FACTSHEET

Risk of Excess Mortality Assessments of Recent IDPs

August, 2022
Diinsoor and Belet-Weyne, Somalia

CONTEXT

Somalia is experiencing a recurrent and severe drought due to below-average rainfall and ongoing armed conflict. Currently, Somalia faced five consecutive failed rainy seasons from October to December 2022, which led to widespread displacement, severe water shortages, and a devastating food and nutrition crisis. According to the results of the IPC analysis and projections concluded in November 2022, nearly 8.3 million Somalis are expected to face a crisis (IPC Phase 3) or worse acute food insecurity outcomes between April to June 2023. In addition, IPC analysts suggested that the number of persons facing catastrophic levels of food insecurity (IPC Phase 5) is expected to increase through mid-2023. In light of persisting information gaps, REACH conducted a risk of excess mortality assessment in IDP communities in Belet-weyne and Diinsoor to support an evidence-based response.

ASSESSMENT OVERVIEW

ASSESSMENT OBJECTIVE

In August 2022, REACH conducted a Risk of Excess Mortality assessment to measure mortality among recent IPDs in Belet-Wayne and Diinsoor to inform evidence-based planning, integrated resource allocation and programme design. The assessment aimed to estimate the mortality rate and associated needs to inform the IPC Acute Food Insecurity and Acute Malnutrition analyses.

METHODOLOGY

Between 12th August to 17th August 2022, REACH conducted a representative household survey, with 590 and 615 internally displaced (IDP) households interviewed in Dinsoor and Belete-Wayne IDP sites respectively, where recent arrivals (after Eid-al-Fitr, May 2nd) had been recorded by Camp Coordination and Camp Management (CCCM) cluster. A two-stage cluster sampling design using Standardized Monitoring and Assessment of Relief to Transition (SMART) survey methodology was used, with the IDP sites serving as primary sampling units (PSUs). In total, 30 PSUs and 4 reserve PSUs were selected using probability proportional to size sampling (PPS) for each assessment area. Households were selected during the second-stage sampling using systematic random sampling from maps drawn together with camp leaders. The survey sample size was estimated using Emergency Nutrition Analysis (ENA) for SMART software and key sampling parameters (estimated crude death rate, design precision, design effect, 90 days recall period, average household size and non-response rate). The assessment covered estimation of crude and under-5 mortality rates and potential contributing factors, such as displacement; two-week retrospective morbidity and health-seeking practices; proxy coverage of the measles vaccine; proxy coverage of vitamin A supplimentation and deworming tablet; water, sanitation, and hygiene (WASH) need and food consumption patterns. By the end of the assessment, 91% (31) of the planned clusters had been reached for both sites and 87% and 90% of the planned households in Diinsoor and Belet Weyne, respectively, had been interviewed. The results of this assessment are representative of the IDP population affected by the crisis in the administrative regions of Diinsoor and Belete-Weyne.

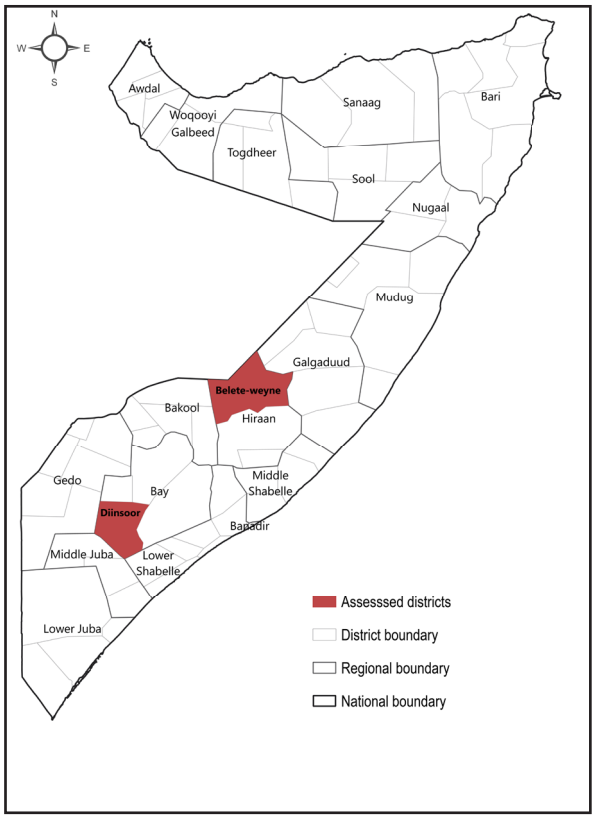
ASSESSMENT SITE SELECTION CRITERIA

Diinsoor and Belete-Weyne IDP sites are among the hot spot concencrisis-affected IDP sites defined by the famine prevention response unit based on, the new IDPs who arrived in the last 18 months and hosted new IDPs in the past 3 months (May to August 2022). They are also the hotspots of concern for the health cluster. Dinsoor and Belete-Weyne were also chosen for this oversampling analysis by excluding IDP sites that had already been covered by the SMART surveys.

LIMITATIONS

- limited by the quality of the sampling frame, as we used CCCM cluster estimates of new arrivals, even though displacements were actively ongoing
- The study focused on new arrivals (who had arrived 3 months prior to the date of data collection) without comparison to other groups such as the host community or older IDPs
- By definition of focusing on IDPs in the last 3 months, lack of clarity on how to interpret the mortality rate, as significant mortality occurred in places prior to displacement as well.

Map 1: Assessment sites



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KEY FINDINGS

0.6 death/10,000 persons/day
(95% CI: 0.22– 0.91)
Crude death rate (CDR) IDPs in Dinsoor

1.3 death/10,000 children/day
(95% CI: 0.34 – 2.26)
Under five death rate (U5DR) IDPs in Dinsoor

0.6 death/10,000 persons/day
(95% CI: 0.32 – 0.95)
CDR IDPs in Bele-Weyne IDPs

1.1 death/10,000 persons/day
(95% CI: 0.22 –1.95)
U5DR IDPs in Belet-Weyne IDPs

SUMMERY OF FINDINGS

The overall findings suggest that recently arrived IDPs in Dinsoor and Belet Weyne, the mortality rate had likely not reached emergency levels, but the rates were serious for the whole population and children under five. Moreover, IDPs were found to face critical gaps in a range of essential needs, suggesting they may be particularly vulnerable to increased risk of mortality in the future.

CONTRIBUTING FACTORS

WASH needs

Findings suggest that IDP households in both locations faced considerable unmet needs related to WASH. In the context of the severe drought and recent displacement, access to water among surveyed HHs was low, with the majority of households reporting insufficient water for basic needs such as drinking (44% in Dinsoor, 28% in Belet Weyne). Access to water for hygiene, cooking and cleaning was even lower in both sites. In Diinsoor, the vast majority (89%) of households depended on unimproved sanitation facilities, such as uncovered pit latrines. The combination of limited access to water for drinking and hygiene and poor sanitation conditions is associated with the risk of contracting easily preventable diseases, such as acute watery diarrhoea (AWD), cholera, and respiratory infections.

Food consumption gaps

In addition to poor WASH conditions, many households were experiencing gaps in food consumption. The survey respondents in both assessment sites reported that unusually high food and fuel prices, loss of employment, reduced income, and drought impacted their ability to access food and livelihoods.

In Diinsoor, 22.3% and 9.8% of recent IDP households had borderline and poor food consumption scores (FCS) respectively and 11.5% experienced moderate hunger, indicative of limited access to food, according to the Household Hunger Scale (HHS). Overall, these scores suggest some households were not consuming adequately diverse and nutritious food which could be exacerbating existing cases of malnutrition and generate new cases of malnutrition.

In Belet-Weyne, however, the proportion of IDP households with borderline FCS was much higher at 72.5% and, with 10% having poor consumption scores. In addition, according to the HHS, 16.3% and 0.7% of households likely experienced moderate and severe hunger, respectively.

In both sites 7.8 % and 9.9 % of the recent IDP households in Belet-Weyne employed medium and severe food-based coping strategies, while, 9.3 % and 11.0 % of the interviewed households in Diinsoor IDP reportedly used medium and severe food-based coping strategies according to the reduced coping strategy index (rCSI).

The results indicated that a significant portion of the surveyed households in both IDP sites experienced hunger and limited access to a variety of nutritious foods, which may have contributed to malnutrition and associated health problems during the reporting period (May 2022 – August 2022).

Access to healthcare service

Many children in recent IDP households did not have access to life-saving health services. The measles vaccination, vitamin A capsule and deworming tablet supplementation coverage among under-five children in the sampled households were all significantly lower than the national average (80%) and the World Health Organization (WHO) targets (90%). This further increases the risk of malnutrition and exposure to disease in households already vulnerable due to poor WASH conditions and limited diets.

MALNUTRITION AND MORTALITY OUTCOMES

According to secondary data, the malnutrition situation in most IDP sites has been persistently critical or serious since 2019. The December 2022 Food Security and Nutrition Analysis Unit (FSNAU) SMART survey report indicated that Global Acute Malnutrition (GAM) among IDPs is critical (15.4%), having deteriorated from serious levels of 13.9% since Deyr (November) 2021. In Belet-Weyne, the December 2022 FSNAU SMART survey result showed an even higher GAM by Mid Upper Circumference (MUAC) prevalence of 19.0%, which is indicative of IPC AMN Phase 4 (Critical) acute malnutrition conditions.

For both IDP sites the CDR and U5MRs were below the World Health Organization (WHO) emergency thresholds level but it is at a serious level (Phase-3) of mortality based on the Integrated Phased based Acute Malnutrition (IPC AMN) classification, suggesting that any further deteriorations in the mortality rate could result in an increase of deaths above the emergency threshold. Moreover, the CDR and U5MR's upper confidence limits were all either close to or extend above the WHO emergency threshold, meaning an emergency situation was unlikely but cannot be completely ruled out at the time of data collection.

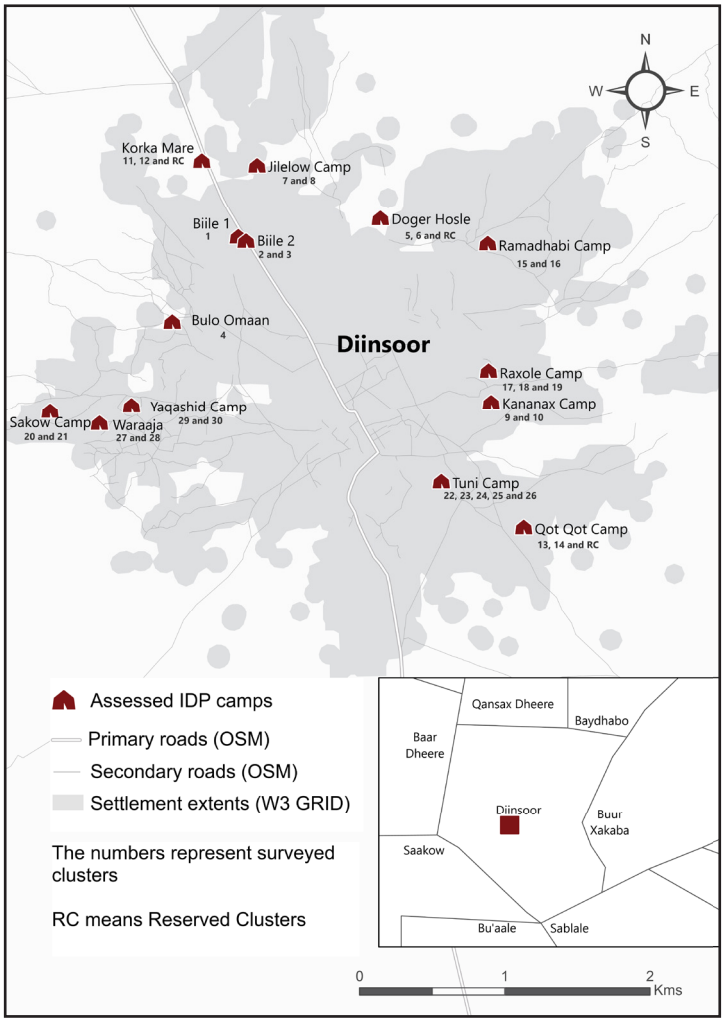
The driver of mortality varied greatly between the assessed locations In Diinsoor, 95% of deaths were reportedly due to disease. The reported 96% of death due to diseases suggests the high WASH needs, limited access to health services, and for some households, food consumption gaps, are likely contributing to the serious levels of mortality among recent IDPs.

In Belet-Weyne, however, over half of the deaths (54%) were reportedly due to trauma, with the remaining 46% reportedly due to illness. The vast majority of recorded deaths reportedly occurred after the households had moved to the IDP sites pointing out that mortality is the main concern of the community. Therefore, the 46% of deaths that are due to illness imply that there are significant WASH, FSL, and health needs;protection is critical in some locations to save lives and assistance needs to be adapted to the site-specific context and conflict dynamics.

FACTSHEET

Diinsoor IDP site | Bay Region

Map 2: Diinsoor IDP site

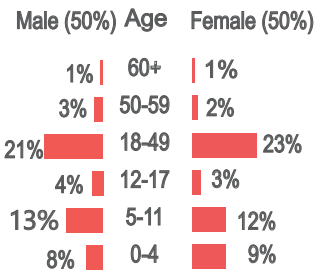


DEMOGRAPHICS INFORMATION (n=590 HHs)

4.5 average number of household members reported.

17.2% are children aged 0-59 months.

Population age and gender

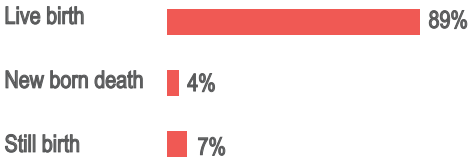


PREGNANCY AND CHILD BIRTH(n=262)

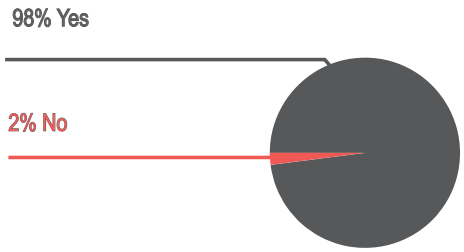
31% of the women in the assessed households were reportedly pregnant before the recall period (2nd May to 17th of August)

47% of the pregnant women gave birth within recall period (2nd May to August 17th of August, 2022).

% of reported births (n=122) per reported birth outcome.



% of pregnant and lactating women (PLW) aged 15-49 (n=263) who were reportedly enrolled in a Blanket Supplementary Feeding Programme (BSFP).

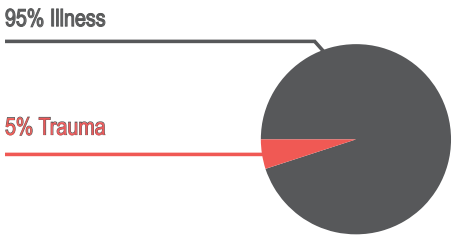


MORTALITY

CDR 0.6/10,000/day (95% CI: 0.22 – 0.91)(n=19)

U5DR 1.3/10,000 children/day(95% CI: 0.34-2.25) (n=7)

Reported deaths (n=19) by perceived cause of death



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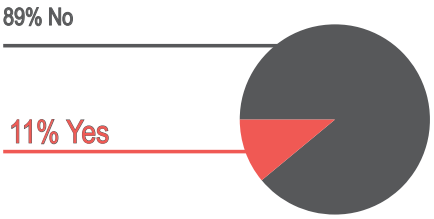
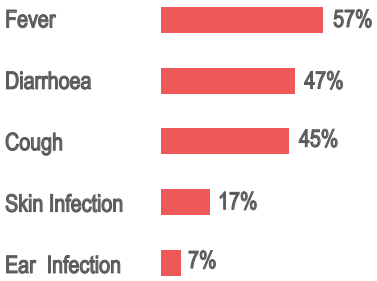
ACCESS TO HEALTH AND NUTRITION SERVICES

% of children aged 0-59 months (n=544) who had reportedly been ill in the 2 weeks prior to data collection



% of children 0-59 months who had reportedly been ill in the 2 weeks prior to data collection (n=60) by reported symptoms

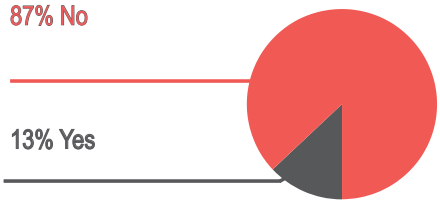


Caregivers of 34% of children 0-59 months who had reportedly been ill in the 2 weeks prior to data collection (n=60) reported not having sought medical care when their child fell ill.

Number and % of children (6-59 months of age) (n=544) who had reportedly been screened for malnutrition in the 3 months recall period (2nd May-17th August 2022)

Screened	Frequency	Percent
Yes	42	7.7
No	99	91.7

% of U5 children (6-59 months) who had reportedly been enrolled into the Integrated Management of Acute Malnutrition (IMAM) program (n=544) in 3 months recall period (2nd May-17th August 2022)



% of children aged 6-59 months (n=478) who had received deworming, vitamin A, and measles vaccinations in the past six months prior to data collection

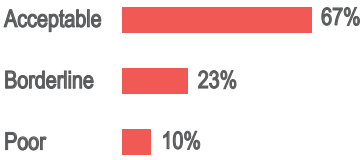
5.2% of the children aged 9-59 months (n=24) had reportedly received a measles vaccination confirmed by card and the mothers recall.

13.2% Of children, aged 6-59 months (n= 63) age received the vitamin A capsule supplementation.

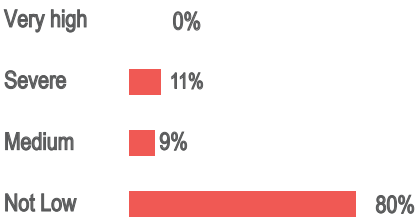
11% of children aged 12-59 months (n=46) had reportedly received deworming tablets supplementation.

FOOD SECURITY AND LIVELIHOOD (FSL)

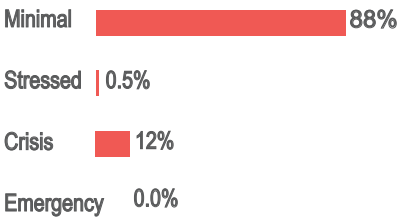
% of households (n=102) by FCS category



% of households (n=590) by rCSI category



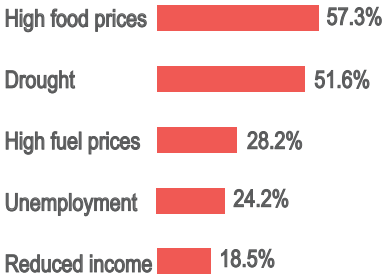
% of households (n=590) by HHS category



Households Income

93.5% of the HHs reported casual labour as the main sorce of income

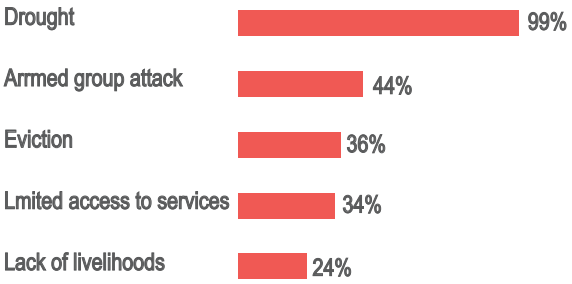
The 5 most frequently reported FSL shocks, by % of HHs within 2nd of May to 17th August 2022.



IDP Site Establishment

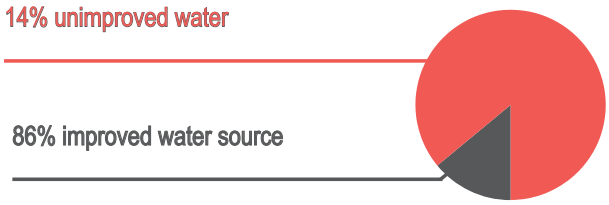
68% of households reportedly the IDP site has been established less than 18 months a go.

Most reported push factors from area of origin, by % of households (n=590)



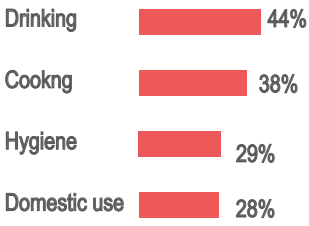
WATER, SANITATION AND HYGIENE (WASH)

Main source of drinking water, by % of HHs



13% of households (n=1249 reported that their primary source of water for drinking was piped water.

% of households (n=124) reporting having access to adequate quantities of water for drinking, cooking, personal hygiene, and domestic use



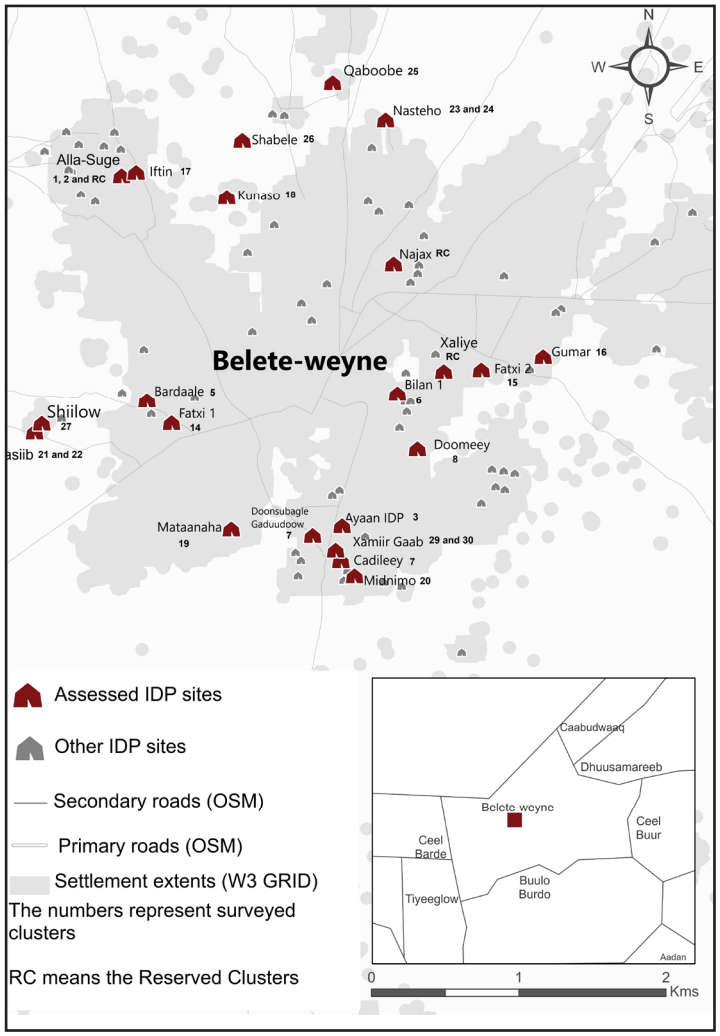
% of households (n=124) reporting having access to waste disposal systems

11% Of the assessed households reported having access to an improved sanitary disposal system.

89% of households reported having access to an unimproved sanitary disposal system.

Belet-Weyne IDP site | Heran Region

Map 3: Belet-Weyne IDP site

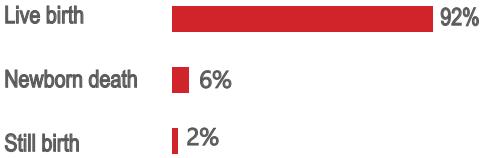


PREGNANCY AND CHILD BIRTH(n=184)

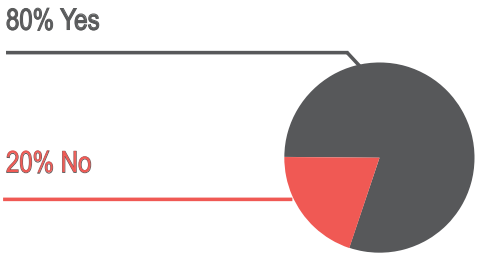
31% of the women in the assessed households were reportedly pregnant before the recall period (2nd May to 17th of August)

47% of them were give birth within the recall period (2nd May to 17th of August)

% of reported births (n=90) per reported birth outcome



% of pregnant and lactating women (PLW) aged 15-49 (n=184) who were reportedly enrolled in a blanket supplementary feeding programme (BSFP)

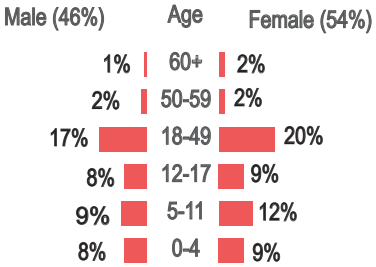


DEMOGRAPHICS INFORMATION(n=615 HHs)

5.7% average number of household members reported

19.1% are children age 0-59 months

Population age and gender

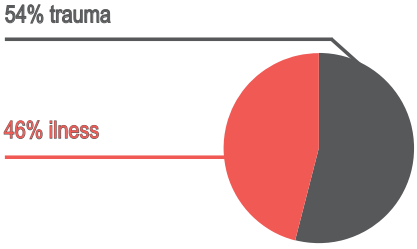


MORTALITY

CDR 0.6/10,000/day (95% CI: 0.32-0.95)(n=50)

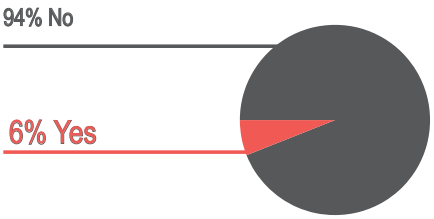
U5DR 1.1/10,000 children/day(95% CI: 0.22-1.95) (n=16)

Reported deaths (n=50) by perceived cause of death

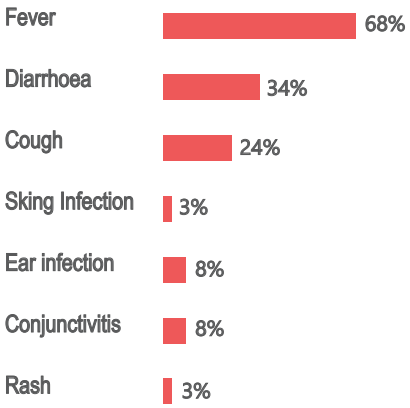


ACCESS TO HEALTH AND NUTRITION SERVICES

% of children aged 0-59 months (n=645) who had reportedly been ill in the 2 weeks prior to data collection.



% of children 0-59 months who had reportedly been ill in the 2 weeks prior to data collection (n=38) by reported symptoms

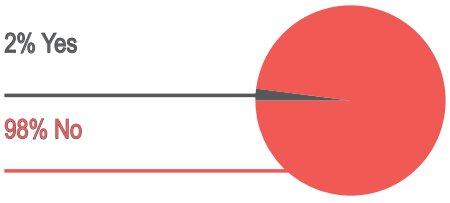


Caregivers of 29% of children 0-59 months who had reportedly been ill in the 2 weeks prior to data collection (n=38) reported not having sought medical care when their child fell ill.

Number and % of children (6-59 months of age) (n=645) who had reportedly been screened for malnutrition in the 3 months recall period (2nd May to 17th August 2022)

Screened	Frequency	Precent
Yes	24	3.7
No	618	95.8
Do not know	3	0.5

% of U5 children (6-59 months) who had reportedly been enrolled into the Integrated Management of Acute Malnutrition (IMAM) programme (n=645)



% of children aged 6-59 months (n=645) who had received deworming, vitamin A, and measles vaccinations in the past six months prior to data collection

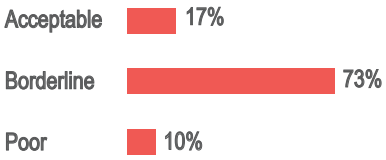
10.3% of the children 9-59 month age received the vaccination measles where 6.9% confirmed by card while 3.4% confirmed by recal

4.4% of of children 6-59 month age recived viamin A supplmentation

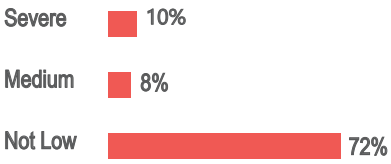
2.9% of children 12-59 month age recived deworming supplimentation coverage.

FOOD SECURTIY AND LIVELIHOOD (FSL)

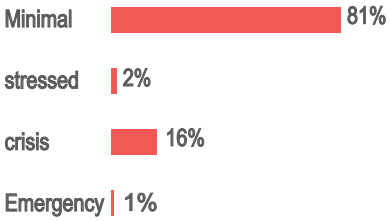
% of households (n=110) by FCS category



% of households (n=615) by rCSI category



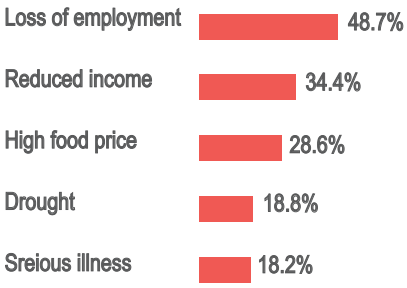
% of households (n=615) by HHS category



Households Income

92.9% of HHs reported casual labour as the main source of income

The 5 most frequently reported FSL shcoks, by % HHs



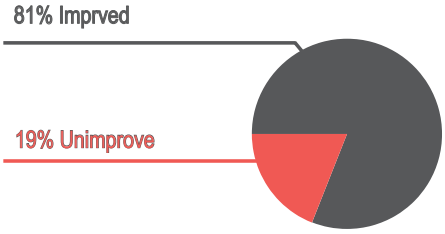
IDP SITE ESTABLISHMENT

82% of the respondents reported that Belet-Weyne IDP site has been established less than 18 months ago.

Most reported push factors from area of origin, by % of households (n=615)

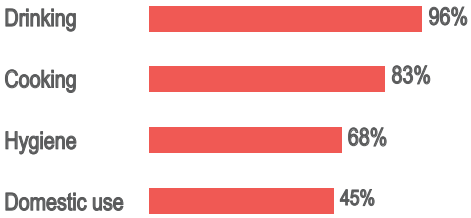
WATER, SANITATION AND HYGIENE (WASH)

% of households by main source of drinking water (n=154)

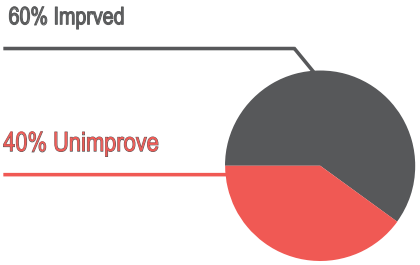


The two most frequently mentioned main sources of drinking water were boreholes (44%) and pipes (29%) respectively.

% of households (n=154) reporting having access to adequate quantities of water for drinking, cooking, personal hygiene, and domestic use



% of households (n=154) reporting having access to sanitory facility.



METHODOLOGY NOTE

Study Design

The survey applied a two-stage cluster sampling using the retrospective SMART methodology with the clusters being selected using the probability proportional to population size (PPS). Stage one sampling involved the sampling of the clusters to be included in the survey while the second stage sampling involved the selection of the households from the sampled clusters.

Sampling procedure: Selection of Clusters

Selection of clusters A two-stage cluster sampling design was applied. In the first stage, clusters were derived using probability proportional to size (PPS). The sampling frame in the first stage of sampling was derived during the mapping process and development of the sampling frame before the start of data collection. The list of updated IDP sites was drawn through consultation with various stakeholders at the field level including survey teams and community representatives. A total of 34 (4 reserve clusters) clusters were sampled for each of the Diinsoor and Belet-Weyne IDP sites. The sampling frame is available in respective surveyed IDP sites ENA for SMART software planning tab. The smallest administrative units (community/segments) were included in the sampling frame.

Sampling Procedure: Selection of Households

The second stage, it involved the selection of households through simple random sampling from an updated list of households in the sampled clusters. Households were selected in second-stage sampling using systematic random sampling from a map drawn together with IDP site local leaders. Households were screened for their arrival date at the IDP site, and if they arrived after Eid-al-Fitr they were included in the survey. If they did not meet the inclusion criteria, teams were instructed to move immediately one household over and interview that household instead or continue this step until they found an eligible household. Data collection took place from August 12th to August 17th, 2022. A random number generator was included in the tool to give each interviewer a roughly 25% chance of additionally asking questions on food security, livelihoods, WASH, and humanitarian assistance.

Estimated Sample size

Parameter	Dinsoor	Belete-weyne	Justification
Estimated death rate	1/10,000 people/day	1/10,000 people/day	Proposed by the global IPC team
Design Precision	0.45	0.45	Proposed by the global IPC team
Design effort	1.5	1.5	Rule of thumb
Average HH size	5.0	5.0	Recommended by country MOH
Non-response rate	3.0%	3.0%	Recommended by the field team by considering the IDP community movement.
Recall period	105 days (Eid to mid-data collection)	105 days (Eid to mid-data collection)	From 2nd of May to 17th of August 2022.
Population Included	2950	2950	
Household Included	608	608	

Dinsoor and Belet-Weyne RoEM Result table

Indicator		Dinsoor IDP		Belet-Weyne IDP	
		Percent	95% CI:	Precent	95% CI:
Death rate	Crude Death Rate (CDR)	0.6	0.222 – 0.911	0.6	0.316-0.953
	Under Five Death Rate (U5DR)	1.3	0.341-2.256	1.1	0.222-1.954
Demography	Average Household size	4.5		5.7	
	% under-five children	17.5		19.1	
Morbidity	% children ill 2 weeks before	11	5.4-16.6	5.9	2.3-3.95
	Health seeking behavior	57		71	
Vaccination and Micronutrient supply	Measle vaccination with Card	0.4	0-1	6.9	1.1-12.7
	Measle vaccination with mother recall	4.8	1-8.6	3.4	1.4-5.5
	Vitamin A supplementation	13.2	5.2-21.1	4.4	1.5-7.3
	Deworming supplementation	11	3.4-18.5	2.9	0.9-4.9
Nutrition	Children Screened	7.7	1.1-14.3	3.7	1.1-6.3
	Children enrolled -TFP	12.5	5.3-19.7	2.2	0.3-4.0
Pregnancy outcome	Pregnant women	31	23.3-38.7	21.1	15-27.1
	PLW enrolled in BSFP-yes	8	0-17	19.6	9.5-29.6
	Delivery in the recall period	46.6	34-59.2	48.9	38.2-59.6
	Delivery result-breathing	89.3	82.9-95.8	92.2	86.4-98.1
	Delivery result-still birth	6.6	1.7-11.5	2.2	0-5.3
	Newborn death	0.6	0.1-1.1	0.6	0.1-1.1
Water Source	Improved water source	13.7	8.1-2.2	81.2	74.7-87.1
Water availability	Drinking	28.2	20.2-36.3	95.5	91.6-98.7
	Cooking	29	20.9-37.1	83.1	77.3-89.0
	Hygiene	42.7	33.9-52.4	68.2	61.0-75.3
	Domestic use	37.9	29.1-46.8	64.9	57.8-72.
Sanitary facility	Improved	**10.5**	**5.6-16.1**	59.7	51.3-66.9
	Unimproved	89.5	83.9-94.4	40.3	33.1-48.7
FCS	Acceptable	**67.6**	**51.5-83.8**	**17.3**	6.5-28.0
	Borderline	**22.5**	**9.5-35.6**	**72.7**	61.5-84.0
	Poor	**9.8**	**1.2-18.4**	**10**	2.4-17.6
HHS (based IPC)	Minimal	**88**	**83.3-92.7**	**81.1**	77.3-85
	Stressed	**0.5**	**0-1.3**	**2**	0.8-3.1
	Crisis	**11.5**	**6.9-16.2**	**16.3**	12.5-20
	Emergency	**0**	0-0	**0.7**	0-1.3
rCSI	No to low	79.7	75.3-84.0	82.3	78.3-86.2
	Medium	9.3	5.9-12.7	7.8	4.4-11-2
	Severe	**11**	**6.5-15.6**	**9.9**	6.2-13.6

End note

page 1 FSNAU-Somalia, Multi-Partner-Technical-Release-on-Updated-IPC-Analysis-for-Somalia-fo-October-2022-to-June-2023

page 1 FEWS NET-Somalia Seasonal Monitor December-23, 2022

page 2 FEWS NET-Somalia Seasonal Monitor Decembrer-23, 2022

page 2 IPC-Somalia_Acute_Food_Insecurity_Snapshot_Oct 2022, December-12, 2022.

page 2 UNICEF- Somalia Humanitarian Situation Report No. 10, October 31, 2022