environmental hazards.

## 2.2 Intended impact

Dissemination to the Health, Nutrition, Food Security and Livelihoods (FSL), and WASH Clusters of household and health facility data on a localized level would inform integrated programmatic interventions for emergency response during the cholera outbreak and in the aftermath of Gu flooding. Data on IDPs specifically would serve to advocate for a vulnerable population by quantifying the severity of their need, particularly noting that IDPs are a priority population in the 2024 HNRP.<sup>11</sup>

## 3. Methodology

### 3.1 Methodology overview

The general research design for the Integrated Public Health Rapid Assessment will consist of a mixed-methods approach constituting two main methods: **household surveys** and **health facility observation checklists**, each of these methods having globally recognized indicators for which data can be collected. The household survey component will consist of a two-stage stratified simple random sampling design, intended to provide *localized* results which are not generalizable beyond the assessed population. They will be indicative of the emergency situation within the target population and statistically representative of the sampled sites. The two geographic strata to be targeted are North and South Galkacyo district, within which the IDP population group will be sampled. Within each stratum, using a 95% Confidence Interval and a 10% margin of error, 102 IDP households will be sampled, equally distributed across three sites per strata randomly selected for assessment using Population Proportionate to Size (PPS) site selection. Within each site, the target sample of households (34) will be randomly selected using systematic random sampling, a method which was chosen due to the systematic layout of IDP camps in the district and owing to the potential for household lists to be out of date. Health facility observation checklists will be conducted for each service structure the target population, i.e. the population at risk of cholera.

### 3.2 Population of interest

The target population is IDPs living in districts which are at risk of a cholera outbreak, due to their unique vulnerabilities and high need compared with host communities.<sup>12</sup> Therefore, within the district, the targeted IDP camps will be those verified by the CCCM Cluster. Based on data from the most recent site verification of North Galkacyo in May 2023<sup>13</sup> and of South Galkacyo in March 2024,<sup>14</sup> the population of interest is approximately 19,744 households among 44 IDP camps in North Galkacyo and 12,068 households among 72 IDP camps in South Galkacyo. In the most recent MSNA conducted from June–August 2023, protracted IDPs (those who have been displaced for more than 1 year) in Galkacyo district reportedly experience more barriers to water access, such as distance to waterpoint, than host communities.<sup>15</sup> Data from the DSA VII, conducted from November – December 2023, found that the majority (56%) of sites reported that most residents take more than 60 minutes to reach the nearest health facility; the most commonly reported health facilities were first aid posts (52%) and mobile free clinics (37%).<sup>16</sup> Recent reporting suggests that there has been some improvement in food security indicators in agropastoral and pastoral populations following the Deyr 2023 rainy season, due to improved rainfall from drought conditions in early 2023. However, IDPs are a more vulnerable population that have lost their assets and typical livelihoods during displacement, which has led to Phase 3 Crisis food consumption outcomes that are expected to continue in Galkacyo

<sup>11</sup> [Somalia 2024 Humanitarian Needs and Response Plan \(HNRP\). Jan 2024.](#)

<sup>12</sup> [REACH Somalia MSNA Results Table, September 2023.](#)

<sup>13</sup> [CCCM Cluster. IDP Site Verification Galkacyo North, May 2023.](#)

<sup>14</sup> [CCCM Cluster. Somalia: Verified IDP Sites in South Galkayo as at March 2024.](#)

<sup>15</sup> [REACH Somalia MSNA Results Table, September 2023.](#)

<sup>16</sup> [REACH Somalia Detailed Site Assessment - February 2024 Gaalkacyo, Somalia.](#)

IDP populations through the duration of the Gu season.<sup>17</sup> Since October 2023, the vast majority of IDPs (73.16%) within the district were displaced due to flash flooding during the Deyr season.<sup>18</sup> Within this population, WASH, Health, and Food Security Household Level Indicators will be collected from all sampled households within the target population.

The target population for the nutrition portion of the survey will be children aged 6 – 59 months for the vaccination, micronutrient supplantation, and child health-seeking behavior components. The FSNAU Somalia 2023 Post Deyr Acute Malnutrition Prevalence data, captured in the month following the conclusion of Deyr flooding, recorded high rates of Global Acute Malnutrition (GAM) in children under 5 in Galkacyo IDPs (18.0%).<sup>19</sup> Indicators related to infant and young child feeding behaviours and practices will target all children under 2 years of age within the target population of IDPs in Galkacyo district. Specific data to be collected in the nutrition component of the survey is as follows:

- **Age:** This will be recorded as a date of birth (day/month/year) if the information is available on official written documents such as vaccination or birth registration cards. If documentation is unavailable, age will be recorded in months. A local calendar of events will be used to estimate the age.
- **Sex:** Male or female
- **Health Interventions Data:** Vitamin A supplementation, Deworming, and Measles immunization data will be collected through health cards or recall. Enumerators will bring used Vitamin A capsules and deworming tablet packaging to show parents and improve recall.

### 3.3 Secondary data review

The main assessment design is based off guidance documents and tools for Integrated Public Health Rapid Assessment (IPHRA), available on the [IMPACT Intranet](#). Secondly, the IPHRA toolkit is designed to align with the Risk of Excess Mortality Framework utilized by the Global Emergencies Team and outlined by Checchi (2023), in order to inform priority indicators and information to include within acute settings. See below for how the RoEM framework maps against different tools within the IPHRA toolkit.

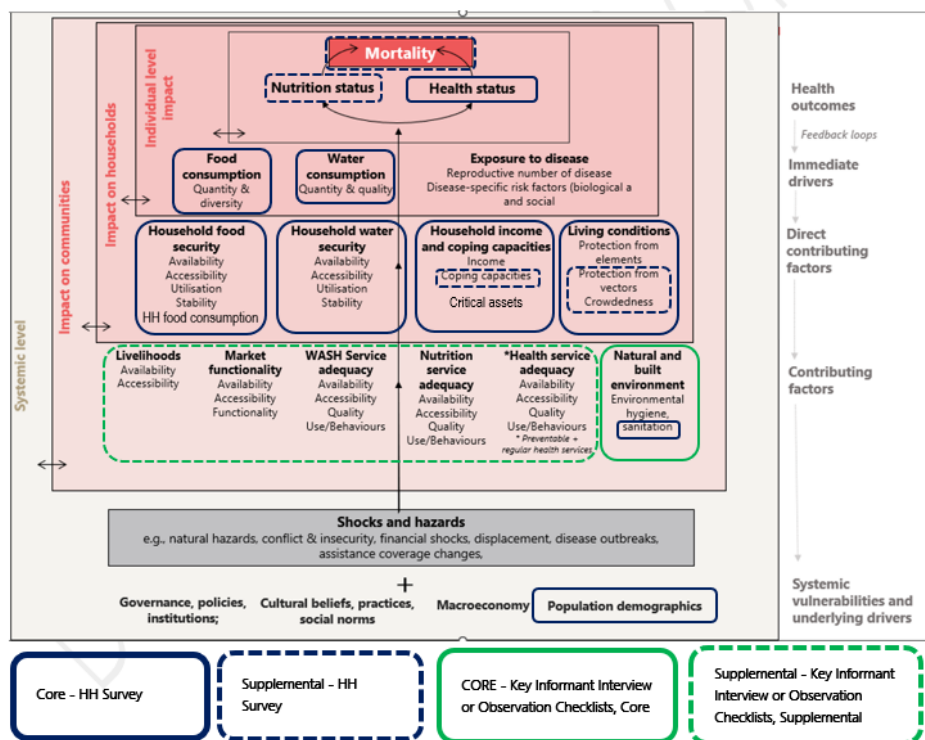
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<sup>17</sup> FEWS NET. Somalia Food Security Outlook, February - September 2024: Gradual drought recovery continues, though millions still need assistance. 30 Mar 2024.

<sup>18</sup> IOM. Somalia Displacement Tracking Matrix (DTM). Accessed 14 April 2024.

<sup>19</sup> FSNAU Somalia Post-Deyr Acute Malnutrition Prevalence, 15 Feb 2024.





Research objectives and district prioritization were guided by strategic documents, including the [2024 HNRP](#), and stakeholder outreach to the national Health, Nutrition, and WASH Clusters and partner INGOs, to identify which data would be most impactful in the information landscape in Somalia. District prioritization was also guided by severity analyses, as seen in the recent HNRP and [IPC on Acute Malnutrition and Acute Food Insecurity \(Jan – Mar 2024\)](#), that are used to set strategic priorities at country level. Vulnerability data on the target population was informed by REACH's portfolio of baseline data and situation monitoring – data collected by the [Somalia MSNA](#) from June to August 2023 and [Somalia DSA VII](#) in November 2023 – to contextualize the tool and subsequent findings. GAM prevalence data was found from the most recent [FSNAU Somalia Post-Deyr Acute Malnutrition Prevalence data](#). Population estimates for sampling were pulled from the CCCM Cluster's site verification exercises in North Galkacyo and South Galkacyo and their estimated number of households and individuals, and triangulated with partners on the ground. Immunization and supplementation indicator cut-offs were contextualized by the most recent [Somalia Immunization Policy](#), formulated by the Somalia Ministry of Health.

Certain data sources will be used for real-time monitoring of the extent of the multi-sectoral crisis. The [Somalia Weekly Weather Forecasts](#), produced by FAO SWALIM and published on Relief Web, will be used to monitor the extent of Gu flooding over the months of April and May. The CCCM Cluster has created a live [Google Sheet document](#) in collaboration with partners on the ground and the local government to map the Flood Response and flood-affected sites in real time. The [Weekly Epi-Watch](#) from WHO and [regular caseload updates](#) from the Somali Ministry of Health, both of which are aggregated to a district level, will provide regular updates on the extent of cholera outbreak and can be used to triangulate household- and facility-level findings in outputs. Operational updates on cholera response programming from partners operating in Puntland and Galmudug States, such as [IFRC](#) will also provide updates on the spread of cholera in the vicinity of Galkacyo district. The Health Cluster's [Health facilities stakeholders mapping dashboard](#) monitors information on staffing levels and service availability at health facilities across the country and will also be used to triangulate rapid assessment findings.

Secondary source	Purpose of source
Cecchi, F. Inferring the impact of humanitarian responses on population mortality: methodological	<ul style="list-style-type: none"> <li>Inform research objectives and design through the Risk of Excess Mortality framework</li> </ul>

problems and proposals. Confl Health 17, 16 (2023). <a href="https://doi.org/10.1186/s13031-023-00516-x">https://doi.org/10.1186/s13031-023-00516-x</a>	
<a href="#">REACH. Integrated Public Health Rapid Assessment toolkit. March 2024.</a>	<ul style="list-style-type: none"> <li>• Inform research objectives, design, and selection of priority indicators</li> </ul>
<a href="#">REACH Somalia Detailed Site Assessment - February 2024 Gaalkacyo, Somalia.</a>	<ul style="list-style-type: none"> <li>• Contextual understanding of target populations</li> </ul>
<a href="#">REACH Somalia MSNA Formatted Analysis. September 2023</a>	<ul style="list-style-type: none"> <li>• Contextual understanding of target populations</li> </ul>
<a href="#">REACH Somalia. Multi-Sector Needs Assessments (MSNA) 2023 - Water, Sanitation, and Hygiene (WASH) - (November 2023). 30 Jan 2024.</a>	<ul style="list-style-type: none"> <li>• Inform research objectives</li> </ul>
<a href="#">REACH Somalia. Health and Nutrition Brief - Multi-Sector Needs Assessments (MSNA) (February 2024). 31 March 2023.</a>	<ul style="list-style-type: none"> <li>• Inform research objectives</li> </ul>
<a href="#">Health Cluster. Somalia: WASH in Health Care Facilities - WHO/UNICEF JMP WASH in healthcare facilities Assessment 2022/2023. 9 Nov 2023.</a>	<ul style="list-style-type: none"> <li>• Inform understanding of information gaps</li> <li>• Inform selection of priority indicators</li> </ul>
<a href="#">IPC Somalia Acute Food Insecurity and Acute Malnutrition Analysis. Feb 2024.</a>	<ul style="list-style-type: none"> <li>• Targeted district prioritization</li> <li>• Contextual understanding of target populations</li> </ul>
<a href="#">Somalia 2024 Humanitarian Needs and Response Plan (HNRP). Jan 2024.</a>	<ul style="list-style-type: none"> <li>• Targeted district prioritization</li> <li>• Inform strategic objectives</li> </ul>
<a href="#">REACH Somalia. Rapid Multi-sectoral Needs Assessment of Populations Affected by Deyr Flooding. Belet Weyne district. November 2023.</a>	<ul style="list-style-type: none"> <li>• Contextual understanding of target populations</li> </ul>
<a href="#">Somali MoH. AWD/Cholera Weekly Epidemiological Report EPI Week 14 (1 April – 7 April 2024). 14 April 2024.</a>	<ul style="list-style-type: none"> <li>• Targeted district prioritization</li> <li>• Contextual understanding of crisis</li> </ul>
<a href="#">IFRC. Somalia Cholera Response: DREF Operational Update (MDRSO017). 15 April 2024.</a>	<ul style="list-style-type: none"> <li>• Real time monitoring of cholera spread</li> </ul>
<a href="#">SWALIM. Somalia Climate Outlook for the 2024 Gu “Long Rains” Season - Issued on 7th March 2024.</a>	<ul style="list-style-type: none"> <li>• Contextual understanding of crisis</li> </ul>
<a href="#">CCCM Cluster. Flood Affected Sites dashboard. Oct-Dec 2023.</a>	<ul style="list-style-type: none"> <li>• Contextual understanding of target population</li> </ul>
<a href="#">FSNAU Somalia Post-Deyr Acute Malnutrition Prevalence. 15 Feb 2024.</a>	<ul style="list-style-type: none"> <li>• GAM prevalences for MUAC sample size calculations</li> </ul>
<a href="#">CCCM Cluster. IDP Site Verification Galkacyo North, May 2023.</a>	<ul style="list-style-type: none"> <li>• Target population size estimate</li> </ul>
<a href="#">CCCM Cluster. Somalia: Verified IDP Sites in South Galkayo as at March 2024.</a>	<ul style="list-style-type: none"> <li>• Target population size estimate</li> </ul>

## Key Definitions

- **Cholera/AWD:** Cholera is an acute diarrheal disease that can be fatal if not treated. It is transmitted through oral-fecal pathway, by the ingestion of food or water that is contaminated with the bacterium *Vibrio cholerae*. The risk of outbreak is increased in contexts with poor WASH infrastructure and high displacement. Cholera is one form of acute watery diarrhea (AWD), which can be caused by several bacterial and viral pathogens; confirmed cholera diagnosis relies on laboratory confirmation, which is not always available in resource-constrained settings, so monitoring AWD rates can serve as an epidemiological proxy for outbreak surveillance, and cholera and AWD cases are often reported together. The Case Fatality Rate (CFR) measures the proportion of people who die of a

certain disease out of all confirmed cases of that disease. The globally recognized emergency threshold for an cholera outbreak requiring immediate intervention is a CFR of 1%.<sup>20</sup>

- **GAM:** Global Acute Malnutrition, or wasting, is acute malnutrition among children under five years, measured through the combination (i.e. the Z-score) of the weight and the height of the child (WHZ), oedema, or by measuring the middle-upper arm circumference (MUAC).<sup>21</sup> Acute malnutrition is diagnosed if oedema is observed, if the WHZ-score is below 2, or if the MUAC is below 125 millimetres.
- **Complementary Feeding:** Complementary feeding is defined as the process starting when breast milk alone is no longer sufficient to meet the nutritional requirements of infants, and therefore other foods and liquids are needed, along with breast milk.<sup>22</sup>
- **Internally displaced persons (IDPs):** Persons or groups of persons who have been forced or obliged to leave their homes or places of habitual residence, in particular as a result of or in order to avoid the effects of armed conflict, clan-based or other forms of generalized violence and insecurity, violations of human rights of natural or human-made disasters, and who have not crossed an internationally recognized state border.

### 3.4 Primary Data Collection

The following section will provide details on the sampling and data collection methods for the household survey, key informant, and observation tools within the assessment.

#### Household surveys

##### Sample Size

The sample size was estimated at roughly 102 households per geographical strata (2), using the known population size per strata and assumptions of 95% confidence level, 50% estimated proportion for household indicators, 10% margin of error, and a 10% non-response rate. Design effect is not considered as IPHRA does not consider cluster survey designs.

##### Site Selection Methods

As the population of interest exists over multiple sites, a total of 6 sites will be selected for the assessment covering IDPs in North and South Galkacyo, 3 sites per strata as recommended by IPRHA guidance. The sites were randomly selected using Probability Proportional to Size (PPS) sampling. The number of households to be sampled per selected site was weighted according to the population size.

Stratum	IDP site name	Pop. size (HH; CCCM site verification)	Number of HH interviews
North Galkacyo	Ayah	196	6
	Jeexdin	2565	87
	Ramaas	259	9
South Galkacyo	Alkharash	368	36
	Hayan	270	25
	Bari Mudug	425	41

##### Household selection methods

Within selected sites, households will be sampled using accepted methods in emergencies to, as best as possible, give each household within the site an equal probability of selection. The household definition for this assessment is:

*“A group of people who ate from the same food pot and slept under the same roof the previous night”*

<sup>20</sup> [WHO. Cholera fact sheet. 2023.](#)

<sup>21</sup> [UNICEF Nutrition Strategy 2020-2030, UNICEF, 2020](#)

<sup>22</sup> [Guiding Principles for Complementary Feeding of the Breastfed Child, World Health Organization, 2003.](#)

Because a rough total number of households are known in the site and they are relatively geometrically ordered, the study will use systematic random sampling. Systematic random sampling will be conducted with the following steps:

- **Determining the sampling interval** – This will be estimated by dividing the total number of households in the site by the target sample per site.
  - E.g. 960 households total and 30 households needed means sampling interval =  $960 / 30 = 32$ .
- **Select the first sampling unit** – To select a random start, randomly select a number N between 1-X, with X being the sampling interval. Starting from one side of the assessment site, count to N<sup>th</sup> household and that will be the first interview.
  - E.g. randomly select the number 5 between 1 and 32... the 5<sup>th</sup> household will be the first one interviewed.
- **Select the following sampling units** – From the 1<sup>st</sup> household interviews, keeping moving along the ordered households counting the number of households equal to the sampling interval until you reach the next household to interview. Continue doing this until you've completed all your target households.
  - E.g. First household interviewed is #5, the 2<sup>nd</sup> household is #37 (5+32), the 3<sup>rd</sup> household is #69 (37+32).
  - **If the sampling interval has a decimal**, you may need to adjust how you count households to ensure you don't run out of households or miss households at the end of the site. The following rules can apply:
    - **Decimal between 0 – 0.2**, then round sampling interval down. E.g. with a sampling interval of 3.2; 1<sup>st</sup> household is 5, 2<sup>nd</sup> household is 5+3=8, 3<sup>rd</sup> household is 8+3=11.
    - **Decimal between 0.3 – 0.7**, alternate between rounding sampling interval down and up. E.g. with a sampling interval of 3.5; 1<sup>st</sup> household is 5, 2<sup>nd</sup> household is 5+3=8, 3<sup>rd</sup> household is 8+4=12.
    - **Decimal between 0.8 – 0.9**, then round sampling interval up. E.g. with a sampling interval of 3.9; 1<sup>st</sup> household is 5, 2<sup>nd</sup> household is 5+4=9, 3<sup>rd</sup> household is 9+4=13.

For special sampling cases that may occur during data collection:

- **If the selected household refuses to participate**, they should still be counted as an interview and saved as non-consent and submitted. This counts towards your sample size as it was considered in your non-response rate or buffer.
- **If no children in the household**, all questions targeting survey subjects other than children will be administered. Household will not be replaced with another one.
- **If the selected household is absent at the time of selection**, the field supervisor can gauge whether the household is abandoned (no one lives there anymore) or just absent (household is just not at home). If time allows, the supervisor can decide to return later in the day and see if the household has returned. If time is not available, the enumerator can be instructed to select instead immediately to the right of the sampled household instead.
- **If the selected household/structure has multiple families**, please check your household definition and use this to determine whether you are dealing with a single or multiple households. If multiple households, randomly choose which household to interview within the structure.

### Team Composition and Data Collection

One household survey team will consist of a team leader and five enumerators, for a total of one team per strata (12 enumerators in total). Teams will receive a two-day training prior to data collection covering the purpose of the survey, good interview practices and ethical conduct during public health assessment, review of the survey tool, and as needed sessions on specific technical topics such as water consumption estimation. Field teams will prepare contextually relevant local event calendars to determine age when age is unknown.

Data collection will be conducted for 3 days. During data collection, supervisors including the Field Officer will make regular visits to the data collection teams, this will help the data collection team to get on-site feedback and support, and the Nutrition Specialist and Assessment Officer will be able to virtually observe all data quality-related flags.

### **Observation Tools**

The Field Officer will assess 2 health facilities per stratum, using the health facility checklist. Health facilities will be sampled purposively, choosing the nearest health facility to the selected site (either inside the site or the facility that the majority of households frequent at that site, determined through conversations with camp leadership). Only two facilities in the North and South were determined to fall in these criteria, as IDPs from multiple neighboring sites frequented the same facility. Health facilities will be chosen if they have in-patient capacity (excluding mobile health clinics) as this is pertinent to the treatment of cholera/AWD cases and the potential for transmission within a facility structure. Approval will be obtained from local health authorities for access to such facilities.

## **3.5 Data Processing & Analysis**

### **Household Survey**

Data will be collected using a contextualized IPHRA ODK tool. Cleaning and analysis will be done using a prepared [IPHRA toolkit](#) package of cleaning and analysis materials coded with R and available through HQ PHU. As PPS was used for site selection, survey weights are not needed at site level before aggregating results across sites for analysis. Sex and age disaggregation (SADD) will be applied to indicators collected at individual level. Age group disaggregation, contextualized to a Somali context following the MSNA 2023, will be as follows: 0-5 years; 6-17; 18-65; 66+.<sup>23</sup>

### **Observation Checklists**

Observation checklists for health facilities, water and sanitation infrastructure, will be analysed in two ways:

- Qualitatively, by assessing the adequacy of services against suggested or contextualized severity thresholds as outlined in the IPHRA Guidance. Additionally providing descriptive analysis where possible on what parts of the services are insufficient.
- Quantitatively, by counting the number of facilities, water points and latrines that are adequately servicing the population and comparing this with minimum acceptable Health and WASH standards.

## **3.6 Limitations**

The IPHRA methodology is intended to be a lightweight method to assess the most key public health outcomes and service coverage indicators compared to other more robust methods. The limitations with this rapid assessment are as follows:

- Not a Causal Analysis – The intent of the IPHRA methods is to understand the severity of public health needs and service gaps, however given this focus it may not fully explain the reasons or causes of the results. Some analysis and triangulation with qualitative components may give an indication, but it will likely be limited.
- Not Generalizable – Cluster sampling approaches are not recommended, and the allowance of purposive sampling means that results shouldn't be generalized to a wider population beyond the sites and facilities assessed. The indicative nature of the results aligns with the research objective of a rapid assessment to guide the emergency response within the first weeks of the crisis.

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<sup>23</sup> [REACH Somalia MSNA Terms of Reference, June 2023.](#)

- Population estimates of IDP populations are difficult to verify; results should be taken as indicative due to the lack of reliable estimates.
- Likely Not Reaching Saturation – For the qualitative components, sample sizes are likely not adequate to reach a full saturation of responses in the population. The intent of these is to provide some light-touch information to triangulate with household survey results.
- Accessibility – IPHRA is not a hard-to-reach methodology and should only be applied to populations which the assessment team can physically access.

## 4. Key ethical considerations and related risks

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

<b>The proposed research design...</b>	<b>Yes/ No</b>	<b>Details if no (including mitigation)</b>
... Has been coordinated with relevant stakeholders to <b>avoid unnecessary duplication</b> of data collection efforts?	Yes	
... <b>Respects respondents, their rights and dignity</b> (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 <b>expose data collectors to any risks as a direct result</b> of participation in data collection?	Yes	
... Does not <b>expose respondents / their communities to any risks as a direct result</b> of participation in data collection?	Yes	
... Does not involve <b>collecting information on specific topics which may be stressful and/ or re-traumatising</b> for research participants (both respondents and data collectors)?	Yes	
... Does not involve <b>data collection with minors</b> i.e. anyone less than 18 years old?	Yes	
... Does not involve <b>data collection with other vulnerable groups</b> e.g. persons with disabilities, victims/ survivors of protection incidents, etc.?	No	It is important to include the perspective of vulnerable populations like people with disabilities, so they will not be purposively excluded from the survey. Enumerator training will include a section on referral pathways if protection incidents arise over the conduct of the assessments.
... Follows IMPACT SOPs for management of <b>personally identifiable information</b> ?	Yes	
... will assessment teams be aware of basic complaints and referral mechanisms in case needed during the course of the assessment?	Yes	Enumerators will disseminate local CFM hotline information to participants, provided for them by the Assessment



Officer through linkages with the state-level Protection Cluster partners

## 5. Roles and responsibilities

Task Description	Responsible	Accountable	Consulted	Informed
Research design	RNA AO	ISU, PHU RM	HQ PHU	CC
Supervising data collection	Field officer	Field coordinator	RNA AO	ISU, PHU RM; Senior Operations Manager
Data processing (checking, cleaning)	Data officer	RNA AO	HQ Data	ISU, PHU RM
Data analysis	Data officer	RNA AO	HQ Data	ISU, PHU RMs; HQ PHU
Output production	RNA AO	ISU, PHU RM	HQ PHU	CC
Dissemination	RNA AO	ISU, PHU RM	CC	HQ PHU, HQ WASH FP
Monitoring & Evaluation	RNA AO	ISU, PHU RM	HQ PHU	CC
Lessons learned	RNA AO	ISU, PHU RM	Operations team, Data team, HQ PHU	CC

**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

### TOOL 1: HOUSEHOLD SURVEY - DEMOGRAPHIC COMPOSITION

Research questions	Data collection method	Indicator / Variable	Questionnaire Question	Questionnaire Responses	Data collection level
Introduction of assessment	HH interview	Consent	Hi my name is _____. - I work for ACTED/REACH and we are currently conducting a rapid	Yes No	HH



			<p>survey to understand the needs and conditions in Galkacyo.</p> <p>- We would like to ask you a few questions about the health, nutrition, food security, water, shelter and people in your household.</p> <p>- The survey usually takes about 25-30 minutes to complete. Any information that you provide will be kept strictly confidential.</p> <p>- This is voluntary and you can choose not to answer any or all of the questions if you want; you may also choose to quit at any point. However, we hope that you will participate since your views are important.</p> <p>- Responses are not directly tied to any form of humanitarian assistance and answers given in this interview will not directly affect any status as a beneficiary or non-beneficiary.</p> <p>- Do you have any questions?</p> <p>- Do you agree to be interviewed?</p>		
Location (GPS)	HH interview	GPS	Please take the GPS points	Enter coordinates	HH
What is the sex and age distribution of the assessed population?	HH Interview	Demographics	How many people are in your household?	Enter number	HH
	HH interview	Demographics	What is the marital status of the head of household?	Single Married Divorced Widowed Other (specify) Don't know Decline to answer	HH

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HH interview	Demographics	What is the residency or displacement status of this household?	Host Community Internally Displaced Person (IDP) IDP Returnee Refugee Returnee Refugee	HH
HH Interview	Demographics	What are the top three priority needs of your household?	Shelter In-kind assistance (NFIs) Education services Infrastructure/ social services repair Multipurpose Cash transfers Information about services and aid Healthcare services Nutrition screening / treatment Protection (e.g. Child Protection, Gender-Based Violence) Water Sanitation In-kind assistance (food) Other (specify) No priority needs Don't know/no answer	HH
HH Interview	Demographics	What is the sex of the individual?	Male Female	Individual
HH Interview	Demographics	What is the age of the individual?	Enter number	Individual
HH interview	Demographics	What is the individual relationship to the head of household?	Head of household Child Parent Sibling (brother or sister) Grandchild Grandparent Cousin Uncle / aunt Nephew / niece Other (specify) Don't know	Individual

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HH Interview	Demographics	Do you know the day, month, and year **date of birth** of the individual?	Yes No Don't know	Individual
HH Interview	Demographics	What is the **date of birth** for the individual?	Date (DD/MM/YYYY)	Individual
HH Interview	Demographics	If not exact date, can you estimate the **month-year of birth** for the individual?	Date (MM/YYYY)	Individual

**TOOL 1: HOUSEHOLD SURVEY – HEALTH AND NUTRITION**

Research questions	Data collection method	Indicator / Variable	Questionnaire Question	Questionnaire Responses	Disaggregation	Data collection level
<p>What proportion of the population is experiencing unmet health care needs in the two weeks prior to data collection?</p> <p>How do these unmet needs differ by sex, age, and symptom?</p>	HH Interview	Unmet health care needs	Has the individual had any illness or health problem in the last two weeks and needed to access health care?	Yes No Don't know Prefer not to answer	Age Sex	Individual
	HH Interview	Unmet health care needs	If yes, what symptoms did the individual have?	Fever; Diarrhoea; Cough; Fast and difficulty breathing; Eye infection or red eyes; Skin infection; Ear infection; Rash with raised bumps on head or neck; Other; Don't know; Prefer not to answer;	Age Sex	Individual
	HH interview	Unmet health care needs	If the individual had diarrhea in the last two weeks, did they have 3 or more loose stools per day?	Yes No Don't know Prefer not to answer	Age Sex	Individual
	HH Interview	Unmet health care needs	If yes, was the individual able to obtain health care when he / she felt they needed it?	Yes No Don't know Prefer not to answer	Age Sex	Individual
	HH Interview	Unmet health care needs	If yes, where did the individual go to obtain health care?	Government health facility NGO-supported health facility Private health facility Traditional healer or practitioner Traditional birth attendant Pharmacy Mobile clinic Other (specify) Don't know Prefer not to respond	Age Sex	Individual
What are the self-reported perceptions of health and nutrition needs and access to care in the assessed population?	HH Interview	Health care barriers	In the last 2 weeks, what barriers if any has your household experienced to prevent you from accessing the health care you needed? [choose up to 3 most important]	Did not need to access services; No functional health facility nearby; Specific service sought unavailable; Could not afford cost of medication; Long waiting time for the service; Could not afford cost of consultation/service; Could not afford transportation to health facility; Health facility is too far away (5km or 1 hour walk); Disability prevents access to health facility;	Age Sex	HH

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				No means of transport; Not safe/insecurity at health facility / while travelling to health facility Not enough qualified staff at health facility Not enough female staff at health facility; Minority clan affiliation prevents access to health facility / denial to access [to be probed for] Wanted to wait and see if problem got better on its own Lack of information on how to access care; Specify other reason; Don't know Prefer not to respond No barriers experienced;		
	HH Interview	Health care barriers	Is you or any member of your household able to access health care providers within one hour by normal means of transportation?	Yes No Don't know Prefer not to answer	Age Sex	HH
What proportion of children 9-59 months have received any measles vaccination?	HH Interview	Measles vaccination	Has the child ever received measles vaccination?	Yes from maternal recall Yes from vaccination card /record No Don't know Prefer not to answer	Age Sex	Individual
What proportion of children 6-59 months have received Vitamin A supplementation in the last 6 months?	HH Interview	Vitamin A supplementation	Has the child received Vitamin A supplementation in last 6 months?	Yes, No, Don't Know, Prefer not to answer	Age Sex	Individual
What proportion of children 12 – 59 months have received deworming treatment in the last 6 months?	HH Interview	Deworming	Has the child received deworming treatment in the last 6 months?	Yes, No, Don't Know, Prefer not to answer	Age Sex	Individual
What are the basic breastfeeding and food consumption patterns for under-2 children?  What challenges are caregivers having in breastfeeding and complementary feeding for under-2 children?	HH Interview	IYCF-E	Is the mother or usual caregiver for the child present and can answer questions on feeding practices?	Yes No Don't know	Age Sex	Individual
	HH Interview	IYCF-E	Yesterday during the day or at night, did the child consume breastmilk from you or another woman?	Yes No Don't know	Age Sex	Individual
	HH Interview	IYCF-E	If the child wasn't breastfed yesterday, what are the reasons behind not breastfeeding the child?	Mother has no milk to breastfeed child/ mother is stressed; Child is fed other breastmilk substitutes (infant formula); Child is fed other milk (e.g. cow milk); Cultural barriers / child is too old to breastmilk / boys should not breastfeed; Mother or/and child is sick; Lack of time to breastfeed child/ competing workload; Lack of information on importance of breastfeeding; Mother is pregnant;	Age Sex	Individual

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			Influence from other household members e.g. father/ grandmother; Other; Prefer not to respond;		
HH Interview	IYCF-E	Which foods did the child consume in the last 24 hours?	Breast Milk Grains, roots, tubers and plantains Pulses (beans, peas, lentils), nuts and seeds Dairy products (milk, infant formula, yogurt, cheese) Flesh foods (meat, fish, poultry, organ meats) Eggs vitamin-A rich fruits and vegetables Other fruits and vegetables (non- Vitamin A) Don't know Other (specify)	Age Sex	Individual
HH Interview	IYCF-E	What are the challenges that your household face with the complementary feeding of the child?	Lack of money/ financial barriers to buy food; High food prices/ food is expensive; Lack of adequate information on IYCF; Child is sick/ low appetite; Poor hygienic practices/ lack of water; Lack of time to prepare foods for child/ household chores; Lack of time to care for child/ competing workload; Lack of information on importance of complementary feeding; Other; Prefer not to respond		Household

**TOOL 1: HOUSEHOLD SURVEY - WATER, SANITATION, AND HYGIENE**

Research questions	Data collection method	Indicator / Variable	Questionnaire Question	Questionnaire Responses	Data collection level
<p><i>What proportion of households have access to safe, improved drinking water in the assessed population?</i></p> <p><i>What is the average and median liters per person per day consumed in the assessed population?</i></p>	HH Interview	Main sources of water	<p>What is the main source of water used by your household for drinking or other household uses?</p> <p>What are the other sources of water you use for drinking or other household uses?</p>	<p>Piped into dwelling</p> <p>Piped into compound, yard or plot</p> <p>Piped to neighbour</p> <p>Public tap/standpipe</p> <p>Borehole or tubewell</p> <p>Protected well</p> <p>Unprotected well</p> <p>Protected spring</p> <p>Unprotected spring</p> <p>Rainwater collection</p> <p>Tanker-truck</p> <p>Cart with small tank / drum</p> <p>Water kiosk</p> <p>Bottled water</p> <p>Sachet water</p> <p>Surface water (river, dam, lake, pond, stream, canal, irrigation channel)</p> <p>Other (specify)</p> <p>Don't know</p> <p>Prefer not to answer</p>	HH
	HH Interview	Liters per person per day	Do you have any containers that you use to Collect and Store drinking water for your house?	Yes, No, Don't Know, Prefer not to answer	HH

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	HH Interview	Liters per person per day	How many containers did you use to collect water yesterday, or the last time you filled all your storage containers?	Number	HH
	HH Interview	Liters per person per day	What is the type of container number \${container_position}?	20L jerry can 10L jerry can 3L jerry can 2L jerry can Other (specify)	HH
	HH Interview	Liters per person per day	If other, can you specify the size per litre of the container.	Number (liters)	HH
	HH Interview	Liters per person per day	Do you know how many times was this container filled YESTERDAY	Number	HH
	HH Interview	Liters per person per day	From the last time you collected water, how many days do you estimate this water will last your household before needing to collect more water? (number of days)	Number	HH
What proportion of households can collect water within 30 minutes, including travel to, from, and queuing time?	HH Interview	Water collection time	How long does it take the household to collect water (including travel to and from and waiting)?	Water available inside the compound Under 30 minutes 30 minutes to less than 1 hour 1 hour to less than half a day Half a day More than half a day Don't know Prefer not to answer	HH
What types of water treatment methods are households in the assessed population using?	HH Interview	Water treatment	What do you do to treat the water you drink if anything?	No treatment Boil water Chlorine tablet / Aquatab Filter cloth Other (specify) Don't know Prefer not to answer	HH
What are the self-reported perceptions of water needs and barriers to access in the assessed population?	HH Interview	Water usage	What do you use water from \${wash_water_source} for? [for each source]	Drinking Cooking Bathing Laundry Household hygiene Ablution Washing after using latrine Other (specify)	HH
	HH Interview	HWISE	In the last 4 weeks, how frequently did you or anyone in your household worry you would not have enough water for all of your household needs?	Never (0 times) Rarely (1-2 times) Sometimes (3-10 times) Often (11-20 times) Always (more than 20 times)	HH
	HH Interview	HWISE	In the last 4 weeks, how frequently have you or anyone in your household had to change schedules or plans due to problems with your water situation? (Activities that may have been interrupted include caring for others, doing household chores, agricultural work, income-generating activities, sleeping, etc.)	Never (0 times) Rarely (1-2 times) Sometimes (3-10 times) Often (11-20 times) Always (more than 20 times)	HH
	HH Interview	HWISE	In the last 4 weeks, how frequently have you or anyone in your	Never (0 times) Rarely (1-2 times) Sometimes (3-10 times)	HH

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			household had to go without washing hands after dirty activities (e.g., defecating or changing diapers, cleaning animal dung) because of problems with water?	Often (11-20 times) Always (more than 20 times)	
	HH Interview	HWISE	In the last 4 weeks, how frequently has there not been as much water to drink as you would like for you or anyone in your household?	Never (0 times) Rarely (1-2 times) Sometimes (3-10 times) Often (11-20 times) Always (more than 20 times)	HH
What proportion of households in the assessed population have access to improved sanitation facilities?	HH Interview	Latrine type	What kind of toilet facility do members of your household usually use?	Flush to piped sewer system Flush to septic tank Flush to pit latrine Flush to open drain Flush to elsewhere Flush to don't know where Pit latrine with slab Pit latrine without slab / open pit Composting toilet Plastic Bag Bucket No facility/bush/field Other Prefer not to answer	HH
	HH Interview	People per latrine	Do you share this facility with others who are not members of your household?	Yes, No, Prefer not to answer	HH
	HH Interview	People per latrine	If yes, how many households in total use this toilet facility, including your own household?	Number	HH
	HH interview	Protection and accessibility features	Does your household have access to a sanitation facility with the following features:	Door Walls that protect privacy Lock to close door Inside light Outside light Marked separated facilities between men and women (for shared or communal facilities) Close to dwelling (less than 50m) Easily accessible to all household members (children, elderly, people with disabilities, pregnant women) None of the above Don't know Prefer not to answer	HH
What is the frequency of daily handwashing among households with access to handwashing facilities?	HH Interview	Household hygiene	Can you please show me where members of your household most often wash their hands?	Fixed or mobile handwashing place in dwelling/yard/plot No permission to see No handwashing place in dwelling/Yard/plot	HH
	HH interview	Household hygiene	Observe availability of water at the place for handwashing.	Water is available Water is not available	HH
	HH interview	Household hygiene	Observe availability of soap or detergent at the place for handwashing.	Soap or detergent available Soap or detergent not available Sand / ash used instead of soap	HH
	HH interview	Household hygiene	Does the majority of your household also regularly (on a daily	Yes No Don't know	HH



		basis) use this handwashing facility?	Prefer not to answer	
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## TOOL 1: FOOD SECURITY AND LIVELIHOODS

Research questions	Data collection method	Indicator / Variable	Questionnaire Question	Questionnaire Responses	Data collection level
<i>What is the proportion of households in the assessed population experiencing food consumption gaps in terms of quantity and diversity?</i>	HH Interview	FCS	How many days over the last 7 days, did most members of your household (50% +) eat, inside or outside the home, cereals, grains, roots and tubers, including wild roots?	Number 0-7	HH
	HH Interview	FCS	... Pulses, Legumes, nuts?	Number 0-7	HH
	HH Interview	FCS	... Milk and other dairy products?	Number 0-7	HH
	HH Interview	FCS	... Meat, fish and egg?	Number 0-7	HH
	HH Interview	FCS	... Vegetables and leaves?	Number 0-7	HH
	HH Interview	FCS	... Fruits?	Number 0-7	HH
	HH Interview	FCS	... Oil, fat, butter?	Number 0-7	HH
	HH Interview	FCS	... Sugar, or sweet?	Number 0-7	HH
	HH Interview	FCS	... condiments and spices?	Number 0-7	HH
	HH Interview	HHS	In the past 4 weeks (30 days), was there ever no food to eat of any kind in your house because of lack of resources to get food?	Yes; No	HH
	HH Interview	HHS	How often did this happen in the past [4 weeks/30 days]?	Rarely (1-2 times); Sometimes (3-7 times); Often (more than 10 times)	HH
	HH Interview	HHS	In the past 4 weeks (30 days), did you or any household member go to sleep at night hungry because there was not enough food?	Yes; No	HH
	HH Interview	HHS	How often did this happen in the past [4 weeks/30 days]?	Rarely (1-2 times); Sometimes (3-7 times); Often (more than 10 times)	HH
	HH Interview	HHS	In the past 4 weeks (30 days), did you or any household member go a whole day and night without eating anything at all because there was not enough food?	Yes; No	HH
	HH Interview	HHS	How often did this happen in the past [4 weeks/30 days]?	Rarely (1-2 times); Sometimes (3-7 times); Often (more than 10 times)	HH
<i>What are the main sources of food utilized by the assessed population in the last 7 days?</i>	HH Interview	Main Sources of Food	What are the household's most important sources of food in the past 7 days?	Own stocks (crop/garden production); Local market Borrowing/debts; Donations from neighbours, relatives, or friends Work for food; Humanitarian food and/or cash assistance Government assistance Other; None	HH
	HH Interview	Main Sources of Food	First source:		HH
	HH Interview	Main Sources of Food	Second source:		HH
	HH Interview	Main Sources of Food	Third source:		HH
<i>What are the main sources of water and fuel utilized by households for cooking in the assessed population?</i>	HH Interview	Food Utilization – Water	What water source does your household use for food preparations in the past 30 days?	Piped into dwelling Piped into compound, yard or plot Piped to neighbour Public tap/standpipe Borehole or tubewell Protected well Unprotected well Protected spring Unprotected spring Rainwater collection Tanker-truck Cart with small tank / drum Water kiosk Bottled water Sachet water	HH

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				Surface water (river, dam, lake, pond, stream, canal, irrigation channel) Other (specify) Don't know Prefer not to answer	
	HH Interview	Food Utilization – Fuel	What energy source does your household use for food preparations in the past 30 days?	Firewood Coal (charcoal, mineral charcoal) Electricity Gas Straw (caws) or other feed Other (specify) Don't know Prefer not to answer	HH
What are the main barriers to accessing food for the assessed population?  What are the self-reported perceptions of food needs in the assessed population?	HH Interview	Barriers to Food Accessibility	In the last 7 days, did you face any barriers to consistently accessing food sources?	No barrier faced accessing food sources Live too far from food sources/no means of transport. Transportation to food source too expensive. Not enough food is available Damage to main source of food Security issues travelling to and from food sources. Not allowed to access main food sources (cultural, social, etc. reasons) Other (specify) Don't know Prefer not to answer	HH
	HH Interview	Coverage of Emergency FSL Intervention	Is you or any member of your household registered and received for general food distribution or cash transfer programming?	Yes, No, Don't know, Prefer not to answer	HH
What is the household coverage of emergency food security interventions in the assessed population?	HH Interview	Coverage of Emergency FSL Intervention	If yes, please select what you received in the last 2 weeks?	Food In-Kind Food vouchers Livelihoods (inputs) voucher Multi Purpose Cash Assistance Cash for food Cash for livelihoods (inputs, assets, etc) Other (specify) None Prefer not to answer	HH

**TOOL 1: SHELTER AND CRITICAL NFIS**

Research questions	Data collection method	Indicator / Variable	Questionnaire Question	Questionnaire Responses	Data collection level
What types of shelter are the assessed population living in?	HH Interview	Shelter type	What type of shelter do you live in?	Solid / finished house Unfinished / non-enclosed building Temporary shelter (i.e. tent, makeshift shelter, buul) None (sleeping in open) Other (specify) Don't know Prefer not to answer	HH
What proportion of households are reporting shelter damage?	HH Interview	Shelter damage	What damage and/or noticeable issues does your enclosure have?	No damage or noticeable issue Minor damage to roof (cracks, openings) Major damage to roof with risk of collapse Damage to windows and/or doors (missing, broken, unable to shut properly) Damage to walls	HH

				Lack of privacy inside the shelter (no partitions, doors) Lack of space inside shelter Shelter is too cold Shelter is too hot Limited ventilation (no air circulation unless main entrance is open) Leaks during rain Unable to lock the shelter Lack of lighting inside or outside the shelter	
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## TOOL 2: HEALTH FACILITY OBSERVATION TOOL

Research questions	Data collection method	Indicator / Variable	Questionnaire Question	Questionnaire Responses	Data collection level
What if any gaps are there with human resources, infrastructure, supplies, equipment, and WASH environment of health facilities serving the assessed population?	Observation	Health Facility Damage	What is the overall physical state of the health facility structure?	0 Good condition (new facility or facility that has been rehabilitated/undergoing rehabilitation. No damage) 0 Functional (light damage/facility not well-maintained, needs more significant rehabilitation support for things such as flooring, doors, windows, etc.) 0 Partial destruction/damaged (lack of/unusable/partially damaged doors, windows, flooring, ceiling/roof) 0 Significant destruction (no roof but walls still intact, physical structure could be used with significant rehabilitation)	Facility
	Observation / KI	Rooms	Facility has sufficient number of consultation and examination rooms for client volume?	0 Yes 0 No	Facility
	Observation / KI	Privacy	Facility has private areas for consultation?	0 Yes 0 No	Facility
	Observation / KI	Power	Is there electricity available at the facility? If yes, what is the source and availability?	0 Yes 0 No 0 Not functional	Facility
	Observation / KI	Power	Electricity Source:	Text	Facility
	KII	Power	Availability (hours per day / days per week):	Integer Text	Facility
	Observation / KI	Water	Is there a water supply within the health facility compound?	0 Yes 0 No	Facility
	Observation / KI	Water	If no, how far away is the nearest water supply?	Integer (meters)	Facility
	KII	Water	What is the primary water source in the facility?	0 Borehole 0 Protected hand dug well 0 Unprotected hand dug well 0 Other:	Facility
	KII	Water	Estimated litres per day from water source	Integer (litres)	Facility
	KII	Water	Is there water storage capacity at this facility?	0 Yes 0 No	Facility
	KII	Water	If yes, what is the water storage capacity (litres)?	Integer (litres)	Facility
	KII	Water	Average number of out-patients per day	Integer (outpatients)	Facility
	Calc.	Water	Estimated litres per day outpatients	Calculation (litres)	Facility
	KII	Water	Are there toilets in the health facility?	0 Yes 0 No	Facility
	KII	Water	Dry or flushing?	0 Dry 0 Flush	Facility
	KII	Water	How many toilets?	Integer (toilets)	Facility
	Calc.	Water	Estimated liters per day for toilet hygiene	Calculation (litres)	Facility
	KII	Water	How many people on average use the toilet per day?	Integer	Facility

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Calc.	Water	Estimated liters per day for toilet flushing	Calculation (litres)	Facility
Calc.	Water	Total Outpatient Litres Per Day	Calculation (litres)	Facility
KII	Water	Average number of in-patients per day	Integer (in-patients)	Facility
KII	Water	Is there a cholera outbreak and patients are being treated here?	0 Yes 0 No	Facility
KII	Water	Average number of cholera patients per day	Integer (cholera patients)	Facility
KII	Water	Is there in-patient therapeutic feeding programs?	0 Yes 0 No	Facility
KII	Water	Avg. number of therapeutic feeding patients daily?	Integer (therapeutic feeding patients)	Facility
Calc.	Water	Total Inpatient Litres Per Day	Calculation (litres)	Facility
Calc.	Water	Total Health Facility Water Needed per Day	Calculation (litres)	Facility
Observation / KI	Latrines	Does the health facility have a toilet or latrine? If so, what kind? Select all that apply	<input type="checkbox"/> None <input type="checkbox"/> Flush or pour / flush toilet <input type="checkbox"/> Pit latrine without slab <input type="checkbox"/> Pit latrine with slab <input type="checkbox"/> Open hole <input type="checkbox"/> Hanging latrine / toilet <input type="checkbox"/> Dedicated open defecation point <input type="checkbox"/> Other (specify)	Facility
Observation / KI	Latrines	# of toilets/latrines total	Integer	Facility
Observation / KI	Latrines	Are there toilets / latrines dedicated for specific groups? (sex)	0 Yes 0 No	Facility
Observation / KI	Latrines	# of female toilets	Integer	Facility
Observation / KI	Latrines	# of male toilets	Integer	Facility
Observation / KI	Latrines	Are there toilets / latrines that are disability accessible?	0 Yes 0 No	Facility
Observation / KI	Latrines	# of disability accessible toilets	Integer	Facility
Observation / KI	Latrines	Are there toilets / latrines dedicated for staff?	0 Yes 0 No	Facility
Observation / KI	Latrines	# of staff toilets	Integer	Facility
Observation / KI	Latrines	Are the latrines functioning?	<input type="checkbox"/> None or functioning, need rehab <input type="checkbox"/> Some are functioning <input type="checkbox"/> All are functioning	Facility
Observation / KI	Latrines	If any not functional, Please describe the issues with the latrines?	<input type="checkbox"/> Latrines are full <input type="checkbox"/> Latrines are damaged (broken walls or door) <input type="checkbox"/> Insufficient privacy <input type="checkbox"/> Other	Facility
Observation / KI	Latrines	Are the latrines at least 30 meters away from any water sources?	<input type="checkbox"/> All are within 30 meters <input type="checkbox"/> Some are within 30 meters <input type="checkbox"/> None are within 30 meters	Facility
Observation / KI	Latrines	How far are the toilets/latrines from the health facility?	Integer (meters)	Facility
Observation / KI	Hygiene	Are there handwashing facilities with soap and water available at the toilets / latrines?	<input type="checkbox"/> None <input type="checkbox"/> Some, with soap and water <input type="checkbox"/> Some, with water only <input type="checkbox"/> All have, with soap and water <input type="checkbox"/> All have, with water only	Facility
Observation / KI	Hygiene	Are there handwashing facilities with soap and water available at each point medical care is provided?	<input type="checkbox"/> None <input type="checkbox"/> Some, with soap and water <input type="checkbox"/> Some, with water only <input type="checkbox"/> All have, with soap and water <input type="checkbox"/> All have, with water only	Facility
Observation / KI	Solid Waste Management	Is there a demarcated, fenced off waste area?	0 Yes 0 No	Facility
Observation / KI	Solid Waste Management	Is there a pit for organic waste?	0 Yes 0 No	Facility
Observation / KI	Solid Waste Management	Is there a functioning incinerator?	0 Yes 0 No	Facility
Observation / KI	Solid Waste Management	Is there a pit for sharps?	0 Yes 0 No	Facility
Observation / KI	Solid Waste Management	Is refuse separated between ordinary and medical waste?	0 Yes 0 No	Facility
Observation / KI	Solid Waste Management	Are segregated waste bins available in all areas where patients are treated? *Should be segregated into 3 categories infections, non-infectious and sharps bins	0 Yes 0 No	Facility

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Observation / KI	Solid Waste Management	Are sharps bins available in all areas where patients are treated?	0 Yes 0 No	Facility
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