Food and Agriculture Organization of the United Nations

SWALIM

SOMALIA DROUGHT UPDATE (May—September 2022)

Issued on 14 June 2022

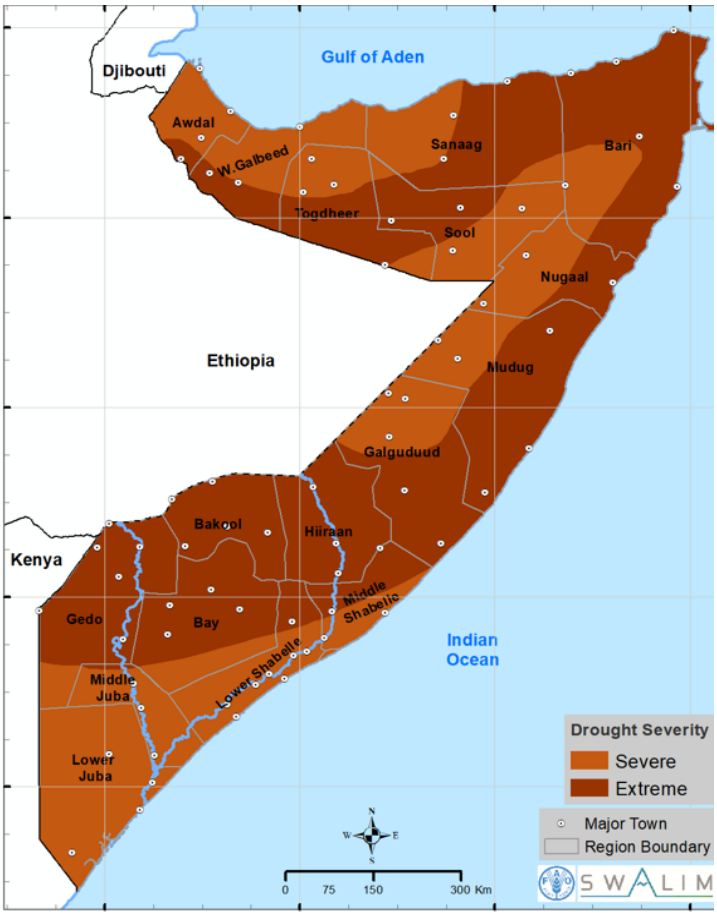
Drought Severity			
DROUGHT CONDITION	**IMPROVING**	**STABLE**	**WORSENING**
NORMAL ***Normal conditions***			
MILD ***Going into drought, long-term dryness slowing the planting and growth of crops. Also coming out of drought – water deficits, partial loss of crops and pasture***			
MODERATE ***Crop or pasture losses are likely; water shortages trucking common; Abnormal livestock migration and death cases***			
SEVERE ***Crop or pasture losses are likely; water shortages trucking common; Abnormal livestock migration and death cases***			**Larger parts of Awdal; W. Galbeed; west of Sanag; areas bordering Ethiopia of Nugaal & Gal-Mudug; parts of Bari; Middle Juba; Lower Juba; Lower Shabelle and southern parts of Middle Shabelle**
EXTREME ***Major crop/pasture losses with limited migration options; increased livestock death; widespread water shortages and water trucking***			**Gedo; Bakool; Bay; Hiraan; Lager parts of Gal-Mudug; Nugal; Bari; East of Sanaag; North of Sool; and south of Togdheer & W. Galbeed.**

Despite Short-Term Improvements, drought conditions are expected to worsen across Somalia during July through mid-October 2022 dry period

- The 2022 Gu rainy season in Somalia came to an early end in May, with depressed rainfall amounts recorded and forecasts indicating little to no rainfall through mid-June . The overall seasonal rainfall performance was poor. The northern areas recorded 30% to 60% of the average rainfall while the central and southern areas received 45 % to 75%. This marks a fourth consecutive failed rainy season since late 2020.
- Gu season rainfall has moderated drought conditions in most parts of the country as it replenished pasture and water resources. However, this improvement is expected to be short-lived as and drought conditions are expected to worsen throughout the prolonged dry Hagaa (July-September) dry season.
- Current climate forecasts indicate a 62 per cent chance of La Niña during the June to August 2022 period (IRI). La Niña is generally associated with drought conditions in the Horn of Africa region, including Somalia. The next seasonal rains are not expected until mid-October and available long-range forecasts indicate that a record fifth below-average rainy season is likely across Somalia during the forthcoming October and December 2022 Deyr season. This could set the conditions for a worsening multi-season drought well into 2023.
- More than 80 per cent of Somalia is currently facing severe to extreme drought conditions. The drought severity levels are comparable to that of 2010/11 and 2016/17 as seen in Annex I.
- Water resources are expected to decline drastically during the forthcoming dry season as water demand and use increases. In Garowe, there was abnormal drop in ground water level of seven meters between October 2021 and May 2022 (Annex II).
- The Juba and Shabelle River levels are currently 30 percent below the short-term average, with limited water available to support irrigation of crops and other uses. The river levels are expected to decrease further in the coming weeks and months.
- The vegetation conditions that had improved in some areas as a results of the Gu season rains are expected to be depleted soon due to the low level of biomass recovery and likely influx of livestock into these areas. The Prospects for *Gu* season cereal production remain bleak, with crop failure expected in many areas . Due to the poor rains, some communities did not plant during this season. Dry and hot conditions will continue across most parts of the country during this dry *Haggai* (June/July-September) season except for parts of Somaliland that will receive moderate *Karan* rains.
- With no significant rains foreseen until the next rainy season in October, and the La Nina predictions, the current drought situation will deteriorate further in Somalia. The negative trends are not expected to reverse until the arrival of *Deyr* (Oct-Dec) 2022 rains. However, the preliminary forecast for the Deyr 2022 season is also below average—FEWSNET

2022 Gu rainfall performance and drought severity

Map-1: Drought Conditions Map - May 2022 *Source: SWALIM*



The March/April to June 2022 Gu season rainfall was below average across the country, worsening the existing drought conditions in Somalia (Map 2). The seasonal rains, which started in mid to late April appear to be ending early by late May/early June 2022. The rains were characterized by heavy storms lasting a few hours and were concentrated within a short period. Heavy downpours led to high runoff and limited replenishment of pasture and water resources. The poor spatial and temporal distribution could not sustain crop growth nor replenish the water sources adequately.

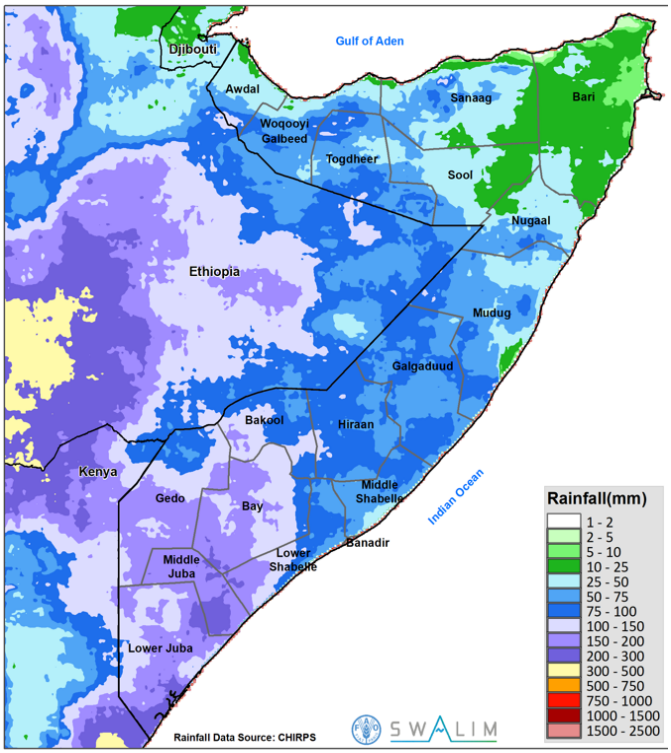
Map 2 shows the cumulative rainfall amounts for March through May, while Map 3 compares the 2022 Gu seasonal rainfall with the long term average for the same season. Northern parts of Somalia recorded 30% to 60% of the average rainfall while central and southern regions received 45 % to 75% of average. This is also consistent with observed rainfall data from rain-gauge stations.

The Ethiopian highlands from where the Juba and Shabelle rivers draw most of their water received below average rains during the current Gu season.

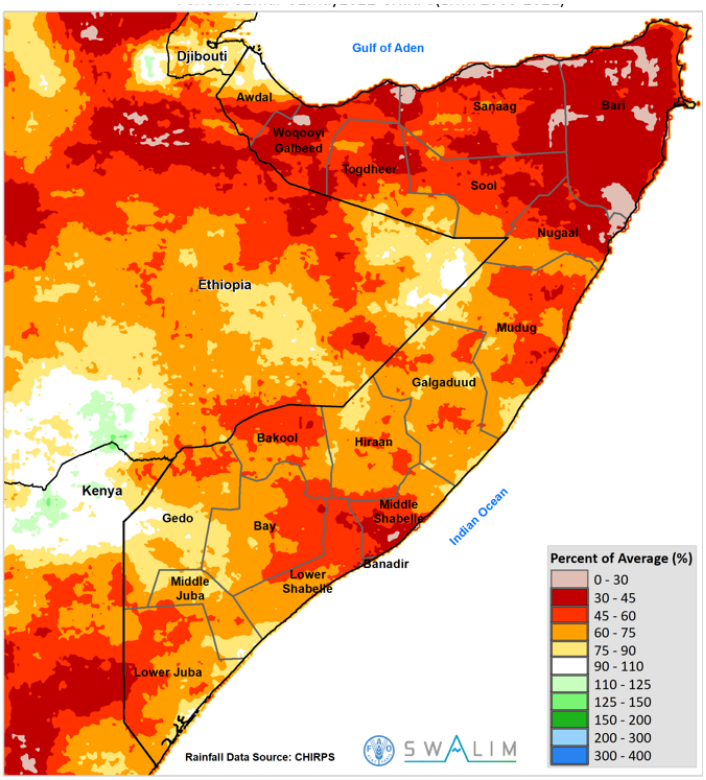
Abnormal high temperatures were reported in Somaliland, Puntland and Gedo region during the month of May. This increased the rate of evaporation in the areas contributing to increased moisture stress and drought severity.

The SWALIM drought tool, the Combined Drought Index (CDI), shows that severity of the current drought is comparable to the severe droughts of 2010/11 and 2016/17 (Annex I).

Map-2: March to May 2022 cumulative Rainfall *Source: CHIRPS*

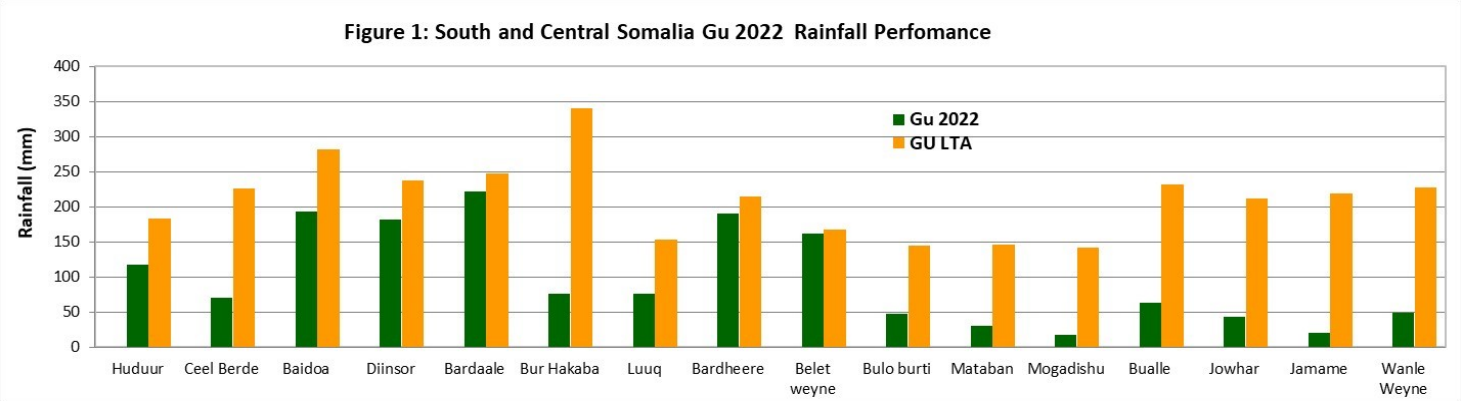


Map-3: March to May 2022 Rainfall As Percent of Average (%) *Source: CHC*



2022 Gu rainfall performance and drought severity

South and Central: The 2022 Gu season rains started in the second half of April and appear to be ending by late May/early June 2022. Most stations in Bay and Bakool recorded between 100 to 180 mm of cumulative rainfall as observed by SWALIM. Gedo and the Jubas recorded below 150mm, while the entire Shabelle regions recorded minimal rains below 100 mm except for Belet Weyne, which recorded 155 mm. However, these amounts are below average and distributed poorly in time and space, with most of the rain concentrated within a few days. The total amount of rainfall was 45% to 75% of the long term average rains of Gu season. Figure 1 presents the Gu 2022 cumulative rainfall amounts compared to the Long Term Average (LTA) for the same season for some selected rainfall stations in the south and central regions.



The south and central regions have had no significant rains since 2020 Deyr season. The persistence of below-normal rains has left the area under persistent drought conditions although Gu season rainfall has lessened the severity of the drought. However, there have been widespread cumulative loss of livestock since mid-2021. Out-migration of both humans and livestock started in late 2021, including migration and displacement to neighboring countries . Low conception and birth among livestock has led to further declines in milk availability throughout the season.

The agriculture sector of this area which serves as the country's breadbasket, has been primarily affected, and the prospects of Gu harvest are bleak. With an early cessation of the rains, most crops will wilt while the remaining may produce low yields. Irrigation along the rivers is also minimal due to the low volume of water along the two rivers. ,Preliminary estimates by FSNAU and FEWS NET indicate a 40-60% decline in crop production compared to the long-term average.

Water resources in the area have been affected by the drought. In areas like Baidoa, some of the production wells are running dry upon pumping, and it takes quite some time to recharge. The situation is likely to get worse when the surfaces water sources which received limited recharge from the Gu rains dry out, putting more pressure on the boreholes.

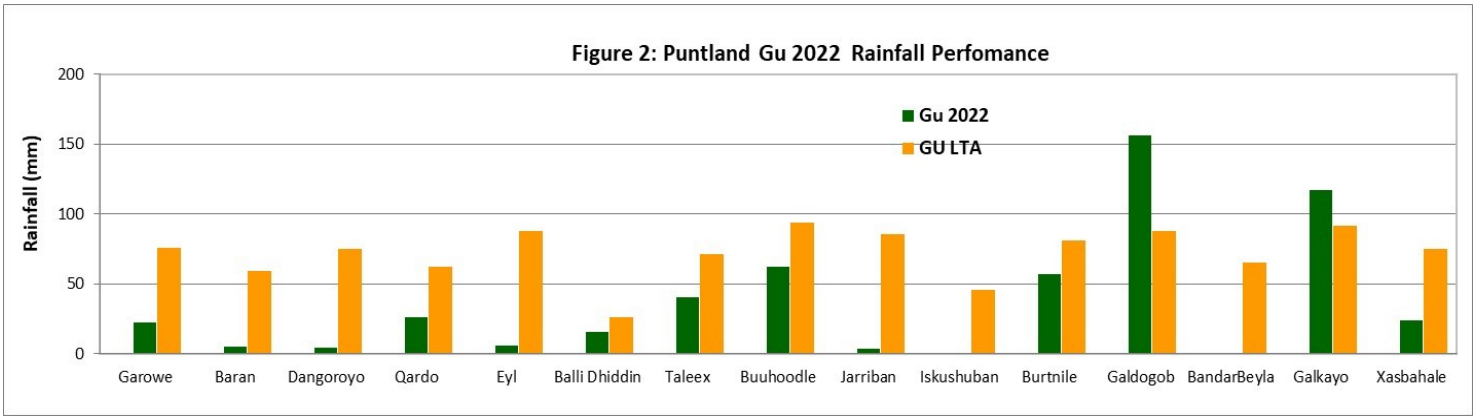
The drought conditions in south and central areas are expected to deteriorate further in the coming months as we head into the extended dry Hagaaa (June-September) season, except in areas that may receive Hagaa showers.

Puntland: The overall 2022 Gu rainfall performance in Puntland was below average. The rainfall was observed during the last week of April and the first week of May. The first week of June also saw moderate rains in Bari region, mainly Karkaar (Qardho district) and Iskushubsn district; and parts of Sanaag Region. The temporal and spatial distribution of the rains was poor. Most stations recorded less than seven rainy days. In Bari, 30% to 45% of the average rains were recorded. The were also a few pockets of the region which recorded less than 30% of the average rains. The other regions received 45% to 60% of the rains.

Groundwater level in Puntland has dropped, as a result of increased extraction and limited recharge from the short Gu rains. A SWALIM's monitoring well in Garowe has recorded 7m drop in water level between October 2021 and May 2022 (Annex II). Out-migration of humans and livestock has increased recently. Reports indicate a high concentration of animals in the areas that received relatively good rains, which led to the growth of pasture, especially in the Hawd pastoral area of the Nugal region. In the areas of Bari and Sanaag Regions where rains were received in June there may be a slow down in the out-migration, depending on pasture re-growth.

Figure 2 compares Gu 2022 and the long term average rainfall of the same period in Puntland using observed rainfall data from selected stations. Most stations recorded below normal rains.

2022 Gu rainfall performance and drought severity



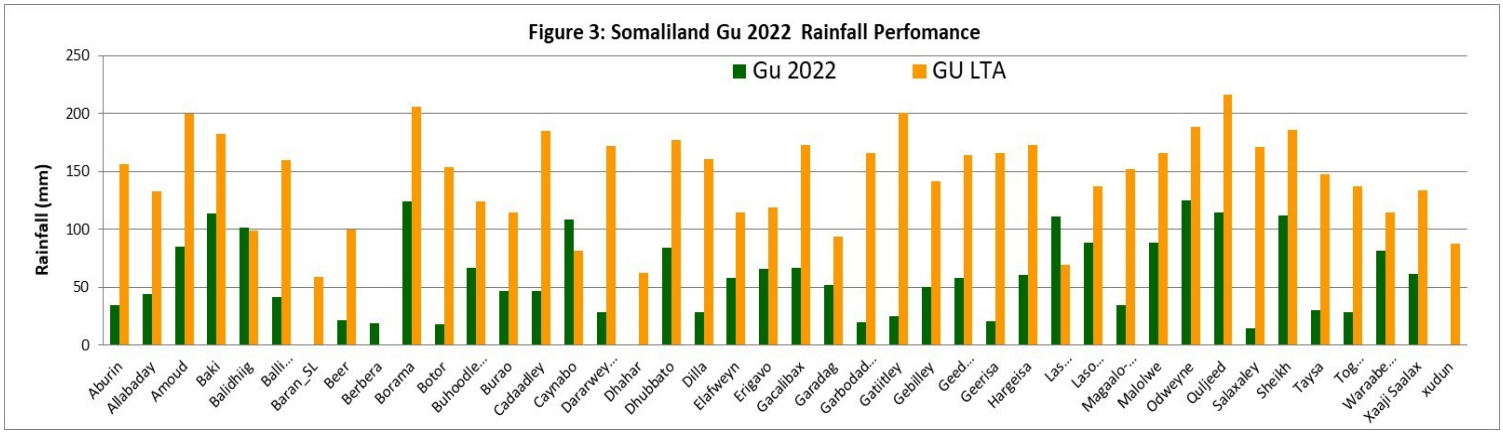
The total amounts received are not adequate to reverse the current drought conditions in Puntland. With no more rains expected until the next rainy season in October, drought conditions in Puntland will continue to worsen significantly between June and October 2022.

Somaliland: The season was delayed and started in the last week of April with moderate rains, which were erratic and not well distributed. The area which had been relatively good in the preceding seasons received the least amounts of rainfall during this Gu 2022 season. Wooqoyi Galbeed and Togdheer regions recorded 30% to 45% of average rains. The rest of the areas received 45% to 60% of rains. However, the rains provided immediate relief to the water-stressed sector and improved water availability and pasture regrowth for a short while. Currently, the water resources are limited in Somaliland.

Given the antecedent soil moisture and high evaporation rates in the region, most farmers in the agro-pastoral areas opted not to plant as the rains were insufficient to sustain crop production.

The livestock body conditions despite having improved in some areas where the rains were received, is expected to deteriorate due to the prevailing dry conditions and rapid depletion of pasture.

The water sources across Somaliland have been adversely affected by the ongoing drought. Almost all the surface water points were dry before the onset of the Gu rains, and even though some were able to recharge from the short rains, this was temporal due to the preceding dry conditions and the current demand. Communities are currently relying more on groundwater sources, with the risk of overstretching them beyond their production capacity. A water sources survey carried out in Somaliland between April and May 2022 identified that 39% of the 450 boreholes are pumped at least 12 hours a day. Further, over 40% of the boreholes are used for water tracking, as the government and humanitarian agencies intervene to save lives for the communities affected by the drought. This puts additional pressure to the limited functional water sources.



Update on the Juba and Shabelle Rivers

Rainfall in the Ethiopian highlands is usually contributes more than 80% of river flow along the two rivers of Juba and Shabelle in Somalia. During the 2022 Gu season, the highlands recorded light to moderate rains, leading to increased river flow inside Somalia with no risk of flooding. However, this trend did not last long as the rains ended early, and the levels started to decrease again, as seen in Figures 4 and 5. The river levels have remained below the short term average (STA, 2002-2021) since the beginning of 2021.

In Jowhar district, open river breakages at Egi, Huruwaa and Bodaale villages caused flooding. Several other breakages remain open along the two rivers as communities extract water for irrigation. Currently, the river levels along the two rivers are below average and will continue to decrease in the coming months.

The river levels are updated on a daily basis and can be found in this link: http://frrims.faoswalim.org/rivers/levels

Figure 4: Belet Weyne River levels 2022 compared to historical levels

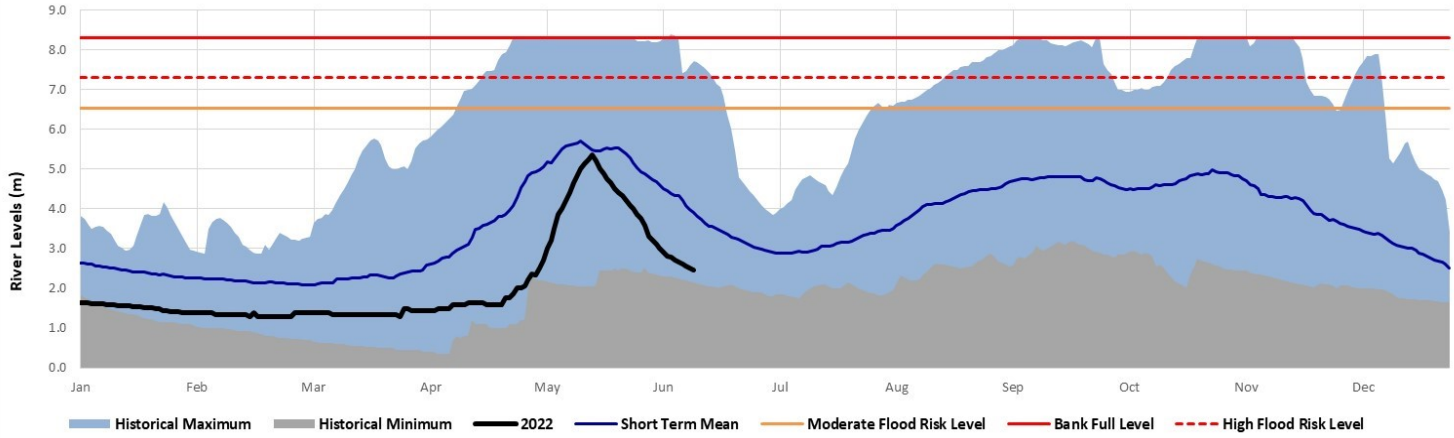
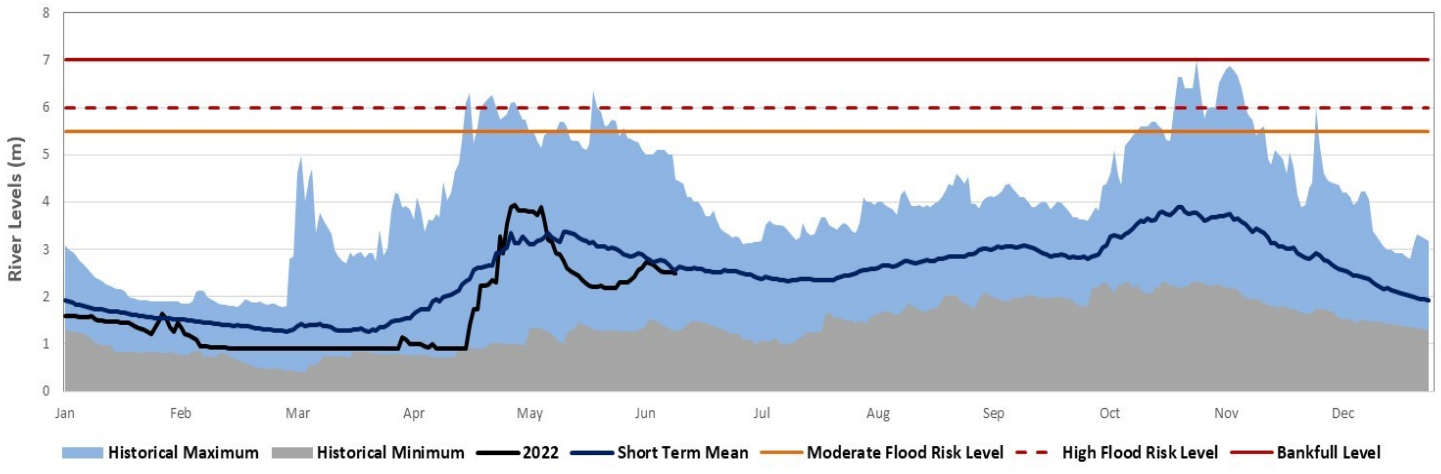
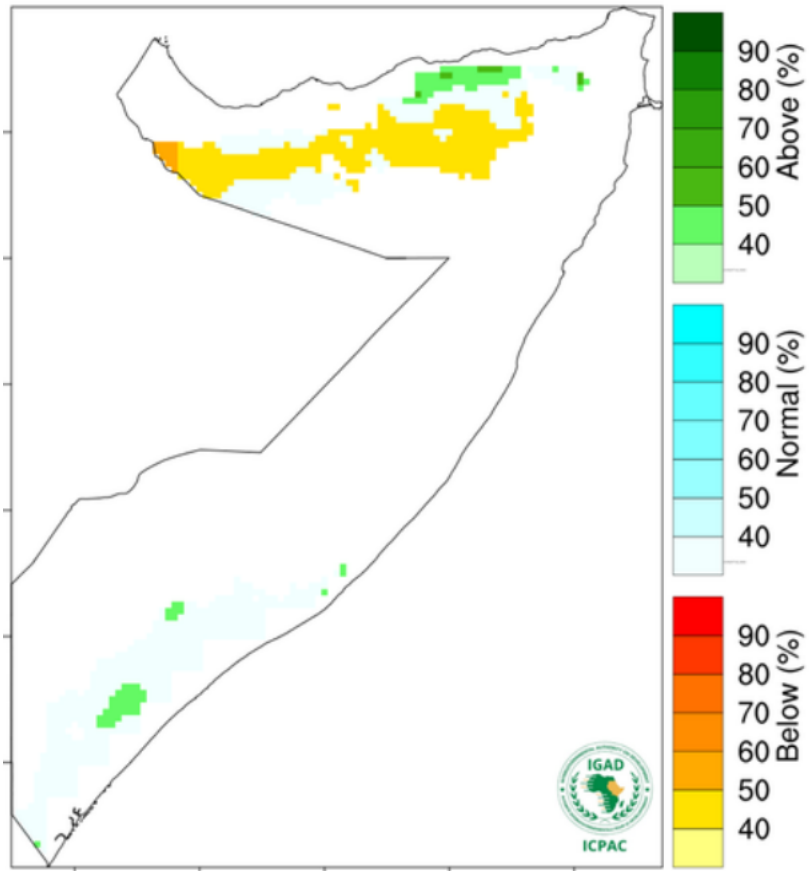


Figure 5: Luuq River levels 2022 compared to historical levels



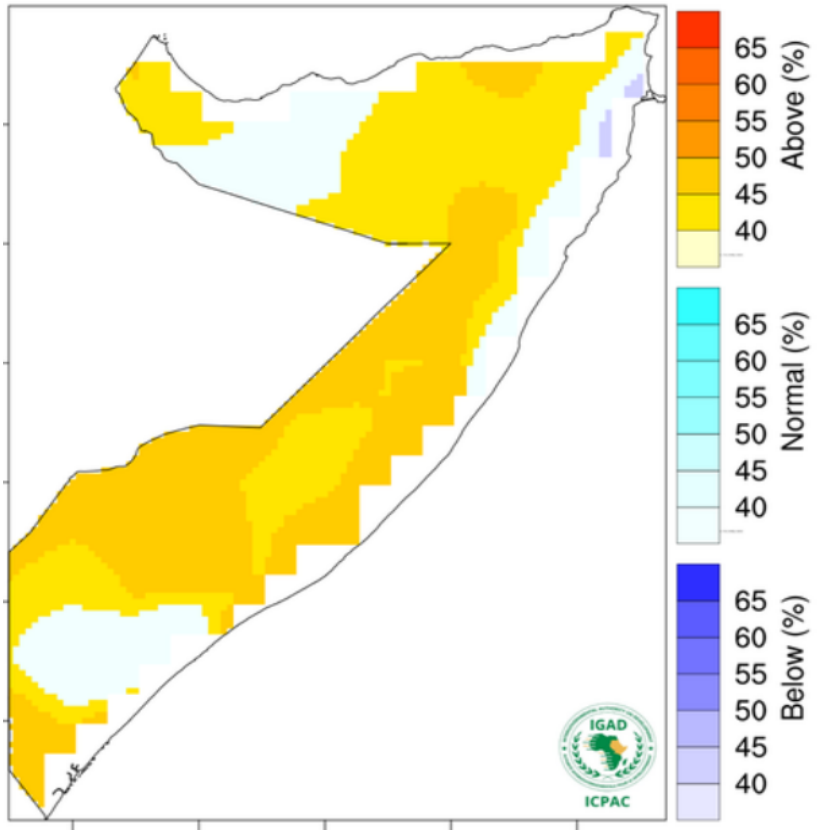
Rainfall and Temperature Forecast for June 2022

Map 4: June 2022 rainfall forecast *Source: ICPAC*



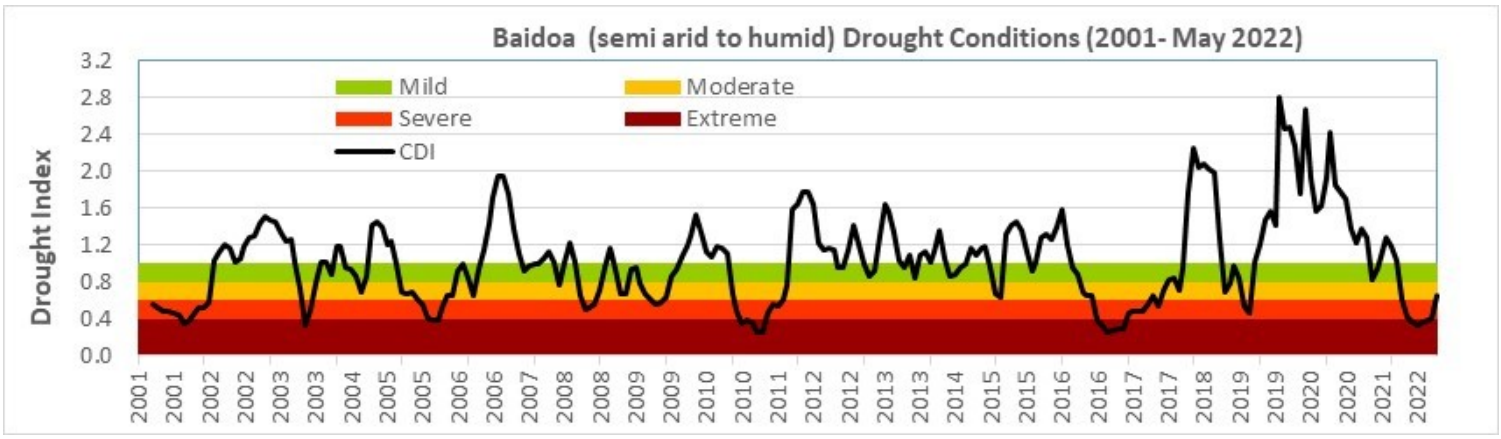
Usually after the end of Gu in May and early June, a few areas in including Somaliland and southern coastal areas continue to receive rains locally known as Karan. According to the June 2022 rainfall forecast issued by IGAD Climate Prediction and Application Center (ICPAC), there is a greater likelihood of below-average rains in Somaliland during the month while average rains are expected in the southern areas. The Ethiopian highlands will receive minimal rains during the forecast period.

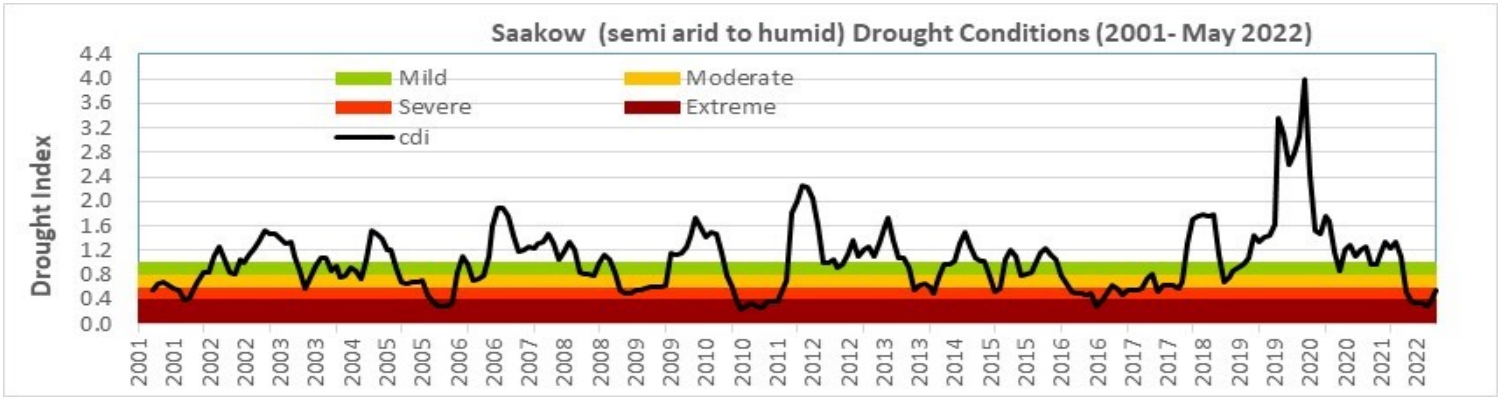
Map 5: June 2022 temperature forecast *Source: ICPAC*

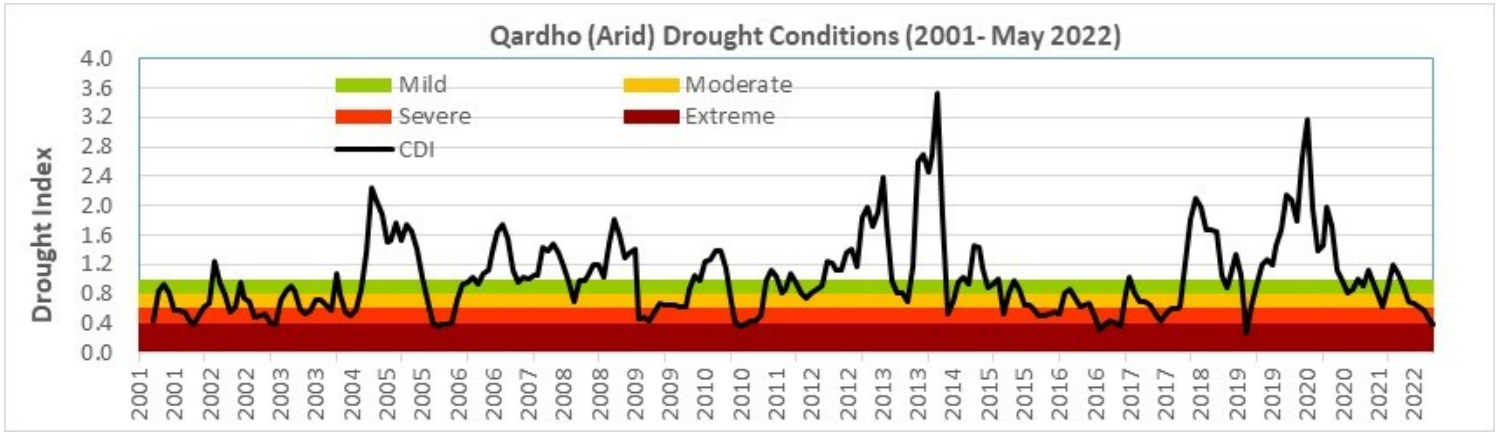


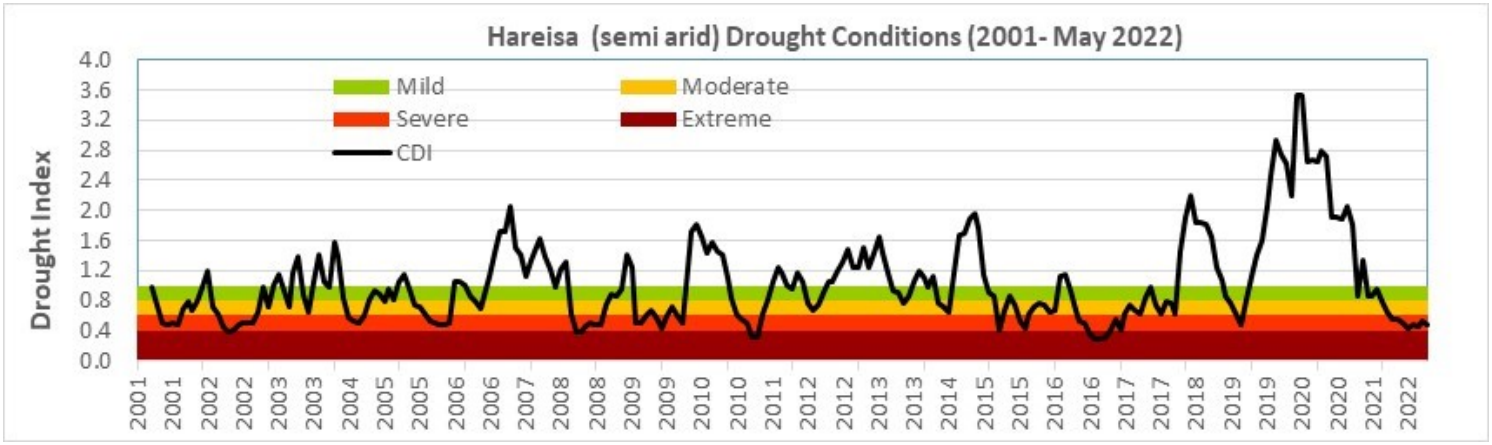
During the month of June, high temperatures foreseen in the Puntland, South & Central parts of Somalia. The foreseen high temperatures will enhance evaporation, which reduces surface water and dries out soils and vegetation. Consequently this will lead to drier than normal conditions and increased worsening the current drought situation.

Annex I: Drought severity in selected districts









Annex II: Ground Water level at Garowe (Oct 2021 to May 20222)