



Special Report

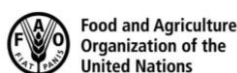
## Multi-season drought drives dire food security situation

10 February 2022

### KEY MESSAGES

- The performance of 2021 October-December “short rains/*Deyr*” rainy season was extremely poor, characterized by a delayed onset of seasonal rains, an erratic temporal distribution, and below-average cumulative rainfall. Across much of the region, this represents the third consecutive season of below-average rains, with severe impacts on household livelihoods, food security and nutrition.
- Through May 2022, FSNWG estimates that between 12 – 14 million people in southern and south-eastern Ethiopia, the arid and semi-arid lands (ASAL) regions of Kenya and Somalia will likely face high levels of food insecurity (in line with IPC Phase 3+) because of the ongoing drought.
- Beyond May, the food security outlook is heavily dependent on the performance of upcoming March-May 2022 “long rains /*Gu*” rainy season. Unfortunately, this season is notoriously difficult to forecast with global models showing mixed signals and high levels of uncertainty. Given this uncertainty, FSNWG has agreed to develop two separate food security projections through September 2022, one based on an assumption of average to above-average rains and a second based on a scenario of significantly below-average/failure of the rains.
- Under an average to above-average rainfall scenario, food security outcomes will begin to improve from April in pastoral areas and from July in agropastoral areas. However, an analysis of food security outcomes after the 2011 and 2017 drought emergencies show that recovery will take time. Widespread Stressed (IPC Phase 2) and Crisis (IPC Phase 3) outcomes would be likely through September 2022, with between 7 to 11 million people still highly food insecure (IPC Phase 3+) in drought-affected areas. Additionally, a total of 5.7 million children would be wasted, out of whom 1.7 million would be severely wasted and in need of life-saving treatment.
- Severe food insecurity would be expected if the March to May rains were significantly below average or failed. Without a scale-up of humanitarian assistance, Emergency (IPC Phase 4) area classifications would be likely. In a worst-case scenario where the rains completely fail and there is no humanitarian assistance to worst-affected households, it is possible that some households could face extreme food consumption gaps indicative of Catastrophe (IPC Phase 5). Under this scenario, between 15 to 20 million people could become highly food insecure (IPC Phase 3+) in drought-affected areas. The nutrition situation would also sharply deteriorate with 6.9 million children expected to be wasted in 2022, about 2 million of them severely so.
- Given the current severe drought and uncertainty around the performance of the March to May 2022 rainfall season, large-scale emergency food, nutrition, livelihood, and non-food interventions, including water, health, and sanitation access, are critically needed to urgently mitigate an acceleration in food insecurity and nutritional outcomes.

Inputs for this analysis have been provided by:



## BACKGROUND

Prior to the current drought across the Horn of Africa, the food security and nutritional situation in the region was already precarious, leaving households extremely vulnerable to food insecurity with little to no coping capacity to manage additional shocks.

For example, across Ethiopia, Kenya, and Somalia, 22.3 million people were already highly food insecure (IPC Phase 3+) in 2021, representing a 77 percent increase compared to peak 2020 levels. Key drivers of this food insecurity included armed conflict (in Ethiopia and Somalia), economic challenges including rising food prices and the socio-economic impacts of COVID-19, and natural hazards including droughts, flooding, and desert locusts.<sup>1</sup>

The prevalence and severity of acute malnutrition were also already high in the region, with about 1.3 million children requiring treatment for severe acute malnutrition in the three countries, including 1 million children in Ethiopia, 136,000 in Kenya, and 162,000 in Somalia. Additionally, in certain areas of all three countries, rates of global acute malnutrition (GAM) frequently exceeded the 15 percent emergency threshold.<sup>2</sup>

## CURRENT SITUATION

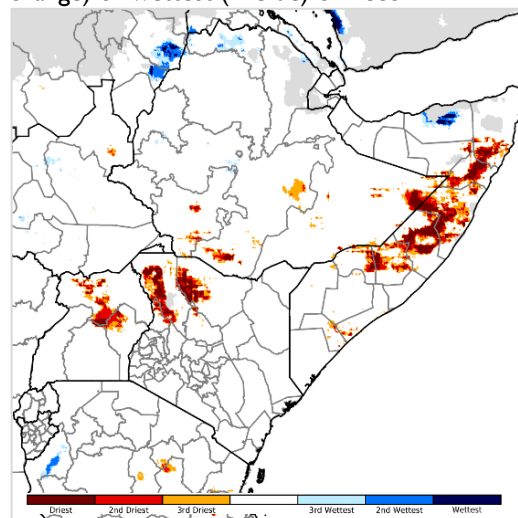
### Rainfall performance

Due in part to a La Niña occurrence, the performance of the October – December 2021 “short rains/*Deyr*” rainy season was extremely poor across the region, characterized by a one-month delay of the onset of seasonal rains, poor temporal distribution, and below-average cumulative rainfall. In eastern and southeastern Kenya, as well as far southern Somalia, heavy rainfall episodes in December mostly offset rainfall deficits, but these rains were often too late to lift prospects due to the imminent end of the rainy season in December.

Cumulative rainfall totals between October and December across northern Kenya, southern and south-eastern Ethiopia, and much of Somalia were well below average, with rainfall totals of less than 55 percent of average in worst-affected areas. Furthermore, in parts of central Somalia, northwestern Kenya, and isolated pockets of southern Ethiopia, seasonal performance was worse than in 2010 and 2016 and amongst the worst on record. Consequently, moderate to severe drought conditions are currently present throughout much of the region.<sup>3</sup>

This poor rainy season represents the third consecutive below-average rainy season across much of the region, as the October to December 2020 “short rains/*Deyr*” season and the March to May 2021 “long rains/*Gu*” season were also below average. Additionally, in localized areas of southern Somalia, it has been the fourth consecutive below-average rainy season.

**Figure 1.** Areas where October – December rains were amongst the top three driest (in orange) or wettest (in blue) on record



Source: Climate Hazards Center - UC Santa Barbara

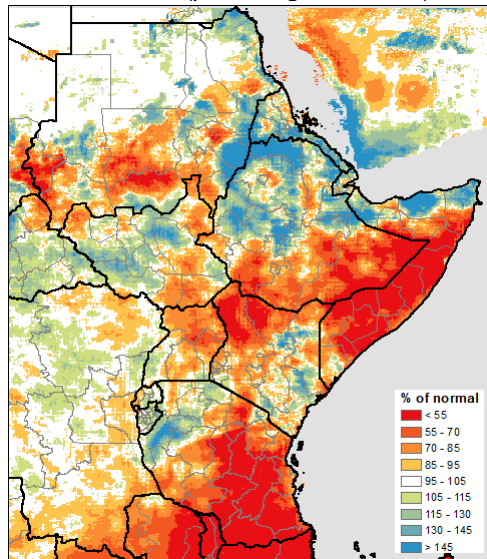
<sup>1</sup> FSIN (2021). Global Report on Food Crises 2021, September 2021 Update. <https://reliefweb.int/report/world/global-report-food-crises-joint-analysis-better-decisions-september-2021-update>

<sup>2</sup> FSIN (2021). Global Report on Food Crises 2021. <https://www.wfp.org/publications/global-report-food-crises-2021>

<sup>3</sup> FEWS NET and USGS (2021). East Africa Seasonal Monitor, December 31, 2021.

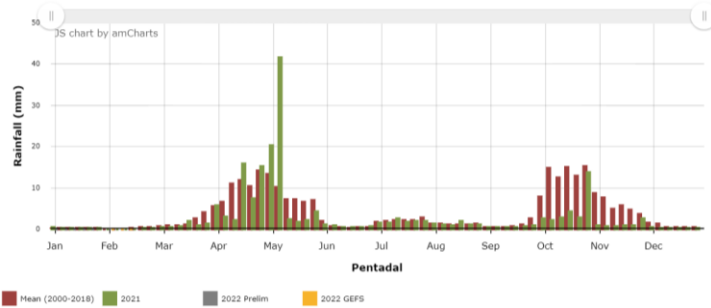
[https://fewsn.net/sites/default/files/documents/reports/EAST\\_AFRICA\\_Seasonal\\_Monitor\\_December\\_2021.pdf](https://fewsn.net/sites/default/files/documents/reports/EAST_AFRICA_Seasonal_Monitor_December_2021.pdf)

**Figure 2.** Rainfall anomalies, October to December 2021 (percentage of normal)

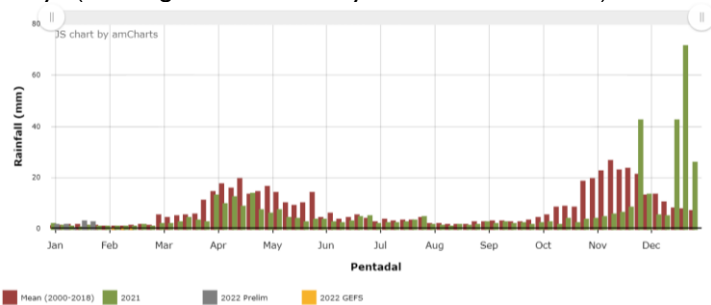


Source: FEWS NET/USGS

**Figure 3.** 2021 rainfall trends compared to average in Hiraan, Somalia (showing below-average rains through October – December season)



**Figure 4.** 2021 rainfall trends compared to average in Garissa, Kenya (showing an extreme delay in the start of season)



Source: FEWS NET/USGS

These consecutive below-average rainy seasons are a major source for concern as historical analyses of past drought events in the East Africa region, including the 2010/2011 and 2016/2017 drought emergencies, show that consecutive below-average seasons are highly correlated with significant deteriorations in food security outcomes.

### Crop conditions

In the major crop-producing areas of southern and central Somalia, the *Deyr* harvest, gathered in January and typically accounting for about 40 percent of the total annual cereal output, has largely failed in rainfed agriculture areas. Here, the poor performance of the rainy season resulted in a below-average planted area, widespread germination failures and crop wilting. Some crops have been harvested in riverine areas along the Juba and Shabelle rivers, where farmers practice irrigation and flood-recession agriculture<sup>4</sup>. However, the dismal rain performance over Somalia and in the upper river catchments in the Ethiopian highlands reduced river levels and water availability<sup>5</sup>, constraining crop production. Overall, 2021 *Deyr* cereal production in southern Somalia is estimated at 58 percent lower than the long-term average.<sup>6</sup>

Similarly, in southeastern and coastal marginal agricultural areas of Kenya, the output of short rains crops, currently being gathered and accounting for about 65 percent of local annual crop production, is expected to be about 70 percent below average<sup>7</sup>, leading to a third consecutive season with below-average cereal production. Here, due to

<sup>4</sup> FEWS NET and FSNAU (2021). Somalia Food Security Alert, December 20, 2021. <https://reliefweb.int/sites/reliefweb.int/files/resources/Somalia-Food-Security-Outlook-December-2021.pdf>

<sup>5</sup> FEWS NET (2022). Somalia Seasonal Monitor, January 2022. <https://reliefweb.int/sites/reliefweb.int/files/resources/somalia-devr-seasonal-monitor-20220105-final.pdf>

<sup>6</sup> FSNAU (2022). Preliminary results from the 2021 post-*Deyr* assessment.

<sup>7</sup> FEWS NET (2022). Key Message Update, January 2022. <https://fewsn.net/east-africa/kenya/key-message-update/january-2022>

severe dryness, the planted area was also well below average as many households opted not to plant. Additionally, for those who did plant, most crops failed to germinate or wilted. Late season rains in late November and December allowed some late season planting of cereals and pulses, which germinated but did not reach maturity before the seasonal rains subsided in late December<sup>8</sup>.

### Pastoral conditions

Pastoral conditions are currently extremely poor across the region due to the effects of the multiple consecutive below-average rainy seasons. For example, NDVI<sup>9</sup> is showing widespread negative anomalies across much of southern and central Somalia, southern Ethiopia, and northern Kenya. Meanwhile, in eastern and southeastern Kenya, above-average December rains at the end of the season improved vegetation conditions, and NDVI is currently above average, reflecting an improvement in rangeland conditions.<sup>10</sup>

USGS/FEWS NET's water point monitoring is also showing widespread "near dry" watering points across Somalia, southern and southeastern Ethiopia, and northern Kenya.<sup>11</sup>

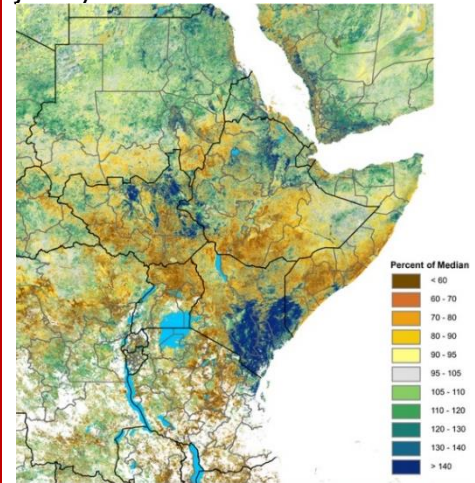
In Kenya, FAO through its desert locust surveillance system and partners (i.e., 51 Degrees) recently conducted field visits to drought-affected areas to validate current remote sensing data. These visits generally confirmed remote sensing data and found poor rangeland conditions, near dry water points, and significant livestock deaths across northern Kenya. Improved conditions, meanwhile, were observed in eastern areas, likely linked to the late season rains.

Widespread livestock deaths are currently being observed across the region due to the poor pastoral conditions. In Ethiopia, 260,000 livestock have died across Somali, southern Oromia, and SNNP regions<sup>12</sup> Similarly, the Kenya mid-season assessment estimated that over 1.4 million livestock had died across the ASAL regions of Kenya<sup>13</sup>.

### Water, sanitation, and hygiene (WASH) situation

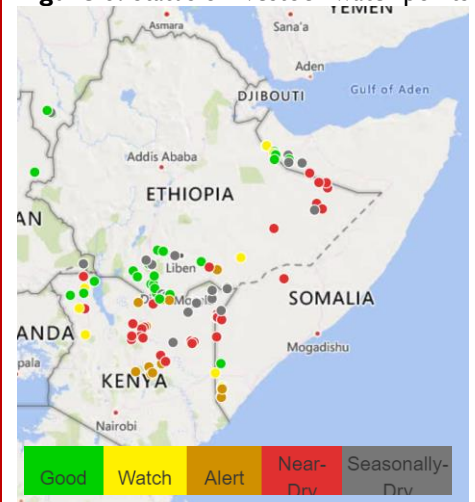
Beyond the agricultural drought resulting in failed harvests and poor livestock production, the rainfall deficits over the past three seasons resulted in a severe hydrological drought in the Horn of Africa, and alarming water insecurity levels for households

**Figure 5.** NDVI anomalies, 21 – 31 January 2022



Source: USGS/FEWS NET

**Figure 6.** Status of livestock water points



Source: USGS/FEWS NET

<sup>8</sup> FEWS NET (2021). Food Security Alert, December 2021. <https://fews.net/east-africa/ethiopia/alert/december-22-2021>

<sup>9</sup> A measure of vegetative greenness using satellite imagery

<sup>10</sup> USGS (2022). eMODIS NDVI C6. <https://earlywarning.usgs.gov/fews/product/448>

<sup>11</sup> USGS (2022). Water Point Viewer Overview. <https://earlywarning.usgs.gov/fews/software-tools/21>

<sup>12</sup> OCHA (2022). Ethiopia Drought Update No. 1.

[https://reliefweb.int/sites/reliefweb.int/files/resources/ethiopia\\_drought\\_update\\_january\\_2022.pdf](https://reliefweb.int/sites/reliefweb.int/files/resources/ethiopia_drought_update_january_2022.pdf)

<sup>13</sup> Government of Kenya, WFP, FEWS NET, and UNICEF (2021). 2021 Short Rains Mid-Season Food and Nutrition Security Situation Update.

<https://reliefweb.int/sites/reliefweb.int/files/resources/KFSM%20Mid%20Season%20Assessment%20PPT.pdf>

and livelihoods. Field assessments indicate that many of the most reliable surface water points, usually resilient to climate variability, have dried up. Even the best built rainwater harvesting and storage systems (hafirs, berkads) that provide water during the dry season, are currently dry. Wells and boreholes tapping into shallow aquifers vulnerable to climate variability are also either dry or have reduced yield production.

The quantification of the hydrological drought reveals severe household water insecurity, affecting the whole sub-region. In the Somali region of Ethiopia, for example, already 29 percent of boreholes and 34 percent of hand-dug wells are dry or with extremely low water levels<sup>14</sup>. This has resulted in 2.3 million people in 85 woredas in need of water trucking services. In Oromia region, 600 000 people need water trucking for the same reasons. In Kenya, 87 percent of the drought-affected counties report household trekking distances to water points for drinking water ranging between 2 to 6 kilometers, and livestock trekking distances ranges from 15 to 20 km, which is three times the normal distance in a typical dry season<sup>15</sup>.

Improved rains in December in southeastern Kenya will have very limited impact on the hydrological drought as less than 50 percent of natural or man-made rainwater harvesting reservoirs impounded rainwater, and they are expected to dry again by the end February<sup>16</sup>. The number of people and counties with water insecurity for household and livestock continue to increase (2.8 million people as of 30 January, 2022<sup>17</sup>).

In Somalia, household water insecurity is affecting 3.2 million people in about 40 out of the 90 districts<sup>18</sup>. In southwest Somalia, according to a multi-agency WASH needs assessment, two thirds of interviewed households reported not having enough water to meet family needs between September and November 2021 and only 25 percent reported to have a functional water point in the community. The most important reason for non-functionality was that water points had dried up (58 percent), followed by mechanical problem or unknown reasons<sup>19</sup>. Additionally, at the peak of the drought in 2021, the WASH Cluster identified at least five high water price hotspots in Mudug, Gedo, and Lower Juba with vendors selling water at 30 USD/m<sup>3</sup> or more (approximately +300 percent increase compared to average). Prohibitive water prices are likely to pre-dispose households to water insecurity with risks of dehydration and waterborne diseases, skin, and eye infections due to forced rationing of water.

### *Conflict in drought-affected areas*

Resource-based conflict has intensified in drought-affected areas, driven by the scarcity of and increased competition for rangeland resources, including pasture, browse and water. In Kenya, several counties including Baringo, Isiolo, Laikipia, Lamu, Marsabit, Samburu, Tana River, Turkana and Wajir, have been affected by resource-based conflicts, resulting in the loss of lives, livestock, and other assets, driving population displacements, and

**Figure 7.** Livestock deaths in Marsabit, Kenya (January 2022)



Source: 51 Degrees

<sup>14</sup> Ethiopia WASH cluster (2022). WASH cluster update, 4 January 2022

<sup>15</sup> OCHA (2021). Kenya Drought Flash Appeal - Oct - Dec 2021 (September 2021). <https://reliefweb.int/report/kenya/kenya-drought-flash-appeal-oct-dec-2021-september-2021>

<sup>16</sup> Kenya National Drought Management Authority (2022). Drought updates, January 2022.

<sup>17</sup> Kenya Food Security Steering Group (2021). The 2021 Short Rains Mid-Season Food and Nutrition Security Rapid Assessment Report. <https://www.ndma.go.ke/index.php/resource-center/send/84-2021/6290-2021-short-rains-mid-season-assessment-main-report>

<sup>18</sup> WASH Cluster (2022). 2022 Somalia WASH Humanitarian Response Plan - January 2022. <https://reliefweb.int/report/somalia/wash-cluster-2022-somalia-wash-humanitarian-response-plan-january-2022>

<sup>19</sup> SWS Joint IA WASH needs assessment, 28-30 Nov. 21

disrupting livelihoods and markets. For instance, between October and December 2021, 17 people were killed in Saku sub-county of Marsabit county, following frequent inter-community attacks fueled by competition for water and pasture<sup>20</sup>. In Turkana County, cross-border conflict has also intensified as raids, especially along national borders, increased from an average of 2-3 in a month to 9-12 between September and December 2021<sup>21</sup>.

Similar trends have also been observed across Somalia. For example, at least 15 people have reportedly been killed and several others injured in armed clashes over ownership of grazing land in Laas Caanood district, Sool region<sup>22</sup>. In Afmadow district, Lower Juba region, conflicts over grazing lands and water resources have been reported as communities are attracted by the regeneration of pasture and availability of water due to recent rains in the district. It is likely that the area will soon be overgrazed, leading to more conflict<sup>23</sup>. Resource-based conflicts have also been reported in Galgaduud and Mudug regions.

Additionally, concerning access to water, the few remaining good productive water points (strategic boreholes, wells over sub-surface dams) are used by a growing number of people and the current over-extraction/over-pumping is causing a high risk of collapse of water production and tensions between users. Crowding at limited water points has also increased the incidences of cattle thefts, further aggravating tensions and disputes.

**Figure 8.** Retail red sorghum prices in Baidoa, Somalia



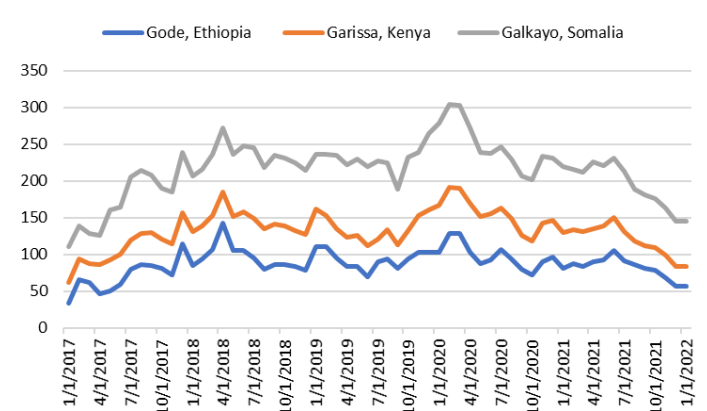
Source: FAO/GIEWS Food Price Monitoring and Analysis Tool

### Market conditions

In Somalia, in December 2021, prices of sorghum and maize in key producing areas of Bay and Lower Shabelle regions were more than twice the values of a year earlier. After four consecutive below-average harvests, the very high cereal prices were close to the levels reached during the 2016/17 drought, the worst in recent years.

Despite worsening animal body conditions, prices of livestock in December were around the levels of a year earlier, sustained by high export demand. Terms of trade for pastoralists deteriorated during 2021, however, due to soaring cereal prices. In

**Figure 9.** Terms of trade (goat/maize) in selected markets in East Africa



Source: FEWS NET

<sup>20</sup> Kenya Food Security Steering Group (2021). The 2021 Short Rains Mid-Season Food and Nutrition Security Rapid Assessment Report. <https://www.ndma.go.ke/index.php/resource-center/send/84-2021/6290-2021-short-rains-mid-season-assessment-main-report>

<sup>21</sup> Aljazeera (2021). "Heading into the worst": How drought drives conflict in Kenya. <https://www.aljazeera.com/features/2021/12/22/how-drought-drives-conflict-in-kenya>

<sup>22</sup> OCHA (2022). Somalia Drought Situation Report No. 3. <https://reliefweb.int/sites/reliefweb.int/files/resources/Somalia%20-%20Drought%20Situation%20Report%20No.3%20%28As%20of%2020%20January%202022%29.pdf>

<sup>23</sup> OCHA (2021). Somalia Drought Situation Report No. 2. <https://reliefweb.int/report/somalia/somalia-drought-situation-report-no2-21-december-2021>

Galkayo, for example, one of the main livestock markets in the Horn of Africa, they were 35 percent lower than one year earlier in December 2021<sup>24</sup>.

In northern and northeastern pastoral areas of Kenya, prices of livestock in December were 20 to 40 percent lower than a year earlier, mainly due to worsening animal body conditions. In these areas, maize prices were 5 to 35 percent above their year-earlier levels, mainly due to consecutive poor local harvests, coupled with sustained demand for animal feed due to pasture shortages. The terms of trade for pastoralists have therefore deteriorated over the last 12 months and, in December, they were between 35 and 50 percent lower than one year earlier.<sup>25</sup>

Similarly, in southeastern Somali region of Ethiopia, livestock-to-cereal terms in December were up to 45 percent below average due to deteriorating body conditions and soaring prices of cereals<sup>26</sup>, mainly as a result of increasing costs of imports from Kenya due to the continuous devaluation of the Ethiopian birr.<sup>27</sup>

### *Food security situation*

To a large extent, the current situation looks similar to the 2016/2017 drought emergency in East Africa, the worst in recent years. For example, in Somalia, FSNAU's Early Warning Early Action Dashboard showed a similar number of indicators in alarm phase in December 2021 as in December 2016.<sup>28</sup> Similarly, considering only counties covered by Kenya's NDMA early warning bulletins in both 2021 and 2016, eleven counties were in alert stage and nine in alarm stage in December 2021, compared to nine in alert stage and ten in alarm stage in 2016.

Based on currently available information, FSNWG estimates that between 12 – 14 million people in southern and south-eastern Ethiopia, the ASAL regions of Kenya and Somalia will likely face high levels of food insecurity (in line with IPC Phase 3+) due to the effects of the ongoing drought. In Kenya, an estimated 2.8 million people are currently in need of assistance due to drought. In Somalia, the number of highly food insecure people (IPC Phase 3+) is expected to reach 4.1 million through June 2022. In Ethiopia, no new food security data is available but based on consultations with FSNWG members, FSNWG is estimating that approximately 5.5 – 6.5 million people need food assistance in drought affected areas of the south and southeast.

### *Nutrition*

The nutrition situation in the Horn of Africa continues to deteriorate with increasing food insecurity and drought conditions in northern Kenya, Somalia, and southern Ethiopia. The key drivers to the increased levels of malnutrition include high levels of food insecurity, water shortages, disease outbreaks, the COVID-19 pandemic, high food prices, and low household purchasing power. A total of 5.7 million children are anticipated to be wasted in 2022, out of whom 1.7 million require treatment for severe wasting in Ethiopia, Kenya, and Somalia.

In Ethiopia, the third prolonged drought since 2011 has severely impacted Afder, Bale, Borena, Dawa, East Bale, Guji, Liben, South Omo, and zones in the southern areas of the Somali region, resulting in pasture and water shortages and large-scale livestock deaths, severely diminishing herd sizes and milk availability for children. The admission trends for severe wasting (SAM) are the highest observed over the past five years in each of the drought-affected regions of Oromia, Somali and SNNP regions. Additionally, the drought-affected regions account for 75 percent of admissions for severe wasting among children in 2021.

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<sup>24</sup> FAO-GIEWS (2022) Food Price Monitoring and Analysis Bulletin, January 2022 (to be published on 10 February)

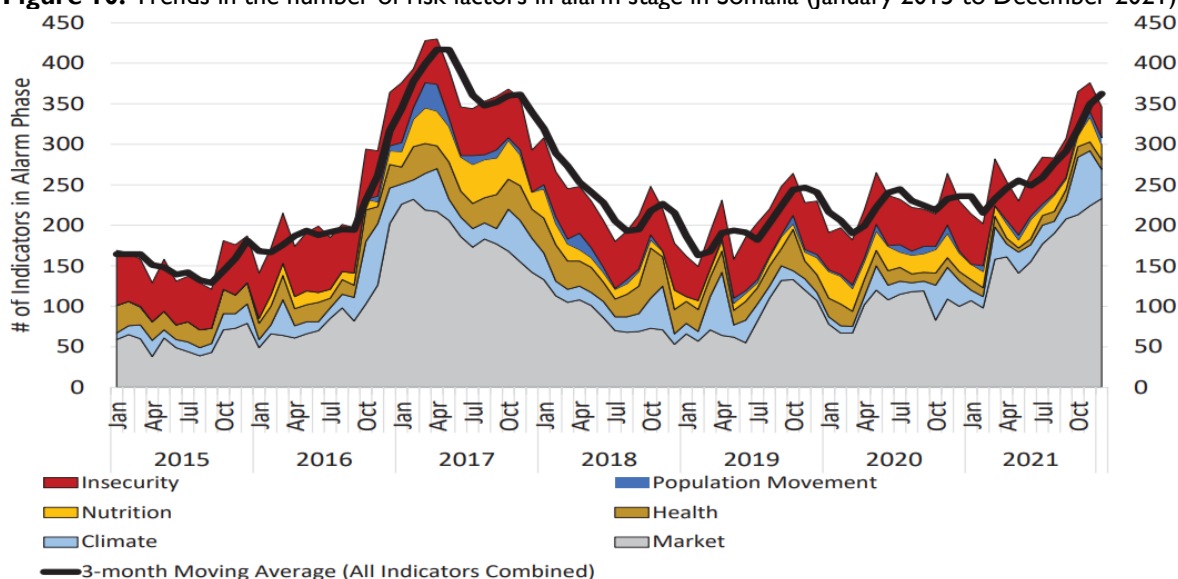
<sup>25</sup> FAO-GIEWS calculations based on NDMA (National Drought Management Authority) data

<sup>26</sup> FEWS NET (2021). Food Security Alert, December 2021. <https://fewsn.net/east-africa/ethiopia/alert/december-22-2021>

<sup>27</sup> FAO-GIEWS (2021). Special Alert n. 348 – East Africa. <https://www.fao.org/3/cb7721en/cb7721en.pdf>

<sup>28</sup> FSNAU (2022). Somalia Early Warning-Early Action Dashboard Time Series Chart: Trends in the Number of Risk Factors in Alarm Phase (Jan 2015 – Dec 2021). <https://www.fsnau.org/downloads/Early-Warning-Early-Action-Dashboard-Time-Series-Chart-Dec-2021.pdf>

**Figure 10.** Trends in the number of risk factors in alarm stage in Somalia (January 2015 to December 2021)



Source: FSNAU-Somalia

In the ASAL regions of Kenya, poor rainfall performance, high food prices, resource-based conflict, flooding, and COVID-19 are driving a deterioration in the nutrition situation<sup>29</sup>. Malnutrition status remains in the Critical phase in Turkana, Samburu, Mandera, Wajir, Garissa, North Horr, Laisamis and East Pokot counties and is in the Serious phase in West Pokot and Tana River counties. For SMART surveys undertaken in January 2022 in Isiolo, Wajir, Garissa and Tana River, all except the last county showed significant deteriorations, with Garissa recording the highest GAM rates ever (24.7% GAM and 4.8% SAM) while Wajir also recording the highest prevalence of wasting since 2011.

In Somalia, a market assessment undertaken in mid-January 2022 indicated scarcity of milk and an increase in prices of staple food commodities, with a knock-on effect on the prevalence of acute malnutrition that will be accentuated in the weeks to come if multi-sectoral response actions are not scaled up.

## OUTLOOK THROUGH SEPTEMBER 2022

The eastern Horn of Africa has a bi-modal rainfall regime, consisting of a first rainy season from March to May<sup>30</sup>, and a second rainy season from October to December. Beyond the current January – February dry season, the food security outlook across the Horn of Africa will be heavily dependent on the performance of the March to May “long rains/Gu” rainy season. Unfortunately, this season is notoriously difficult to forecast, with global models currently showing mixed signals and high levels of uncertainty for most of the region. More specifically, while some models are indicating an increased likelihood of average to above-average rains, others based on analyses of Pacific March-May sea surface temperatures, past droughts, and previous La Niña years, suggest the possibility of another below-average season.

<sup>29</sup> Kenya Food Security Steering Group (2021). The 2021 Short Rains Mid-Season Food and Nutrition Security Rapid Assessment Report. <https://www.ndma.go.ke/index.php/resource-center/send/84-2021/6290-2021-short-rains-mid-season-assessment-main-report>

<sup>30</sup> Generalized at the regional level. The start and end of the rains varies between March and June within the eastern Horn of Africa.

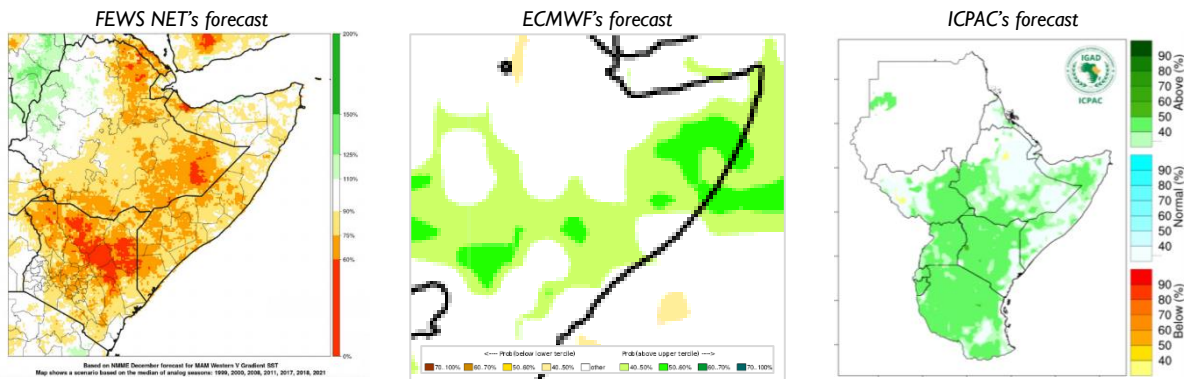


Given this considerable uncertainty about upcoming rainfall performance, FSNWG has decided that it is not possible to develop a “most likely scenario” at this time. Instead, FSNWG has agreed to develop two separate food security projections for the Horn of Africa, based on different rainfall scenarios:

1. Scenario based on the assumption that the March to May rains will be average to above average, and
2. Scenario based on the assumption that the March to May rains will be below average.

The following sections will outline key assumptions and likely resulting food security outcomes under both of these scenarios.

**Figure 11.** Rainfall forecasts for the March to May rainy season from ICPAC, FEWS NET, and ECMWF, illustrating examples of the currently existing, conflicting forecasts (as of January 2022)



### Scenario 1: Average to above-average rainfall between March and May 2022

#### Assumptions

- **Atmospheric temperatures:** Temperatures are anticipated to remain above normal from January through March. The higher-than-average temperatures, coupled with the poor performance of the previous rainy season in late 2021, are likely to accelerate the depletion of remaining pasture and browse, exacerbate current water shortages, and cause wilting of off-season crops. However, the impacts will likely be less severe in southeastern Kenya and localized areas in southern Somalia (e.g., Lower Juba), where improved late-season rains in December partially regenerated rangeland resources. Temperatures are likely to seasonally moderate somewhat from April through July but will likely remain at above-average levels.
- **Rainfall:** Given currently available forecasts from multiple regional and global meteorological agencies, including ICPAC, NOAA, and ECMWF, this scenario assumes that rainfall between March and May 2022 will be average to above average.
- **Desert locusts:** According to FAO, current dry conditions in northern Somalia are likely to drive small locust swarms southward toward southern Ethiopia and northern Kenya, though the infestation and related agricultural losses are expected to be insignificant.
- **Crop production and household food stocks:** Following below-average harvests in January/February, agropastoralists and marginal agricultural households in the eastern Horn of Africa are likely to deplete their household food stocks early, resulting in an atypically long agricultural lean season from around February through May. The “long rains/*Gu*” harvests in June/July, which rely on the March-May rains, will likely be average to above-average given favorable rainfall levels.

- **Staple food prices:** The upward pressure on staple food prices is anticipated to increase through June, ranging from 30 to 100 percent above average, according to FEWS NET price projections for various monitored markets. After June, average to above-average harvests from agropastoral, riverine, and marginal agricultural cropping will likely cause staple food prices to decline starting in June and July. In Ethiopia, prices will remain well above average due to macroeconomic challenges while prices will return to near-average levels through at least September in Kenya and Somalia.
- **Livestock migration:** Until April, agropastoral and pastoral households are anticipated to continue to engage in atypical livestock migration patterns in search of water and pasture, leading to the clustering of livestock in few areas where limited pasture and water are available. Once rangeland conditions begin to normalize due to the average to above-average March to May rains, livestock migration patterns will return to normal starting in April and continuing through September.
- **Livestock disease:** A proliferation of livestock diseases in areas where livestock cluster is anticipated as livestock continue to trek longer distances until April. Additionally, the current poor livestock body conditions and weakened state, particularly for cattle and sheep, suggests that the characteristic dip in atmospheric temperatures and increased rainfall at the season onset, in April, are likely to cause an upsurge in the Contagious Bovine and/or Caprine Pleuro Pneumonia, during the first month of the rainy season. Anticipated livestock deaths at the season onset will likely add to already high drought-related losses from November to March. Livestock diseases will likely normalize starting in April and through the end of the scenario period in September.
- **Livestock production:** Very dry conditions during the current dry season are expected to significantly affect livestock body conditions and result in atypically high livestock deaths until the start of the next rainy season in March/April. Milk production will likely remain limited even during and after the rainy season, as the severity of drought in late 2021 and early 2022 has decreased herd sizes and has affected livestock conceptions, reducing expected birth levels in March-May. While poor livestock health will likely exert downward pressure on livestock prices, market prices will be still underpinned by low supply and strong urban and export demand. Consequently, livestock body condition/salability and household herd holdings are expected to be the main limiting factors for household income. These trends, coupled with above-average food prices, are likely to continue to erode household purchasing power derived from livestock sales through May and until food prices begin to fall with the next harvests. Terms of trade will then begin to normalize through the second half of the scenario period, or through September.
- **Civil conflict:** Sporadic conflict associated with political instability and intercommunal grievances are likely to continue through the outlook period, concentrated in southern Ethiopia, northeastern Kenya, and southern Somalia and resulting in population displacements and periodic disruptions in livelihood activities, labor movement, livestock migration, and trade flows.
- **Resource-based conflict:** Growing scarcity and competition for rangeland resources including pasture, browse, and water, are likely to cause increased conflict among pastoralists, agropastoralists, and sedentary marginal agricultural households. The conflict is expected to drive increased population displacement and loss of assets (primarily livestock) and standing and stored crops through at least March. Resource-based conflict levels will then subside to normal levels during the rainy season and following dry season.
- **Drought-related displacement:** In both Somalia and Ethiopia, significant population displacements are forecasted, even under a scenario of average to above-average rains. For example, IOM has projected that in Somalia alone, between 1,036,000 to 1,415,000 people could be displaced in the next six months due to the current drought conditions (based on historical trends during 2017).<sup>31</sup> This is a significant increase in displacement levels compared to previous expectations. For example, as a comparison, the Danish Refugee Council had previously estimated (not factoring future rainfall forecasts) that displacement would increase by 200,000 individuals in Somalia while in Ethiopia, displacement would increase by almost 1 million people by end-2023.

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<sup>31</sup> IOM (2022). Drought analysis 2021.

[https://displacement.iom.int/sites/default/files/public/reports/IOM\\_DTM\\_SOMALIA\\_Drought\\_Analysis\\_01\\_2022.pdf](https://displacement.iom.int/sites/default/files/public/reports/IOM_DTM_SOMALIA_Drought_Analysis_01_2022.pdf)

- **Access to water:** Despite forecast average to above-average rains, a full recovery of groundwater systems will not be achieved in 2022. In an “average to above-average rains” scenario, locally built rainwater harvesting and storage systems will be replenished. However, a full recovery of groundwater systems will not be achieved as the replenishment of the aquifer may take months or years. Water prices are likely to increase to record levels during the peak of the “Jilal” February-March dry season as most surface water sources dry up, attributed to well below-average water impoundment coupled with above average evapo-transpiration, due to current and projected higher than average atmospheric temperatures. Above-average water prices are expected to reduce household purchasing capacities, compromising food access. Prohibitive water prices are also likely to predispose households to waterborne diseases due to scarcity of clean useable water. However, water prices will likely ease during the peak of the rains in April and May, returning to average levels after the March to May rainy season.
- **Macroeconomic challenges:** Ongoing national-level macroeconomic challenges are likely to continue to disseminate to the rural areas of the eastern Horn of Africa. Constrained foreign exchange reserves, local currency depreciation, and removal of international economic support in the case of Ethiopia are likely to increase existing inflationary pressures and drive high staple food, fuel, and water prices, compounding eroded food and income sources, through the outlook period.
- **Access to humanitarian assistance:** Access to humanitarian assistance is anticipated to continue to mitigate extreme food insecurity outcomes across the eastern Horn of Africa though at least March. However, given current funding gaps, access constraints in conflict-affected areas, and inadequate logistical capacities in the eastern Horn of Africa, considerable humanitarian assistance gaps for populations in need will likely be prevalent. Humanitarian assistance distribution plans from April through September are unavailable for most of the eastern Horn of Africa.
- **Gender-based violence:** Due to stress on households relating to the ongoing drought and food insecurity, gender-based violence and violence against children will likely rise during the first half of the outlook period and will then begin to normalize from April in pastoral areas and from July in agropastoral areas as the situation improves with the start of the next rains.
- **Nutrition:** The prevalence of acute malnutrition is likely to rise markedly through April, in many areas of southern and southeastern Ethiopia, eastern and northeastern Kenya, and southern and central Somalia. Increased morbidities due to lowered hygiene levels during the drought, coupled with increased disease occurrences at the onset of the rainy season in April, are likely to drive atypically higher than average GAM and SAM prevalence. Given that seasonal access to milk and staple food harvests will begin to normalize in June and July with the average to above-average rainy season, a seasonal reduction in SAM and GAM prevalence is likely.

#### Projected food security and nutrition outlook

As the effects of drought continue over the near future, affected households will be forced to rely on negative coping strategies, including crisis and emergency levels of coping in worst-affected areas. Worst-affected populations will be located in pastoral and agropastoral areas where vulnerable households will face significant crop and livestock losses, reduced market access, and high disease incidence, though riverine communities will also be affected.

Widespread Crisis (IPC Phase 3) outcomes are expected, particularly during the first half of the scenario period (through May). An increase in the population in Emergency (IPC Phase 4) is also expected in pastoral areas of Ethiopia and Kenya, as well as across Somalia. Household food access is likely to be extremely constrained due to reduced household income from crop and livestock sales, as well as from agricultural labor, amid above-average staple food prices.

From April in pastoral areas and from July in agropastoral areas, food security outcomes will begin to improve due to the positive effects of average to above-average rains on rural households’ livelihoods. However, an analysis of food security outcomes one favorable rainy season after the 2011 and 2017 drought emergencies show that recovery will take time, as households have lost, in many cases, significant livelihood assets, such as livestock. Across agropastoral and pastoral areas, widespread Stressed (IPC Phase 2) and Crisis (IPC Phase 3) outcomes would be likely.

Under this scenario, FSNWG estimates that between 7 to 11 million people could remain in Crisis (IPC Phase 3) or worse food insecurity in drought-affected areas through September 2022.

Under this scenario, the nutrition situation is likely to remain relatively stable, however without any improvement. Large areas will likely remain in serious and critical phase as the effects of successive failed rainy seasons will remain. An estimated 5.7 million children are expected to suffer from wasting in 2022, and of these, 1.7 million children are expected to suffer from severe wasting and will require life-saving therapeutic feeding treatment.

Throughout the scenario period, gender inequality, poverty, and marginalization of certain groups within communities will likely drive more severe impacts for certain populations, such as children, women, older persons, and persons with disabilities.

## *Scenario 2: Below-average rainfall between March and May 2022*

### Assumptions

- **Atmospheric temperatures:** Temperatures are anticipated to remain above normal from January through March, following three successive seasons of above average atmospheric temperatures in most areas of the eastern Horn of Africa. The higher-than-average temperatures, coupled with the preceding poor rainfall season in late 2021, are likely to accelerate the depletion of remaining pasture and browse, exacerbate current water shortages, and cause wilting of off-season crops. However, the impacts will likely be less severe in southeastern Kenya and localized areas in southern Somalia (e.g., Lower Juba), where favorable, late-season rainfall in December partially regenerated rangeland resources. Temperatures are likely to seasonally moderate somewhat from April through July but will likely remain at above-average levels.
- **Rainfall:** Research conducted by FEWS NET climate scientists on historical analog years with La Niña conditions, a transition from La Niña to ENSO neutral, or a strong, warm [Western Pacific Gradient](#), coupled with research on previous drought patterns, indicate that the March to May rainfall is likely to be below the 40-year average. Based on median rainfall performance in these analog years, FEWS NET forecasts the depth of rainfall deficits will vary across the region, ranging from <60 percent of average in parts of northeastern Kenya to 75-90 percent of average in central-northern Somalia. Below-average rainfall is expected to culminate in an unprecedented fourth successive below-average rainy season in most areas of the eastern Horn of Africa.
- **Desert locusts:** According to FAO, current dry conditions in northern Somalia are likely to drive small locust swarms southward toward southern Ethiopia and northern Kenya, though the infestation and related agricultural losses are expected to be insignificant.
- **Crop production and household food stocks:** Following below-average harvests in January/February, agropastoralists and marginal agricultural farms in the eastern Horn of Africa are likely to deplete their household food stocks early, resulting in an atypically long agricultural lean season from around February through May. The bimodal harvests in June/July, which rely on the March-May rains, are also anticipated to be below average. Below-average rains are expected to result in crop moisture stress, especially in drought-prone marginal cropping areas that hardly receive sufficient water even in an average season. Drought-tolerant sorghum and millet are likely to perform better relative to rainfed maize. In addition, households' capacities to finance labor and input purchases will be stretched by the lack of crop income over the past three successive seasons, which will further contribute to a reduction in area planted and yields. Based on past trends, food stocks from the June/July harvests will be inadequate, lasting around 2-3 months. The next crop harvest is not expected until February 2023, underlining the impact of a below-average March to May rainy season on household food stocks. Household income from agricultural labor will also be significantly below normal due to reduced demand for planting, weeding, and harvesting.
- **Staple food prices:** The upward pressure on staple food prices is anticipated to increase through June, at least, ranging from 30 to 100 percent above averages, according to FEWS NET price projections for various monitored markets. Harvests from agropastoral, riverine, and marginal agricultural cropping will likely cause a short-lived minor decline in staple food prices in June and July. Despite the marginal decline in staple food prices, well

above-average prices are anticipated to persist through at least September, at the end of the outlook period, and likely until the subsequent harvest in early 2023.

- **Livestock migration:** Agropastoral and pastoral households are anticipated to continue to engage in atypical livestock migration patterns in search of water and pasture, leading to the clustering of livestock in few areas where limited pasture and water are available, until April. Proliferation of livestock diseases in areas where livestock cluster, coupled with further weakening of livestock, is anticipated as livestock continue to trek longer distances. Based on the below-average March-May rainfall forecast, it is likely that atypical livestock migration patterns between wet and dry season grazing areas is likely to continue between March and June, though the location and timing thereof is difficult to predict due to high variation in rainfall distribution in this region.
- **Livestock disease:** The current poor livestock body conditions and weakened state, particularly for cattle and sheep, suggests that the characteristic dip in atmospheric temperatures and increased rainfall at the season onset, in April, is likely to cause an upsurge in the Contagious Bovine and/or Caprine Pleuro Pneumonia, during the first month of the rainy season. Anticipated livestock deaths at the season onset will likely to add to already high drought-related losses from November and likely through March.
- **Livestock production:** Very dry conditions during the dry season are expected to significantly affect livestock body conditions and result in atypically high livestock deaths through March/April. While deaths are likely to decline after the onset of the rains through March, livestock health, reproduction, and productivity will likely remain below normal due to the below-average seasonal rains, particularly among cattle and sheep. Milk production will likely remain limited even during the rainy season, as the severity of drought in late 2021 and early 2022 has affected livestock conceptions and reduced expected birth levels in March-May. While poor livestock health will likely place downward pressure on livestock prices, market prices are still favorably influenced by low supply and strong urban and export demand. Consequently, livestock body condition/salability and household herd holdings are expected to be the main limiting factors for household income. These trends, coupled with above-average food prices, are likely to continue to erode household purchasing power derived from livestock sales.
- **Civil conflict:** Sporadic conflict associated with political instability and intercommunal grievances are likely to continue through the outlook period, concentrated in southern Ethiopia, northeastern Kenya, and southern Somalia and resulting in population displacements and periodic disruptions in livelihood activities, labor movement, livestock migration, and trade flows.
- **Resource-based conflict:** Growing scarcity and competition for rangeland resources including pasture, browse, and water, is likely to cause increased conflict among pastoralists, agropastoralists, and sedentary marginal agricultural households. The conflict is expected to drive increased population displacement and loss of assets (primarily livestock) and standing and stored crops through at least March. A seasonal reduction in resource-based conflict during the rainy season is likely to be temporary, and likely restart in July due to likely below-average March to May seasonal rains.
- **Drought-related displacement:** In both Somalia and Ethiopia, significant population displacements are forecasted. For example, IOM has projected that in Somalia alone, between 1,036,000 to 1,415,000 people could be displaced in the next six months due to the current drought conditions (based on historical trends during 2017)<sup>32</sup>, a significant increase in displacement levels compared to previous expectations. For example, as a comparison, the Danish Refugee Council had previously estimated (not factoring future rainfall forecasts) that displacement would increase by 200,000 individuals in Somalia while in Ethiopia, displacement would increase by almost 1 million people by end-2023. Under a scenario where the March to May 2022 rains fail, we could see population displacement levels that exceed the estimates outlined by the IOM scenario above.
- **Access to water:** Despite a slight improvement in water availability during the rainy season for locally build rainwater harvesting and storage systems, water levels of groundwater systems will continue to decline given the below-average rains. Water prices are likely to increase to record levels during the peak of the “*Jila*” February-March dry season as most surface water sources dry up, attributed to well below-average water

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<sup>32</sup> IOM (2022). Drought analysis 2021.

[https://displacement.iom.int/sites/default/files/public/reports/IOM\\_DTM\\_SOMALIA\\_Drought\\_Analysis\\_01\\_2022.pdf](https://displacement.iom.int/sites/default/files/public/reports/IOM_DTM_SOMALIA_Drought_Analysis_01_2022.pdf)

impoundment coupled with above-average evapo-transpiration, due to current and projected higher than average atmospheric temperatures. Above-average water prices are expected to reduce household purchasing capacities, constraining food access. Prohibitive water prices are likely to pre-dispose households to waterborne diseases due to scarcity of clean useable water. However, water prices are likely to ease temporarily during the peak rains in April and May, while remaining at below average levels.

- **Macroeconomic challenges:** Ongoing national-level macroeconomic challenges are likely to continue to disseminate to the rural areas of the eastern Horn of Africa. Constrained foreign exchange reserves, local currency depreciation, and removal of international economic support in the case of Ethiopia are likely to increase existing inflationary pressures and drive high staple food, fuel, and water prices, compounding eroded food and income sources, through the outlook period.
- **Access to humanitarian assistance:** Access to humanitarian assistance is anticipated to continue to mitigate extreme food insecurity outcomes across the eastern Horn of Africa though at least March. However, given funding gaps, access constraints in conflict-affected areas, and inadequate logistical capacities in the eastern Horn of Africa, considerable humanitarian assistance gaps for populations in need will likely be prevalent. Humanitarian assistance distribution plans from April through September are unavailable for most of the eastern Horn.
- **Gender-based violence:** Due to stress on households relating to the ongoing drought and food insecurity, gender-based violence and violence against children will likely rise throughout the entire outlook period, with only short temporary improvement during the rainy season (in pastoral areas) or during the harvest period (in agropastoral areas). However, gender-based violence will likely further escalate afterwards as the food security situation becomes dire.
- **Nutrition:** The prevalence of acute malnutrition is likely to rise markedly through April, in many areas of southern and southeastern Ethiopia, eastern and northeastern Kenya, and southern and central Somalia. Emergency-level global acute malnutrition prevalence are widespread among drought-affected pastoral households in the eastern Horn of Africa. It is likely that severe and global acute malnutrition prevalence are likely to rise to extreme levels associated with an increase in hunger-related excess mortalities for many more households. Increased morbidities due to lowered hygiene levels during the drought, coupled with increased disease occurrences at the onset of the rainy season in April, are likely to drive atypically higher than average GAM and SAM prevalence. Given that seasonal access to milk and staple food harvests will be lower than normal in June and July, the seasonal reduction in SAM and GAM prevalence is likely to be limited.

#### Projected food security and nutrition outlook

Severe food insecurity would be expected if the March to May rains were significantly below average or failed across the eastern Horn of Africa. In particular under this scenario, more widespread livestock migration during and after the rainy season, an increase in excess livestock deaths, significantly below-average to failed June/July harvests, and steeper declines in household purchasing power, compounded by increased levels of resource-based conflict and insecurity, would be expected.

Without a scale-up in humanitarian assistance, these factors would likely lead to the occurrence of Emergency (IPC Phase 4) area classifications across the eastern Horn of Africa, and lead to a further rise in the GAM and SAM prevalence, which is associated with atypical increases in hunger-related excess mortalities. In a worst-case scenario where the rains completely fail and there is no humanitarian assistance to worst-affected households, it is possible that some households would face extreme food consumption gaps indicative of Catastrophe (IPC Phase 5). Under this scenario, between 15 to 20 million people could become highly food insecure (IPC Phase 3+) in drought-affected areas.

Under this scenario, the nutrition situation would sharply deteriorate with 6.9 million children expected to be wasted, and approximately 2 million of these children are expected to be severely wasted, requiring lifesaving treatment within 2022. Vulnerable populations, including IDPs, would likely face extreme levels of wasting, potentially resulting in cross-border movement of households trying to cope with the dire situation. The proportion

of severely wasted children requiring in-patient treatment would increase with complications related to malnutrition as well as potential increase in communicable diseases.

Gender inequality, poverty, and marginalization of certain groups within communities will likely drive more severe impacts for certain populations, such as children, women, older persons, and persons with disabilities.

## RESPONSE RECOMMENDATIONS

Given the current severe drought and threat that a fourth consecutive rainy season could possibly occur between March and May 2022, large-scale emergency food, nutrition, livelihood, and non-food interventions including water, health, and sanitation access are critical in urgently mitigating an increase in severe food and nutrition insecurity and outcomes. More specifically, the following actions are recommended:

- **Food security and livelihoods:** In the immediate short-term, there is an urgent need to provide food relief to vulnerable populations in the drought-affected areas. While providing immediate food access, it's also paramount to safeguard the livelihoods of farmers, pastoralists, and agropastoralists, and support their quick recovery of seasonal food production and self-reliance. Context-specific livelihoods packages should be provided, comprised of cash, productive inputs and subsidies for basic productive services (e.g., tractor and irrigation hours). Additional support could include animal destocking, animal feed distribution, water trucking, animal health, and protective treatments. Particular emphasis should also be placed on investments in local climate adaptation to restore livelihoods and support drought-prone communities to anticipate, manage, reduce and adapt to climate-related risks. Investments include climate-smart agricultural infrastructure and practices, the promotion of drought-tolerant and nutrient-dense crops, livelihoods diversification focusing on women and youth, and enhanced risk management through microinsurance and financial inclusion.
- **Nutrition:** Rapid scale up of life-saving health and nutrition interventions will be needed including scaling up of mass screening and integrated outreaches/Mobile Health and Nutrition Teams in drought affected areas, Blanket Supplementary Feeding (BSFP), treatment for severe and moderate wasting as well as Vitamin A supplementation. The health system will need to be supported to cope with the increase in demand due to the high number of wasted children as well as communicable diseases. Timely procurement of nutrition products will be critical to secure adequate therapeutic feeding commodities including RUTF to cope with the potential increase in the caseload. Continued investment is required to strengthen nutrition information systems, including routine reporting systems, to closely monitor the nutrition situation on a continuous basis to allow for evidence informed planning and response monitoring.
- **WASH:** Although life-saving assistance with emergency water provision for affected families and their livestock is a priority, the WASH sector recommends a 40-60 expenditures approach: 40 percent spent on non-durable solutions such as time-bound water trucking with conditions (exit strategy, communities well informed, etc.) and 60 percent to be spent on actions with an durable impact after the end of the projects: increased capacity of water storage at all levels (household, health care facility, schools, and infrastructure for livestock water and small kitchen garden); fix technical electrical or mechanical issues and resume water production of dysfunctional water systems (wells, borehole); drill high yield boreholes with support of geophysics surveys in strategic locations with robust crisis-resilient management arrangements; expand water pipeline to strategic locations. Water trucking at extremely high cost to very remote locations should be discouraged as it creates false expectations among the served communities that it will last, and it absorbs funds that could be better use to fix existing water schemes or build new ones.
- **Conflict management:** Provide support to existing community-based coordination mechanisms to strengthen natural resource conflict management. These interventions could include strengthening regular information sharing and combatting misinformation, sustained engagement between existing natural resource management committees, and accurate monitoring of displacement patterns. It is important that emergency drought response interventions also mainstream conflict sensitivity into their approaches. This can be done through using community-based structures to understand evolving context, participatory and community-led

emergency response planning, and sustained communication channels with drought-affected communities. Building the capacity of local duty bearers and leaders in conflict mitigation remains key given the potential for further increases in conflict incidences and considering their role as intermediaries both between and within communities.

- **Food security monitoring:** Given the high level of uncertainty about weather forecasts and future food security and nutritional outcomes, continuous monitoring of the situation, including the regular collection and analysis of food security and nutrition data, is needed across drought-affected areas of all three countries. FSNWG should also continue to provide updates on the situation, including special reports or alerts, particularly if the March to May rains are poor or if data becomes available to suggest a significant food security deterioration.